2007

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Ashley Rachelle Junek
Louisiana State University and Agricultural and Mechanical College

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GOING WITH THE FLOW?: THE MEDICAL SCHOOL PIPELINE AND ADVISING PREMEDICAL AFRICAN AMERICAN STUDENTS ON PREDOMINANTLY WHITE CAMPUSES

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Educational Theory, Policy, and Practice

by

Ashley Rachelle Junek
B.A., Southeastern Louisiana University, 1994
M.A., Louisiana State University, 1996
May 2007
ACKNOWLEDGMENTS

This difficult journey began years ago and I was fortunate to have many loved ones, friends, and colleagues by my side. My parents, Wanda and Al Junek, have supported and encouraged me from the moment I started to consider the option of working toward my doctorate. There were plenty of times I wanted to give up, but they were there to remind me of the strength I had within me. Not only were they eager to listen to every detail about my coursework and research, they helped me work through ideas about how I could actually implement the qualitative portion of my study at a time when it seemed impossible. Words cannot begin to describe how grateful I am. Throughout this process they have been on the sidelines cheering me on. Growing up, I learned many valuable lessons from them. My parents taught me to take responsibility for my own actions and to believe in myself. This accomplishment was a direct result of their parenting and even though they now live miles away, they are with me always. Thank you, Mom and Dad.

I could not have made it to this point without the guidance and support of my major professor, Dr. Becky Ropers-Huilman. Becky challenged my thinking and beliefs and always pushed me to step outside of my comfort zone. Through her teaching and scholarship, she inspired me to act as an agent of social change and gave me the confidence to take on this research project. Becky, in addition to the other members of my dissertation committee, Dr. Laura Hensley Choate, Dr. John Lynn, Dr. Mandi Lopez, and Dr. Charles Teddlie, invested many hours in reading and reviewing my work. Through their thoughtful comments and feedback I was able to improve my work and writing.

This study would not have been possible without the advisors who took time out of their busy schedules to participate. In addition, the topic of race and ethnicity is a sensitive one.
Participation required advisors to think about and respond to questions that could be considered uncomfortable. Each advisor with whom I spoke was dedicated to helping students through teaching and/or advising and I am grateful to each for sharing their stories.

Also, many thanks to my past and present colleagues in the Educational Research and Leadership program. Dr. Dorian McCoy cleared the path before me and talked me through plenty of frustrating moments. Mitzi Trahan patiently gave me a refresher course in statistics and spent hours showing me how to use the SPSS statistics software program.

Numerous others have cheered me on throughout this process. Many thanks to my brother, Jon, and his wife, Grace for always asking how my work was going. My uncle, Billy Cowart, took a particular interest in my research as my family Ph.D. mentor. I also appreciate the feedback and encouragement of my colleagues in the College of Basic Sciences, Martha Cedotal, Robby Bowen, Karla Lemoine, and Nancy Wagenaar, to name a few. Over the years, each has contributed to my work in unique ways through their patience, understanding, and interest. My closest friends, Kristie Galy, Stacy Millet, and Casey McCarty played important roles in my success by offering a sympathetic ear as well as some much-needed distractions.

Many friends and family members have offered their support over the years. So, for all of you who often asked, “Are you finished yet?” I am pleased to enthusiastically reply, “Yes!”
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ABSTRACT

Over the past two decades, federal agencies and health-related professional associations have launched national movements to recruit people from populations that are underrepresented in medicine for the health professions. While this recruitment effort showed substantial results initially, recent occurrences have impeded the growth. Relevant historical events, current trends of low African American enrollment in medical school, and existing research on diverse student experiences have indicated a critical need for effective academic advising for premedical African American students attending predominantly white undergraduate institutions. Using mixed methods, this study investigated the premedical advising that is being offered to African American students on predominantly white campuses. Results indicated that advisors considered the larger societal and institutional contexts of advising African American premedical students in a variety of ways including the positive impact of African American physicians on the larger community, the influence of affirmative action on the medical school application process, and the adversity some African American students face on predominantly white campuses. Most advisors, however, did not directly use this information when advising African American students. Some advisors considered the race and/or ethnicity of their advisees while others perceived such consideration as unethical behavior and therefore utilized a race-neutral advising approach. The utilization of qualitative and quantitative approaches revealed divergent viewpoints regarding confidence in and comfort with advising African American premedical students. While the majority of advisors believed they had the potential to play a significant role in increasing African American enrollment in medical school, findings from this study raise questions regarding who is ultimately responsible. Results stand to inform the practice of advising diverse populations of students across disciplines.
CHAPTER I - INTRODUCTION

Underrepresented Minorities in Medicine

By the year 2050, it is estimated that half of the United States’ working population will be made up of members from current cultural minority groups, specifically African Americans, Hispanic Americans, Asian Americans, Pacific Islanders, and Native Americans (Smedley, Stith, Colburn, & Evans, 2001). Presently, many minority groups, mainly African Americans, Hispanic Americans, and Native Americans, are severely underrepresented in the health professions. Smedley and his colleagues define underrepresented minorities (URM) as individuals from racial and ethnic backgrounds that are poorly represented in the healthcare professions relative to their overall population in the United States. A vast disparity exists between the percentage of the current URM population and the percentage of URM physicians and medical school students. While this disparity is seen as unfair by many, what is more critical is that the three minority groups that are most significantly underrepresented have also demonstrated a greater need for healthcare compared to Caucasians, in that underrepresented minorities face additional economic and cultural barriers to receiving proper healthcare (Roach, 1999; Sullivan Commission, 2004; Whitcomb, 2007). Evidence indicates that minority healthcare providers are more likely to attend to populations that are medically underserved (Curtis, 2003; Xu, Fields, Laine, Veloski, Barzansky, & Martini, 1997). A lack of URM physicians has a negative impact on citizens across the entire country as the United States has few physicians serving the populations that are the most in need of healthcare. Not only does an increase of minority enrollment in medical school improve the outlook of healthcare, diversity in medical school classes enhances the learning experiences of all students in the class (Cannon, 1999; Smedley et al.; Sullivan Commission, 2004). Studies document the need for diversity in
health professions and highlight some general pre-health advising techniques that assist URM students with admission to health professional schools (Smedley et al.).

The Pipeline to Medical School

The educational avenue by which one must travel to successfully enter a profession is often referred to as the “pipeline” (College Board, 1999; Sullivan Commission, 2004). The pipeline is not equally accessible to all individuals; underrepresented minorities are often left out or may slowly trickle out. Educators consider the pipeline to begin at the primary school level. To become a physician, one’s educational foundation must begin at the primary level, proceed to the secondary and post-secondary levels, and then on to medical school. Each step in the process is considered to be crucial. Fifty percent of medical students are said to have decided to become doctors by junior high (Sullivan Commission). Each part of the pipeline prepares students for the levels to come. With each segment comes potential obstructions that can cause educators to lose students from the pipeline; obstructions tend to be encountered more often by underrepresented minority students than non-minority students.

Project 3000 by 2000

Taking note of the severe lack of URMs in healthcare professions, the federal government joined many private agencies to fund a nationwide movement to increase the diversity of health professionals. Unfortunately, the movement achieved little success after suffering critical setbacks including judicial decisions and lawsuits challenging the use of affirmative action in the admissions procedures of professional schools (Curtis, 2003; Smedley et al., 2001; Sullivan, 1992). In addition, elementary, secondary, and higher education URM students have not received as much math and science preparation as non-URM students, preparation that is considered to be vital for successful completion of health professions
programs (Smedley et al.). With the Supreme Court ruling in favor of affirmative action in professional school admissions in the 2003 *Grutter v Bollinger et al.* case, many medical schools have begun to reexamine their admissions procedures. Further complicating this issue are other cases in which courts have ruled against affirmative action policies, for example *Gratz v. Bollinger et al.* (2003). Activist groups such as the Center for Individuals’ Rights, the Michigan Civil Rights Initiative, and the Washington State Civil Rights Initiative continue to fight diligently against affirmative action policies citing discrimination that violates the Fourteenth Amendment (Green, 2004; Steinecke, Beaudreau, Bletzinger, & Terrell, 2007).

Acknowledging the necessity for an increase in URM physicians, the American Association of Medical Colleges launched Project 3000 by 2000 in the fall of 1991 (Nickens, 1998). The goal was to increase URM national enrollment in medical school to 3000 students by the year 2000. After the start of this project, URM enrollment increased 27% by 1994. Also during this period, the number of minority applicants increased by 40%. Through Project 3000 by 2000, a network was set up to foster cooperation among medical schools, colleges, and K-12 school systems. All members of this network committed to work to develop student interest in health professions and teach the skills necessary to succeed in science (Nickens). In 1996, *Hopwood v. Texas* virtually put a stop to affirmative action in professional schools in Texas, Louisiana, and Mississippi, the states subject to the Fifth Circuit Court of Appeals (Hopwood v. Texas, 78 F.3d 932 5th Cir 1996).

In *Hopwood*, the Fifth Circuit Court of Appeals ruled that using affirmative action in the admission process for the University of Texas Law School was unconstitutional. Subsequently, the overall URM medical school enrollment decreased 22% between 1996 and 1999. The *Hopwood* decision overturned the prior litigation of *Bakke*. In 1978, the Supreme Court ruled in
Bakke that the University of California-Davis Medical School could not hold a specific number of seats for underrepresented minority applicants, but did not object to the notion of using underrepresented minority status as a plus factor during the admissions process (Daniel & Timken, 1999).

In June of 2003, the United States Supreme Court ruled in favor of the affirmative action practices employed by the University of Michigan Law School (Grutter v. Bollinger, et al., 123 S.Ct. 2003). This decision cleared some of the haze that has shrouded affirmative action in higher education for many years. While the Supreme Court did not uphold the affirmative action policies set in place at the University of Michigan undergraduate program, the majority of justices declared diversity to be a compelling interest. They claimed that the University of Michigan Law School addressed this compelling interest in an appropriate manner by using race as a plus factor after reviewing a student’s overall application. In order to abide by the Supreme Court’s decision, colleges and universities have had to “narrowly tailor” their admissions procedures and set goals of achieving a “critical mass” of URM students rather than a pre-specified quota (Grutter v. Bollinger, et al., 2003).

During the same week the Grutter case was decided, the AAMC adopted a new term: Underrepresented in Medicine. The definition of this new term was described as follows: “Underrepresented in medicine means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population” (AAMC, 2004, p. 1). This new expression allows medical schools the freedom of focusing on their own regions and provides the flexibility to incorporate future changes in the population (AAMC).
Fifteen years after the launch of Project 3000 by 2000, the most recent initiative taken by the AAMC was unveiled in the fall of 2006: AspiringDocs.org. AspiringDocs.org is an outreach campaign designed to create an awareness of the need for diversity in the medical professions and encourage “well-prepared” African Americans, Latinos, and Native Americans to apply for and attend medical school (www.aamc.org/diversity/). The website not only gives prospective medical students advising and application information, but offers the opportunity for students to submit questions to a panel of experts. Questions and answers are later posted on the website for all to peruse. Much of the information available on Aspiring.Docs.org should also be available from premedical advisors at undergraduate institutions. While this new campaign is an excellent resource for students and advisors, it raises the question of whether or not the AAMC has faith in the premedical advising that is taking place for underrepresented minority students on undergraduate campuses.

**Alternate Programs**

Historically, African Americans have tended not to perform as well as white students on standardized tests and, on average, have not had grade point averages typical of those considered to be competitive medical school applicants (Fleming & Garcia, 1998; Henry & Bardo, 1996). Some research has indicated that African American students are more susceptible to stereotype vulnerability or “the tendency to expect and be bothered by prejudice and to be affected by stereotype threat” which in turn may negatively affect students’ academic and test performance (Aronson & Inzlicht, 2004, p. 834). While medical schools acknowledge the need to increase enrollment of underrepresented minorities, legal constraints have forced medical schools to alter their approach to admissions. Many medical schools have begun taking into account noncognitive factors that influence grades and test scores of applicants as a way to indirectly
consider race (Steinecke, et al., 2007). Assuming that many underrepresented minorities come from low-income families, a number of medical schools have utilized socioeconomic and disadvantaged status of applicants in order to indirectly assist URM s obtain admission to medical school. Socioeconomic status as well as parents’ level of educational attainment can affect students’ academic achievement (Bowen & Bok, 1998). Because students enter college at different levels of academic preparedness, medical schools have considered for admission applicants who may not appear to be competitive on paper, but who have overcome hardships and, therefore, have demonstrated their willingness and ability to succeed. URM applicants who come from lower income and/or single parent families may be considered for admission by schools that take this into account and use different standards based on the assumption that such hardships may negatively impact a student’s academic credentials. Overcoming adversity is also seen as an indicator of future academic success in that students who are able to persevere through hardships are more likely to complete medical school (Steinecke, et al.). There are problems with this approach since some middle and upper class URM applicants may not necessarily have competitive scores and grades. Evidence suggests that while socioeconomic status impacts academic performance and standardized test scores, underrepresented minority students in general tend to have lower grade point averages and test scores when compared with non-minority students from comparable SES backgrounds (Nickens, 1998; Steinecke et al.). Preliminary data from the Association of American Medical Colleges indicated that consideration of socioeconomic status without also consideration of race or ethnicity would not lead to the development of a diverse medical student enrollment (Steinecke et al.). This may be partly due to the fact that when compared with African American students, there are six times as
many white students coming from a lower socioeconomic status who have standardized test scores that are considered competitive (Bowen & Bok, 1998).

Studies show that noncognitive factors, such as self-concept, motivation, and aspirations, may be indicative of potential for success for minority students (Joubert-Thompson, 2000). However, unlike socioeconomic status and family circumstances, assessing these noncognitive factors is nearly impossible through the medical school application process. Only in an interview can admissions officers attempt to measure these traits. Most medical schools do not interview students unless their applications show competitive grades and test scores. While several factors are taken into account when assessing applicants, most medical schools receive hundreds, if not thousands, of applications. MCAT scores and grade point averages are generally reviewed first and are often used during initial screening to narrow the number of interviews (Baffi-Dugan, 2005).

Many programs have been developed to assist applicants who are underrepresented in medicine and/or are considered disadvantaged with regard to the admission process for medical school. For example, the Summer Medical and Dental Education Program (SMDEP), formerly the Minority Medical Education Program (MMEP), funded by the Robert Wood Johnson Foundation, is a summer program offering intensive and personalized medical school preparation for applicants who are from rural areas, are economically disadvantaged, and/or are from populations that have historically received substandard healthcare (Cantor, Bergeisen, & Baker, 1998; Summer Medical and Dental Education Program, n.d.). Prior to 2003, the MMEP was open only to students from underrepresented groups. URM students who participated in an MMEP attained higher rates of acceptance to medical school when compared with applicants who did not participate (Cantor et al.).
Medical schools have aggressively attempted to increase URM enrollment through the use of special summer programs for elementary, high school, and undergraduate students. Examples of these targeted programs include the University of Alabama School of Medicine’s Biomedical Enrichment and Recruitment Program for college sophomores, Louisiana State University Health Sciences Center Medical School in Shreveport’s Education Familiarization Program, and the Stanford University Minority Medical Alliance (http://www.naahp.org/resourcesminopp.htm). The majority of medical schools have established offices of minority affairs. These offices have been charged with recruiting and retaining URM medical students through special programming and support services. Even with the implementation of these newer programs, URM medical school enrollment has failed to increase significantly. Unfortunately, the AAMC’s Project 3000 by 2000 fell severely short with only 1900 students enrolled in the nation’s medical schools at the turn of the century.

Premedical Information for URM Students

Despite the effort of medical schools to increase URM enrollment, information regarding admissions statistics for URM applicants at specific medical schools is not readily available to premedical undergraduate advisors through the usual professional resources (Moller, 2005). While national statistics are available, individual schools do not usually publish information related to URM admissions outside of the number of students enrolled. Yet, if admissions offices are willing to look at noncognitive qualities of URM applicants in lieu of or in addition to grades and test scores, premedical advisors need to know how and what specific qualities are being assessed. Adequate advising is critical to students preparing for and applying to medical school (Smedley et al, 2001). Students need to be informed about the basic prerequisites as well as academic and personal qualities that medical school admission committees desire of
applicants. Obtaining information on medical school admission statistics, i.e. average grade point averages and MCAT scores of those admitted, is relatively easy (Moller); finding out how applications of underrepresented minorities may be assessed differently is quite difficult. The subject of special consideration for URM applicants is complicated. This may be partly due to the ruling of Bakke, Hopwood, and Grutter as deans of admission for medical schools want to avoid future litigation. Even though the Supreme Court upheld the use of affirmative action in professional school admission as a vested public interest, the threat for future litigation continues. Activist groups including the Center for Individual Rights, the Michigan Civil Rights Initiative, and the Washington State Civil Rights Initiative continue to argue the use of race and or ethnicity in admission to academic programs. In addition, the Supreme Court placed a sunset clause of 25 years on the use of affirmative action in educational admissions implying that it’s use is not expected to continue indefinitely (Steinecke et al., 2007).

While the topic of admission of African American students to medical school is frequently addressed at conference meetings for the National Association of Advisors for the Health Professions (NAAHP), the discussion typically centers around the need for an increase in the number of URM medical students instead of advising techniques appropriate for assisting URM applicants. Likewise, much of the literature in this area only describes the current issue of low URM enrollment (Bergen, 2000; Carlisle & Gardner, 1998; Lloyd & Miller, 1989; Roach, 1999; Xu, et al., 1997).

The lack of literature in the area of URM medical school admission creates a problem for premedical advisors and, in turn, for premedical minority students. Statistics show that the average grade point average for URM applicants admitted to medical school is approximately 3.4 with an average composite MCAT score of 24. The averages for applicants accepted overall
were 3.6 and 29 (Association of American Medical Colleges, 2004). The difference in averages suggests that medical schools are indeed utilizing URM status in the admissions process. Since medical schools are not forthcoming with specific information utilized regarding URM applicants at their institutions, it is nearly impossible for premedical advisors to inform African American students of appropriate academic goals for achieving admission to medical school, other than quoting the current admission statistics for URM applicants. For example, a student carrying a 3.2 grade point average may be advised to consider other career options or to postpone application to medical school until his or her average is more competitive; if this student happened to be a URM student, a 3.2 GPA might be competitive.

The National Association of Advisors for the Health Professions (NAAHP) is a professional organization with nearly 1000 members nationwide including pre-health advisors and medical school admissions representatives (www.naahp.org). The organization is also broken down into regional divisions. National membership automatically includes regional membership. The Southeastern region (SAAHP) includes the following fourteen states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. African Americans make up the largest underrepresented minority population in the Southeastern region. While African Americans make up 12.3% of the total U.S. population, African Americans make up as much as one-third of the population in several southern states. Being interested in relationships between advisors and African American students, I focused the qualitative portion of this study on members of SAAHP. In order to reach a larger and more diverse population of advisors, the quantitative phase of the study included members of the national association.
African Americans Attending Predominantly White Institutions

While many African Americans attending historically black colleges and universities (HBCUs) have been successfully admitted to medical school (Curtis, 2003; Moller, 2005; Oyewole, 2001; Polite & Davis, 1999), the majority of African American premedical students attended PWIs (Allen, 1993; Provasnik & Shafer, 2004). Research has indicated that African American students attending PWIs are less likely to graduate than white students (Allen). Studies have also documented that African Americans attending PWIs perceive a hostile environment and are often faced with additional obstacles to obtaining a bachelor’s degree when compared with white students (Association for the Study of Higher Education (ASHE), 2003; Hurtado, Milem, Clayton-Pedersen, & Allen, 1998; Joubert-Thompson, 2000; Polite & Davis, 1999). If strength of premedical advising has shown to be a key element in admission to medical schools for African American students attending historically black colleges and universities (HBCUs) (Atkinson, Spratley & Simpson, 1994), one can assume that premedical advising would play a critical role for African American students attending PWIs as well, perhaps even more so. Literature highlighting the importance of URM admission to medical school and methods of advising this population of students has been available to premedical advisors (Smedley et al., 2001). However, what has been absent from the literature is how advisors at PWIs perceive their role in the overall movement to increase URM enrollment in medical school, whether advisors consider the race of their advisees, and whether a student’s race affects the advising techniques or styles that advisors utilize.

Purpose of Study

My interest in researching the premedical advising of African American students attending PWIs stemmed from a dissertation written by Rosemary Joubert-Thompson in 2000.
She conducted in-depth interviews with African American students attending a large research-intensive predominantly white institution (PWI). One of her subjects was a premedical major who endured what she perceived to be prejudiced behavior on the part of the premedical advising office. As a premedical advisor at a large predominantly white institution, I felt compelled to investigate the type of advising being offered at other PWIs. This example demonstrated that in dealing with hundreds of premedical students, advisors can come across as uncaring, especially to minority students who may already feel alienated. Minority students already perceive PWIs as a hostile environment in many cases (ASHE, 2003; Hurtado, Milem, Clayton-Pedersen, & Allen, 1998; Joubert-Thompson, 2000; Lee, 2002; Polite & Davis, 1999; Suarez-Balcazar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003). Advisors may need to take a different approach when working with these students to ensure that they perceive a welcoming environment and view advisors as a source of support and encouragement which will, in turn, increase this populations’ willingness to seek guidance.

Researchers have provided some African American premedical students’ perspectives of advising at PWIs (Joubert-Thompson, 2000, Smedley et al., 2001). Studies have also reviewed successful pre-health advising programs for URM students, but most have been restricted to HBCUs (Atkinson et al., 1994; Oyewole, 2001). Missing in the existing body of literature is research concerning the style of advising occurring at PWIs for African American students. Because the majority of African American students enrolled in college attend PWIs, it is important to learn more about what advising techniques and styles are utilized with this population of students.

Another piece that appears to be missing from the literature is the perspective of premedical advisors at PWIs who work with African American students. Studies have yet to
address how this population of advisors views their role in the enrollment of African Americans in medical school. Limited access to information, combined with the ambiguity that surrounds medical school admission procedures related to African American students, creates an uneasy situation for advisors and students. This may be particularly true for white advisors. Interracial advising requires cultural awareness and appreciation on the advisor’s part, as well as accurate information regarding minority medical school admission. Despite any sense of interracial tension on the advisor’s part, research in multicultural counseling indicates that a counselor’s professional competency is more important to minority clients than a counselor’s race (Robinson & Howard-Hamilton, 2000).

In this study, I investigated the premedical advising African American students attending PWIs received as well as advisors’ perceptions of their roles in increasing African American enrollment in medical school. By conducting in-depth interviews with premedical advisors at PWIs located regionally, I found out what these advisors were doing to assist African American premedical students and how they regarded their purpose as advisors to this population of students. Based on a constructivist approach, interviews revealed individual perspectives from a group of advisors who were diverse with regard to primary institutional role and institutional size and type. Interviewing participants allowed me to adapt questions to the respondents and obtain information that could not be inferred from answers on questionnaires alone (Gall, Borg, & Gall, 1996). In order to gather information from a large number of advisors, I also conducted a survey assessing advisors’ attitudes toward advising African American medical applicants as well as advising techniques utilized. By learning more about the type of advising occurring at these institutions, I was able to understand what strategies advisors employ at PWIs with African American students.
Conceptual Framework

I used a constructivist approach to this study. A constructivist orientation to research follows the assumption that reality is constructed by individuals who participate in it. Each person builds his or her own meaning and understanding through personal experience and maturation (Maxcy, 2003). Constructivists argue that there are multiple realities as defined by different individuals; therefore objective reality is nonexistent (Tashakkori & Teddlie, 1998). This viewpoint is in direct contrast to positivist inquiry through which researchers strive to remain objective so as not to influence the outcomes of studies. I chose a constructivist framework for this study in order to focus on the similarities and differences among advisor perspectives and how these similarities and differences informed the advising process. My own experiences as a premedical advisor, a student, and a researcher have influenced the direction of this study and the study has served to further reconstruct my own realities and beliefs about advising.

Upon reading the interview passage that sparked the idea for this study (Joubert-Thompson, 2000), I took an immediate defensive posture. The student described her experience of being turned away for premedical advising as being one of discrimination. Knowing that during registration advising offices are obligated to provide academic advising to hundreds, even thousands of students during a relatively short period, I was certain that a student who asked for premedical assistance was told to return for advising after registration was over. I was sure that such an instance had nothing to do with a student’s race or ethnicity or even her competitiveness for medical school. Later, I realized that the reason this student was turned away did not matter all that much; in this student’s eyes she had been the victim of discrimination. Two realities existed in this scenario: that of the student and that of the department. This was probably a rapid
exchange where the student came in and asked for premedical assistance and was quickly told that she would have to come back. Yet this brief encounter left this student feeling isolated and discriminated against. A few extra minutes spent with this young woman would have probably made a great difference in the way she felt as she left that office. This situation forced me to appreciate and understand this student’s perspective, a perspective that cannot be separated from the context of her identity as an African American female attending a predominantly white institution. My initial reaction stemmed from my own perspective as one of two advisors responsible for advising at least 1,500 students. As a white female, I did not readily understand why a student would think that her race or ethnicity would have an impact on the way she was treated in an advising office. As an advisor, it is my responsibility to appreciate and understand the unique realities that individual students have and the ways their personal identities affect those realities. It is also my responsibility as an advisor to help students to develop an understanding of the unique viewpoints of others.

I chose a constructivist conceptual framework in which to situate this study in order to explore the multiple realities of premedical advisors at predominantly white institutions and the ways in which they interact with and advise African American students. I was interested in learning whether other advisors take into consideration a student’s race or ethnicity during the advising process. Had other advisors been contemplating how they, as advisors at predominantly white institutions, were perceived by African American students? Considering that some premedical advisors are faculty members coming from scientific disciplines and some are professional or full-time advisors who have a variety of backgrounds including student affairs and counseling, unique viewpoints were expected. The framework was set in place to focus on how advisors’ personal and professional experiences influence the ways in which they work with
African American premedical students as well as how advisors take into consideration larger social and institutional contexts. I believe such a methodology works well with advising research.

Joubert-Thompson’s (2000) work illustrated for me that both the student and the advisor bring unique perspectives to each advising session. Each individual has a distinctive definition of reality that has been influenced by life experiences, events, and the interpretation thereof. Without respect for one another’s constructed reality, dialogue between an advisor and advisee may be meaningless. The listener may not necessarily receive the message with the meaning that the speaker intended and the two may each leave the session carrying two different interpretations of the entire exchange. Diverse cultural experiences of both the advisor and the advisee must be taken into account if an advising relationship is to be successful and beneficial for the student. It was along this vein that I worked toward the discovery of the personal realities of advisors at PWIs as well as whether or not those realities included knowledge about the experiences of African American students attending these institutions. Using constructivism as a guide for this study, I focused on individual differences and similarities among participants, keeping in mind the unique experiences each has had and how those experiences impacted their responses.

A constructivist approach also grants me an opportunity to acknowledge my own experience and how it relates to this study. For nearly ten years I have served as an academic counselor at a large research extensive predominantly white institution. Through taking a Race and Gender in Higher Education course, I was faced with the reality of white privilege, something I was aware of on a subconscious level perhaps, but on which I never dwelled (McIntosh, 1988). Throughout the course and ever since, I have looked at others and myself
differently; I have become more aware of race and ethnicity and have focused my attention toward how my behavior can improve the experiences of others. More specifically, I have used this awareness to change my attitude and behavior during advising sessions with underrepresented minority students. My personal interest in this research study was in learning more about whether and how other advisors’ attitudes and behaviors differed when working with African American students as well as how their unique professional and institutional perspectives influenced these differences.

**Research Questions**

The research questions that guided this study are:

Q1. In what ways, if at all, do advisors at predominantly white institutions consider the race and/or ethnicity of their premedical advisees?

Q2. In what ways, if at all, do advisors at predominantly white institutions consider the larger institutional and societal contexts in advising African American premedical students?

Q3. How do premedical advisors at predominantly white institutions perceive their role in increasing African American enrollment in medical school?

Each research question was analyzed both qualitatively and quantitatively. Through the quantitative analysis the research questions were evaluated using the dimensions of advisor differences in attitude across variables of advisors’ primary institutional roles (faculty advisor versus full-time professional advisor) and enrollment size of their institutions (<15,000 versus ≥15,000). The null hypothesis (H₀) utilized for the quantitative analysis was: No differences exist between advisors’ perspectives on advising African American premedical students based on their primary institutional role and/or institutional enrollment size.
This study examined the advising in place at PWIs for African American premedical students, how sensitive premedical advisors at PWIs were relative to the specific needs of African American medical school applicants, how they use the information they have to assist this specific population of students, and how they are disseminating information.

In the next chapter I will provide a literature review encompassing the following areas: 1) the need for minorities in medicine, 2) the current dilemma of a severe lack of minorities in medicine, 3) the history of affirmative action, 4) the role of affirmative action in the admission of minorities to medical school, 5) the specific needs of African Americans attending PWIs, 6) the role of undergraduate institutions in minority medical school admission, 7) teaching, counseling and advising of African American students, and 8) advising African American medical school applicants. Through the literature review I establish the need for an increased enrollment of minorities in medical school and higher education in general and how the current low enrollment affects the nation.

I am specifically interested in the premedical advising of African Americans attending PWIs. However, much of the existing literature focuses on underrepresented minorities, grouping together all students of color to include African Americans (Ladson-Billings, 2000). While there is a substantial literature base of studies concentrating on the educational experiences of African Americans, in the literature review I have also drawn from research related to all underrepresented minority students. I acknowledge here that the individuals from marginalized cultures have unique experiences that, as Ladson-Billings states, may be analogous, but not necessarily equivalent. By tying in the literature that exists regarding underrepresented minority students in general, I am not asserting that all underrepresented minorities share the same experiences. I do, however, believe that the literature I have reviewed serves to inform this
study. I use the terms underrepresented minorities (URM), cultural minorities, and minorities interchangeably. When referring to African Americans specifically, I note that in the text. I refer to Historically Black Colleges and Universities as HBCUs and predominantly white institutions as PWIs.
CHAPTER II – LITERATURE REVIEW

Over the past several years there has been a nationwide movement toward greater racial and ethnic diversity in academia. Educational leaders have taken great strides to include students from all racial and ethnic backgrounds at traditionally white colleges and universities. Medical educators have worked towards producing doctors of various ethnicities with an ultimate goal of having medical students and doctors that reflect the racial percentages of the national population (Nickens, 1998; Roach, 1999).

In 1996, the judicial case of Hopwood greatly affected the growth spurt of underrepresented minorities in U.S. medical schools (Daniel & Timken, 1999; Hopwood v. Texas, 78 F.3d 932 5th Cir 1996). Since the Hopwood decision, many public schools have not been able to legally use affirmative action in the admission selection process; as a result, the number of minority students accepted dropped. The 2003 Supreme Court favorable ruling on affirmative action in Grutter v. Bollinger et al. has yet to have a significant positive impact on the enrollment of URM students in medical school. Slightly over six percent of the 2005 medical school matriculants were African American (http://www.aamc.org/data/facts/+).

The Shortage of Underrepresented Minorities in Medicine

Minority student enrollment in medical school declined 5% between 1995 and 1998, mainly in public medical schools (Carlisle, Gardner, & Liu, 1998). California, Texas, Mississippi, and Louisiana accounted for 44% of the decline in 1996. Three of these states (TX, MS, and LA) are subject to the Fifth Circuit Court of Appeals, which ruled against affirmative action in Hopwood in 1996. The Duke Law School website describes how in California, during the same year, Proposition 209 was passed eliminating educational affirmative action programs throughout the state (http://www.law.duke.edu/journals/dlj/articles/dlj47p187.htm).
The enrollment of African American students in medical school declined 8.7% between 1994 and 1996 (Carlisle & Gardner, 1998). Public medical schools saw the majority of this decline. A few schools stood out as being successful in showing gains in enrollment of African Americans, most significantly the University of California at Los Angeles, Case Western Reserve School of Medicine in Ohio, and Robert Wood Johnson Medical School in New Jersey. In contrast, Texas Tech and Texas A&M reported severe declines (Carlisle & Gardner).

The seriousness of the social impact of such a shortage of minority medical students and physicians has been observed through studies assessing the post-graduate practices of minority medical graduates. Xu et al. (1997) showed that when controlling for gender, childhood family income, childhood residence, and National Health Service Corps (NHSC) Financial Aid obligations, underrepresented minority general practitioners were more likely than white general practitioners to care for the medically underserved. Controlling for NHSC student aid obligations is especially important in that some might assume that minority medical school graduates are more likely to work in poorer areas as a means to have their medical school loans forgiven. Medically underserved areas include communities with a high percentage of minority residents as well as communities with low socioeconomic levels. Residents of communities such as these generally do not seek out and/or receive adequate health care, often because they may not be able to afford it. This evidence emphasizes the need for minorities to be represented in medical school and suggests that this issue is of national concern. Xu et al. indicate that minority physicians are treating underserved patients as a way of giving back to the community, which supports the altruistic ideals of being a physician. At this time, medical schools are not producing nearly enough physicians who are dedicated to serving these areas that are in such need of medical care (Sullivan Commission, 2004; Whitcomb, 2007).
Need for an Increase of African American Medical Students

The number of underrepresented minorities admitted to U.S. medical schools for the 1996-1997 academic year totaled 1,906 (Collision, 1997). At the time, Collision pointed out that the goal of admitting 3000 students by the year 2000 seemed impossible. The numbers showed a decline from 1991-1992, most notably in the state of California. The total number of admissions to medical school dropped .3%, but underrepresented minority entrants dropped 5.2% between 1995 and 1996. Collision’s skepticism proved to be just.

Lloyd and Miller (1989) addressed the need for better representation of minorities in medicine. While African Americans made up 12% of the nation’s population in 1989, only 6% of medical students, 5% of medical graduates, 5% of postgraduate trainees, 3% of practicing physicians, and 2% of medical school faculties were African American. Not only is this underrepresentation seen as an injustice by many, it also has serious implications for underprivileged and minority communities that are typically served by African American physicians. Lloyd and Miller also noted that while enrollment of African American students in medical school remained at approximately the same level between 1981 and 1987, the number of applicants decreased from 2,644 to 2,203. While the cause for this decline in applications could be explained by any number of factors, one conclusion that can be drawn from this data is that fewer applicants may indicate that minority students did not feel confident about their chances of being admitted. The importance of recruiting African American students was stressed as the responsibility of pre-college, college, and medical school administrators.

The need to increase the enrollment of African Americans in medical school was also argued by Sullivan (1992). Sullivan advised educators that the initiative to boost African American matriculation must start at the primary level. Sullivan offered some suggestions such
as encouraging African American students at the elementary and high school level to follow careers in science, fostering cooperation between community colleges and four-year institutions, and offering support programs at predominantly white institutions. The Association of American Medical Schools has partnered with several medical schools nationwide and implemented several such programs.

The Association of American Medical Colleges statistics showed that there were 1,187 African American medical school matriculants for the 2006-2007 academic year out of a total of 17,370 matriculants or 6.8%. At this point, seven years past the deadline for Project 3000 by 2000, the nation has not yet witnessed a significant increase in African American medical students. African Americans made up 6.5 percent of the total medical school enrollment for 2004. Enrollment for all underrepresented minorities was 2,319 or 13.9 percent. While the number African American matriculants has increased, as well as the number of applications, 2,803 in 2004, a great disparity still exists between African American enrollment in medical school and the percentage of the African American population, 12.9 percent in 2000 (U.S. Census Bureau, 2000).

History of Affirmative Action in Education

For years leading up to the Civil Rights movement of the 1960’s, African Americans were educated separately from whites, if educated publicly. In fact, African Americans were forced to use separate public facilities in all areas of life. When the constitutionality of “separate, but equal” treatment came into question, the U.S. Supreme Court ruled in favor of public separation for African Americans in Plessy v. Ferguson (163 U.S. 537, 1896; Garrison-Wade & Lewis, 2004). It was not until the mid-1950’s that the U.S. Supreme Court overruled prior litigation through Brown v. Board of Education (1954) and determined that segregated
educational facilities for minorities were not equal to those offered to whites and therefore violated the fourteenth Amendment of the Constitution (Bowen & Bok, 1998; Garrison-Wade & Lewis). While *Brown v. Board of Education* opened the door for African Americans, the war on discrimination was far from over.

With the 1960’s came the Civil Rights movement and President Johnson’s War on Poverty (Garrison-Wade & Lewis, 2004). President Johnson acknowledged that giving minorities equal access did not mean they were given equal footing. Johnson indicated that due to years of being denied freedom and opportunity for intellectual and economic advancement, minorities were not experiencing equal opportunities to succeed. In order to help provide those opportunities, affirmative action was implemented. While affirmative action was initially intended for the work place, higher education soon followed suit (Garrison-Wade & Lewis). In 1965, African Americans made up only 4.8 percent of the total college enrollment in the United States, but by 1967 that number was climbing rapidly (Bowen & Bok, 1998). The growth was due to the fervor of some of the nation’s academic institutions to not only offer higher education to African Americans, but to enhance the academic experience of all students as well as produce a diverse class of graduates (Bowen & Bok).

**Role of Affirmative Action in Medical Education**

From 1964 to 1995, African American enrollment in medical school grew from 2.2 percent to 8.1 percent (Bowen & Bok, 1998). However, in 1996, *Hopwood* virtually put a stop to affirmative action in professional schools, mainly in Texas, Louisiana, and Mississippi, the states subject to the Fifth Circuit Court of Appeals (Daniel & Timken, 1999). In *Hopwood*, the Fifth Circuit Court of Appeals ruled that using affirmative action in the admission process for the University of Texas Law School was unconstitutional. The *Hopwood* decision overturned the
prior litigation of Bakke (1978). In 1978, the Supreme Court ruled in Bakke that the University of California-Davis Medical School could not hold a specific number of seats for underrepresented minority applicants, but did not comment on the use of ethnicity during the admissions process, meaning that schools could consider the race of applicants, but not in order to fill quotas. Until 2003, the Supreme Court had not ruled on affirmative action specifically, and many schools, being fearful of lawsuits, had abandoned its use in the admissions process.

However, in 2003, the Supreme Court heard a legal case against the University of Michigan Law School regarding reverse discrimination. The use of “narrowly tailored” affirmative action policies in higher education was upheld (Grutter v. Bollinger et al., 2003; Terrell & Bletzinger, 2003). The Supreme Court found that securing a diverse student body in professional schools was a compelling interest for admission committees and government agencies (Terrell & Bletzinger).

A narrowly tailored affirmative action policy (1) avoids entirely the use of quotas and/or separate admissions standards for minority students, (2) favors alternate methods that do not use race, but can lead to an increase in minority enrollment, (3) endorses individual consideration of each applicant, and (4) is reviewed regularly to determine if continuation of the policy is necessary (Terrell & Bletzinger, 2003). The Court ruled that appropriate affirmative action policies result in developing a critical mass of minority students rather than fulfilling a pre-set quota. A critical mass of minority students ensures that minority enrollment is high enough to have the desired impact of positively influencing the education of all students enrolled as well as produce a significant number of minority professionals for society (Grutter v Bollinger, 2003).

The Association of American Medical Colleges (AAMC) endorses the use of affirmative action in medical school admission for the following reasons: 1) cultural competence ensures a
higher quality of health care, 2) minority physicians improve access to health care for underserved patients, 3) a broad research agenda is supported by diverse researchers, 4) racial and ethnic diversity is essential among health care managers, and 5) to create equity and justice as initiated by the Civil Rights movement (Nickens, 1998). In fact, the AAMC provides a list of guidelines that medical schools can follow to set up legal affirmative action policies (Terrell & Bletzinger, 2003).

Despite the AAMC’s endorsement of affirmative action as a way to increase minority admission to medical school, an absence of minorities is evident at all levels. Bergen (2000) found an absence of underrepresented minorities on medical school admission committees nationwide. This does not suggest that only underrepresented minorities can be sensitive to the importance of admitting minority applicants, but rather that if increasing minority enrollment is a priority, then medical schools should strive for diversity at all levels of the institution. The lack of minority representation on admission committees is a direct result of the lack of minority faculty members teaching in medical schools, which in turn is due to the low percentage of minority students admitted and therefore graduating from medical colleges. Likewise, Kondo and Judd (2000) found that while representation of ethnic minorities on medical college admission committees has increased since 1972, half of the 85 schools reviewed had just one or no ethnic minority members. According to the study, the URM admission committee members at most schools were not physicians. These studies indicate a lack of URM participation in medical schools at multiple levels: students, faculty, and admission committee members.

Studies have revealed that prior to 1996, the use of affirmative action was prevalent among medical schools and was fulfilling its intent. Jolly’s 1992 study indicated that the enrollment of underrepresented minority student admissions to medical school increased from
3% to 11% from 1968 to 1992. At this point in time, Jolly found that schools were using affirmative action in the admissions process. Jolly reviewed statistics of medical students from 1978 to 1992 and found that minority students with comparable grades and MCAT scores were accepted at a much higher rate than majority applicants.

Davidson and Lewis (1997) reviewed all admissions to the University of California-Davis School of Medicine between 1968 and 1987 and compared students who were admitted under special affirmative action provisions with those who met regular admission standards. Eleven percent of all students admitted over the twenty-year period were underrepresented minorities. Of the students who were admitted under special provisions, 42.7% were underrepresented minorities, meaning that had this affirmative action not taken place, only 4% of regular admission students would have been from underrepresented minority groups. Davidson and Lewis found that the MCAT scores and grade point averages were significantly lower for the special provisions population and the graduation rate was slightly lower at 94% compared to 98% for the regular admission group. In addition to achieving similar graduation rates, graduates from both groups had comparable job experiences and residency ratings. This indicates a convergence of academic progress between the two groups during medical school. The high graduation rate combined with the comparable professional experience and evaluations point toward the possibility that test scores and grades may not be the best or only indicators of academic success for minority students.

The impact of admitting African Americans to medical school is far-reaching. African Americans with advanced degrees tend to have a stronger commitment to their communities than their white counterparts; African American medical doctors are more than twice as likely to hold leadership positions than white doctors (Bowen & Bok, 1998). In addition, URM physicians
treat minority and poor patients at a higher rate than white physicians (Keith, Bell, Swanson & Williams, 1985). Minority graduates are more likely to use their educational backgrounds to serve their communities and make a positive difference in society at-large (Bowen & Bok). Gartland, Hojat, Christian, Callahan, and Nasca (2003) found that the African American physicians in their study practiced medicine in areas that were socioeconomically deprived at a significantly higher rate than white physicians. African American physicians participating in their study were also significantly more likely to practice in geographic areas suffering from physician shortages.

While professional schools typically judge applicants initially using grades and test scores, Joubert-Thompson (2000) found that several scholars believe noncognitive traits are more predictive of academic success for African American students (Arnold, 1993; Nettles, Thoeny, & Gosman, 1986; Sedlacek, 1998). Noncognitive qualities include factors such as educational aspirations, motivation, and self-concept (Joubert-Thompson). In fact, the purpose of the medical school admissions interview process is to look for noncognitive traits that are found to be indicative of success in medical school. However, for most medical schools, an applicant is initially evaluated utilizing his or her grades and test scores. The absence of a way to consider these noncognitive factors through an application may put many African American students at a disadvantage.

Even applicants who do make it through the preliminary screening may still have their chances of being accepted to medical school quelled due to lower grades and test scores. Shaw, Martz, Lancaster, and Sade (1995) found a significant difference in the ratings of interviewers who had access to medical school interviewees’ grades and test scores when compared with those who did not review any grades or test scores prior to interviewing. Interviewers found
fewer applicants qualified for medical school based on noncognitive traits when applicant files included grades and scores. This indicates that grades and scores can cause bias on the part of the interviewer even when he or she is looking specifically for noncognitive qualities. This study suggests that if an applicant’s grades and scores are not viewed as competitive, their noncognitive traits will not be highly valued as indicators of academic success. If these noncognitive factors are better predictors of scholarly achievement for African Americans, these students will continue to be at a serious disadvantage.

In light of the attacks against affirmative action, its existence in the medical school admission process is threatened. Many medical schools are considering new race-neutral approaches to admission that still ensure a racially and ethnically diverse class (Steinecke, et al., 2007). The authors outline four existing approaches to race neutral admissions including the use of traditional standardized measures, namely grades and test scores, socioeconomically based measures, adversity indices, and community outreach strategies. Race-neutral approaches that do not rely solely on grades and test scores and still attain diverse classes have not been widely implemented and researched in medical school admissions and, as such, would require a leap of faith for admissions offices.

African Americans Attending Predominantly White Institutions

African Americans of the early nineteenth century saw education as a means to lift up their race and escape oppression (Goodchild & Wechsler, 1997). Prior to 1954, African Americans were largely educated separately from white students and did not have the same academic opportunities open to them (Garrison-Wade & Lewis, 2004). While Oberlin College in Ohio was not the first institution to admit African American students, it was the first predominantly white institution to adopt a policy for admitting African Americans on an equal
basis with whites (Irvine & Dunkerton, 1998). For the first time, African Americans experienced regular admission to a college curriculum. Oberlin awarded degrees to many African American leaders and awarded the first bachelor’s degree (A. B.) to an African American woman, Mary Jane Patterson, in 1862. In fact, by 1900, nearly half of the 128 African American college graduates had graduated from Oberlin.

Despite Oberlin’s reputation for being friendly and supportive to African Americans, the institution was not beyond battling with instances of race-based discrimination (Bigglestone, 1971). These instances included segregated housing for students as well as student hostility toward African Americans. African Americans have spent many years fighting for the same educational rights and personal freedoms that many whites have taken for granted. Even within alleged welcoming environments, African Americans have continued to face harsh discrimination.

The history of Oberlin College is mentioned to illustrate the discrimination that African American students face even at institutions that appear welcoming. Although this example is taken from a time in U. S. history when African Americans did not have constitutional rights equal to those of non-minorities, discrimination continues on many predominantly white campuses today (Fries-Britt & Turner, 2002; Suarez-Balcazar et al., 2003). Experiences of racism and discrimination have been found to be an obstacle for post-secondary educational attainment for African American students (Fries-Britt & Turner). Suarez-Balcazar et al. reported that African American students in their study encountered more “incidents of differential treatment” than Latino, Asian, or Caucasian students (p. 438). Overt and covert discrimination no doubt contributes to the lower retention rate of African American students attending predominantly white institutions when compared with non-minority students (Lee, 1999).
Because of the hostile environments that African American students perceive at PWIs, many African Americans choose to attend historically black colleges and universities (HBCUs). HBCUs were founded to educate African Americans who were excluded from higher education institutions, with a few exceptions, in the mid nineteenth century. After the Civil War, over 200 HBCUs were founded by 1890 (Brown & Davis, 2001). The Morrill Act of 1862 provided funding to Union states to establish colleges for educating Americans in professions considered to be practical at the time; African Americans did not benefit greatly from this act. A second act was passed in 1890 extending funding to the sixteen southern states. The southern states chose to educate students in a “separate, but equal” fashion. Hence, the bulk of HBCUs were founded in seventeen of the nineteen southern states (Brown, 1999). Recent data from the fall of 2002 show that 12% of students enrolled in college are African Americans (American Council on Education, 2005). As of the 2000 U.S. Census, African Americans made up nearly 13% of the population (U.S. Census Bureau, 2000).

Recognizing the benefits of a diverse student body and faculty and, in some cases, succumbing to societal and political pressure to diversify their campuses, many predominantly with institutions have begun to aggressively recruit African American students. Research has shown that African Americans attending PWIs face additional challenges and barriers to achieving success when compared to white students (Hurtado, Milem, Clayton-Pedersen, & Allen, 1998; Nora & Cabrera, 1996; Schwitzer, Griffin, Ancis, & Thomas, 1999; Thompson & Fretz, 1991). Through survey research, Allen (1993) found that African American students attending PWIs were less satisfied with their experience than African Americans who attended HBCUs. Having a small representation on campus, African American students oftentimes felt alienated and isolated (Hurtado, et al.). Feelings such as these, as well as encounters with
racism, have contributed to an attrition rate for African Americans attending PWIs that is significantly higher than that of white students (Thompson & Fretz). The National Collegiate Athletic Association reported that white students had a six-year graduation rate that was approximately 20% higher than African Americans (Reyes, 1997).

Much progress has been made over the past few decades in increasing campus diversity at predominantly white institutions. Despite the growth in the number of racial and ethnic minority students attending PWIs, these institutions have yet to develop campus climates that are truly welcoming to all students. Creating warm campus climates requires not only a commitment to increase in the number of minority students and faculty members, but the development of minority campus programming as well as the education of faculty, staff (Mayhew, Grunwald, & Dey, 2006), and students on multicultural issues (Sullivan Commission, 2004).

The need for an increase in the enrollment of African Americans in medical school has been well documented (Carlisle et al., 1998; Curtis, 2003; Collision, 1997; Hung, McClendon, Henderson, Evans, Colquitt, & Saha, 2007; Lloyd & Miller, 1989; Odom, Roberts, Johnson, & Cooper, 2007; Smedley et al., 2001; Steinecke et al., 2007; Sullivan, 1992; Sullivan Commission, 2004). HBCUs have traditionally provided a significant percentage of African American medical school matriculants (Atkinson et al., 1994; Curtis, 2003; Oyewole, 2001). While HBCUs have been noted for providing a more nurturing environment for African American students, the majority of African Americans attend PWIs (Allen, 1993; Astin, 1985). According to the National Center for Education Statistics, in 2001 only 12.9% of African American college students were attending HBCUs (Provasnik & Shafer, 2004). With more
African Americans attending PWIs, the question arises: are these students receiving premedical advising that is comparable to students attending HBCUs?

Existing literature indicates that college students are more likely to complete a bachelor’s degree if they feel connected to the institution they attend (Kuh, Schuh, & Whitt, 1991; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella & Terenzini, 1991). The same holds true for African American students (Harris & Nettles, 1996; Sedlacek, 1999; Tinto, 1993). However, it is more challenging for minority students to feel a connection and a sense of belonging when attending a predominantly white institution. College students tend to feel more comfortable around others who are like themselves (Mack, Tucker, Archuleta, DeGroot, Hernandez, & Cha, 1995); at a PWI, African Americans do not see many students who they perceive to be like themselves. Again, this can lead to feelings of alienation and isolation (Schwitzer et al., 1999).

While many colleges and universities nationwide have made attempts to increase African American enrollment, improvements in campus climates are still needed. Increasing the number of African American students is positive in that it expands the level of diversity, but if campus climates remain chilly, African American students will more than likely not stay at the institution (Tinto, 1993). Ensuring diversity requires more than simply enrolling African American and other minority students; it requires students, faculty, and staff to be open and dedicated to respecting people of all ethnic and racial backgrounds (Sullivan Commission, 2004).

Allen (1993) found that the “fit between black students and white colleges is not very good” (p. 179) and that the attrition rate for minority students attending PWIs is high. African American students attending PWIs were less satisfied with their college experience than African Americans attending HBCUs. Higher grades were reported for African American students attending HBCUs. Interpersonal relationships, including relationships with faculty members,
were shown to be beneficial in contributing to the success of minority students attending PWIs. Faculty relationships have also been seen to determine the level of satisfaction of students’ college experience as well as contribute to their success (Allen, Epps, & Haniff, 1991; Fries-Britt & Turner, 2002).

African American students attending PWIs reported a greater need for formal campus programs, informal faculty contacts, and social activities than white students (Odom et al., 2007; Polite & Davis, 1999; Schwitzer et al., 1999). African American students saw these types of activities as a way to help them deal with academic, racial, and social problems on campus. A strong social support system had a positive effect on African American students while a lack of this support had extreme negative effects along with discrimination by faculty, administrators, and peers. African Americans attending PWIs demonstrated a greater requirement for a support system as compared to white students, but at most PWIs that support was not always easily found (Allen, Epps, & Haniff, 1991). This further illustrates the point that faculty and professional advisors have the potential to serve as a link between African American students and the institution.

Schwitzer et al. (1999) studied the social adjustment experiences of African American college students and found results similar to Allen (1993). For African Americans attending PWIs, four specific features of social adjustment emerged: sense of underrepresentedness, direct perceptions of racism, hurdle of approaching faculty, and effects of faculty familiarity. The study utilized student-run focus groups to gather information from African American seniors attending a PWI. Student responses included feelings of isolation along with having less support than they were used to in their home environments, experiences of racism, and hesitation in approaching faculty except when students perceived faculty as being similar with regard to
ethnicity, gender, or academic specialty. Schwitzer et al. suggested that providing mentoring opportunities for African Americans might help ease their adjustment to life at a PWI. University level interventions intended to improve faculty and staff awareness of the issues that African Americans face may also prove beneficial to African American students. Individuals have often been limited by their own cultural perspectives and can be unmindful of the challenges faced by those of different races and ethnicities (McIntosh, 1990; Mitchell & Rosiek, 2005). However, awareness has been found to be only the first step in creating a welcoming environment where the needs of African American students are addressed and prioritized. Faculty, staff, and administrators must value the participation, persistence, and success of African Americans.

Noncognitive factors such as attitude and motivation have been found to play a larger role than grades when African American students have decided to leave an institution (Reyes, 1997). A study by a private firm, Noel-Levitz, concluded that 37 percent of African Americans who chose to leave an institution had grade point averages of 2.5 or higher (Reyes). Again, this suggested that for many African American students, the decision to persist in college is affected by more than just academics. Advisors have the potential to positively influence African American students’ college experiences.

Several scholars have pointed to the importance of faculty and staff interaction with African American students to foster these students’ academic and personal development (Allen, 1996; Bynum, 1999; Odom et al., 2007; Reyes, 1997; Schwitzer et al., 1999). Stewart, Russell, and Wright (1997) highlighted the significance of advising relationships in assisting with retention of African American students at PWIs. Many large universities have employed professional academic advisors or counselors to provide advisement to students. Along with
faculty, academic counselors have also been in a position to assist in the academic and personal development of African American students. Academic counselors have provided academic guidance and have played a critical role in the overall development of students as well (Kuh et al., 1991; Kuh et al., 2005). While academic counselors’ main objective has been to help students work through issues and concerns related to school, often times personal problems emerge. Personal difficulties, if left unattended, have the potential to affect a student’s academic performance negatively.

Just as faculty members need to be aware of the unique needs of African American students, advisors must also be sensitive to those needs. If the goal of academic advising is to assist with the overall development of students (Kuh et al, 1991; Kuh et al., 2005), then counselors and advisors need to understand that students’ identities are inseparable from their racial and ethnic backgrounds (Ladson-Billings, 2000; Paniagua, 1994). Gordon (1997) notes the resistance that first generation and minority students have toward seeking assistance when dealing with personal, academic, and financial difficulties. The hesitance of minority students to ask for help provides further emphasis for the need for advisors and counselors to make asking as easy and comfortable as possible.

Joubert-Thompson (2000) looked qualitatively at the success of African American students attending a PWI. She posited that factors such as self-concept, academic motivation, and goals/aspirations are better predictors of success for these students than test scores and grade point averages. Perhaps these predictors of undergraduate success can also translate to success in medical school. If so, Joubert-Thompson’s study could have implications beyond the undergraduate environment.
Academic Advising

According to the National Association of Academic Advisors (2002), academic advising is an indispensable component of students’ collegiate experience. The development of each individual academic advising program stems from the institution’s culture, values, and procedures (NACADA). Academic advising is critical to student development and is one of the few institutional practices common to all students.

Advising services vary by campus and are usually determined by the size, mission, and needs of the institution. Advising literature indicates that there are three broad organizational structures of advising systems (Pardee, 2004). Decentralized models include the use of either faculty or full-time/professional advisors to advise students within an assigned department or academic subunit. A centralized model involves assigning all students to an advisor within a centralized advising or counseling office and sometimes limits the involvement of faculty in the advising process. Most common are the four shared organizational models in which students are either assigned to a central advising office or a departmental faculty advisor (supplemental model), are either assigned to a centralized advising office and later assigned to an academic unit or are initially assigned directly to a departmental advisor (split model), are assigned to both a centralized office advisor as well as a departmental advisor (dual model), or are assigned to a centralized advising unit upon entrance to the institution and later to a departmental advisor (total intake model) (Pardee, 2004).

The identified advising systems specify who is advising students and includes faculty, full-time advisors, counselors, paraprofessionals, and peers (King, 1992). Most commonly, faculty and full-time or professional advisors and counselors provide academic advising on college campuses. Members of each group bring different strengths to the advising process.
Faculty advisors have a background and expertise in their respective academic areas and can therefore provide specific information regarding a student’s course work or career goals (King, 2002). Professional advisors and counselors on most campuses come from a student development and/or mental health counseling perspective and can therefore develop strong helping relationships with students (King). King believes that the best advising programs incorporate the use of both faculty and professional advisors or counselors in that they each bring unique qualities to the advising process that benefit students.

Up until the end of the nineteenth century, academic advising was solely a faculty responsibility (Goetz, 1988). Given the broad array of curricula that are offered today and the need for student guidance, many institutions employ full-time staff trained to advise students on academic as well as personal matters. Examples of activities in which advisors assist students include registration, sharing academic and career information, and reviewing progress in meeting degree requirements. The primary goal of an academic advising program is to “assist students in the development of meaningful educational plans that are compatible with their life goals” (http://www.nacada.ksu.edu/Profres/standard.htm, 2002; http://www.nacada.ksu.edu/Profres/corevalu.htm, 2002).

Ideally, academic advisement goes beyond assisting students with course selection (King, 2005). Advising can be used to intervene and positively influence the academic and personal development of students (Baxter Magolda, 2003; Herndon, Kaiser, & Creamer, 1996). Herndon et al. point out that academic advising was modeled using student development theory; academic advisors not only help students with course registration, but also assist with decision making, career and academic planning, and notify students of referral resources. In reality, the academic advising that often occurs at large research extensive institutions is brief and has even been
referred to as “firefighting” (Tuttle, 2000, p. 19). Due to heavy advising loads, advisors do not always have enough time to spend with students to effectively employ a developmental advising approach and instead end up utilizing a prescriptive approach. Students can leave with a number of different interpretations of being rushed through an advising session, including leaving a session with the belief that the advisor or counselor did not care about their personal or professional development.

During the 1980’s and early 1990’s, an abundance of research was conducted on the importance of the out-of-class experience of college students (Christie & Dinham, 1991: Kuh, 1985; Kuh et al., 1991; Pascarella, 1985; Pascarella & Terrenzini, 1991). Through this research, academic advising was linked to student persistence and success (Goetz, 1988). There are a number of ways advising programs can be implemented on college campuses. Administrators must choose programs based on the needs of the institution. According to Crockett (1978) students considered four areas to be important in advising: accessibility, detailed and precise information, advice and counsel, and a personal relationship with the advisor. Other research conducted by Trombley (1984) showed that assistance with defining academic goals, choosing a major, and career development were significant to students.

An advisor’s self-perception stems from his or her interpretation of the advising role, training, administrative expectations, recognition, and rewards for competency (Petress, 1996). Students’ perceptions come from advisor interest, advisor competence, advisor availability, patience, preparation, and personality (Petress). Most institutions view advising as a mutual responsibility between the advisor and the advisee (National Academic Advising Association, n.d.). Advisors are expected to keep up-to-date on information regarding school policies and procedures as well as on graduate and professional programs to which students may apply
(National Academic Advising Association). Optimally, advisors should serve as student advocates and keep in mind that nonacademic issues affect academic performance (Kuh et al., 1991; Kuh et al., 2005).

**Advising Theories and Approaches**

A review of the advising literature reveals three basic advising models: developmental, prescriptive, and intrusive (Garing, 1992; Herndon et al., 1996; Winston et al., 1984). While all three models are employed on college and university campuses, the developmental approach appears to be the most widely used method among academic advisors and is strongly supported by research (Tuttle, 2000). More recently, the emergence of yet a fourth model, a constructivist approach, is underway. While this approach has yet to be widely utilized or studied in the field of academic advising, it directly relates to this study and is the basis for the conceptual framework through its relation to the field of mental health counseling (D’Andrea, 2000; Trippany et al., 2004; Vance, 1993; Vinson & Griffin, 1999).

Developmental academic advising is a holistic approach to assisting students with their overall academic and personal development (Winston et al., 1984). In fact, the developmental model provides the foundation for academic advising as a profession. Through developmental advising, both the student and the advisor share the responsibility of the advising relationship.

In contrast to the developmental model, prescriptive advising is a unidirectional method that involves the advisor giving advice regarding courses and choices of major (Herndon et al., 1996). The goal of prescriptive advising is to provide structure so that students can be certain to complete all degree requirements. Through this method, an advisor simply tells the student what courses to take with limited input from the student. Critics of this model state that prescriptive advising does not contribute to students’ overall development and maturation.
The intrusive model, more recently developed, requires frequent contact between student and advisor. Intrusive advising is intended to be proactive and serve as an intervention tool. The method has been shown to be an effective model for at-risk students, including URM students (Heisserer & Parette, 2002). Through this method, advisors “intrude” on students by requiring several visits throughout each semester. These sessions are intended to keep students focused on academic and personal goals; the frequent visits allow advisors to intervene and assist students promptly (Shultz, Colton & Colton, 2001). For example, a student who is on academic probation may be required to check in before and after exams for difficult subjects; if the student does not perform well on his or her first exam, there is still time to help the student salvage the course. The counselor can refer the student for tutoring or set up a meeting with the instructor of the course. Too often, students wait until the end of the semester to seek help from advisors. Intrusive advising is a way to increase the retention rates of at-risk students, including underrepresented minorities (Garing, 1992). Because students are required to meet with their advisors several times a year, the intrusive advising method is quite time-consuming and requires a dedicated staff as well as ample resources.

The developmental approach to advising has been characterized as the preferred model by advisors, counselors, and scholars. Saving and Keim (1998) looked at advising programs within Colleges of Business at two Midwestern universities. They found that when comparing the satisfaction with and perceptions of advising, advisors gave higher ratings of their own performance than students rated the performance of the advisors. This may have been due to the different expectations that students and advisors had of the advising process. The authors also discovered that while advisors thought they were advising students developmentally, the students
being advised did not agree. Implied in this study is the need for proper training of advisors on developmental models as well as a need for clearly defining the roles of academic advisors.

The Saving and Keim (1998) study provides evidence for the value of further developing a constructivist model of advising. The data indicate a divergence of perspectives between students and advisors. Both advisors and students bring their own unique views of the world to the advising session and have their own expectations. A constructivist approach by the advisor takes into account students’ unique perspectives and the impact they may have on advising sessions. Research in the area of constructivism as related to academic advising is limited. A National Academic Advising Association conference session on employing a constructivist approach to academic advising was presented in 2003 (Borrelli). While research indicates a developmental approach to be the most appropriate method of advising (Creamer & Creamer, 1994; Garing, 1992; Tuttle, 2000; Winston, Miller, Ender, & Grites, 1984), a constructivist approach warrants further exploration as a method of academic advising.

While constructivism in academic advising has not been widely studied, the approach has been documented as an effective method of mental health counseling (D’Andrea, 2000; Trippany, Barrios, Helm, & Rowland, 2004; Vance, 1993; and Vinson & Griffin, 1999). In fact, the constructivist approach has been seen to work particularly well with traditional college-aged students (Vinson & Griffin) as well as in multicultural counseling (D’Andrea). Constructivism in counseling is more a style than a specific technique. Through the use of this style, counselors understand that reality is constructed differently by individuals based on their unique experiences with the world. A constructivist approach takes into account the existence of multiple realities and, thus, counselors focus on listening to and reflecting on the stories of each individual client (Trippany et al.). Since many professional academic counselors are trained and licensed in the
area of mental health counseling, there is much knowledge to be gained from research in the area of counseling.

**Advising African American and Underrepresented Minority Students**

While scholars clearly document the important role academic advisors play in the success of college students (Garing, 1992; Herndon et al., 1996; Winston et al., 1984), this role is even more critical for African American students attending PWIs. Bynum (1999) suggests that it is possible for white counselors to develop strong relationships with African American students and have a positive impact on students despite ethnic differences. Often, when students are different racially or culturally from their counselors and advisors they report low satisfaction of the advising experience (Bynum). An advisors’ ignorance of a student’s cultural background can contribute to this low satisfaction. Bynum believes that talking to, listening to, and interacting with African American students is crucial to advising. Making students feel welcome and cared about is an initial component to developing a strong relationship.

Herndon et al. (1996) found that African American students attending a community college sought academic advising less often than white students. The authors proposed that African American students either did not believe they needed to speak with an advisor or were hesitant in asking for help. Those students who did receive advising preferred developmental over prescriptive advising. While this study did not specifically address why these students preferred developmental advising, Herndon et al. speculated that the students wanted to be part of the decision-making process regarding choices that effected their academic careers.

Astin (1985) and Crockett (1978) have recognized academic advising as critical to student retention. Campus involvement as a means to feel connected has been documented as fundamental to student persistence in higher education (Astin). The development of this
A connection has been shown to be especially critical for African American students attending PWIs (Sedlacek, 1999; Tinto, 1993). Academic advisors have served as a link between students and the university. Advising has been mentioned repeatedly as a valuable way of fostering a feeling of connection between students and their institutions (Brown & Rivas, 1992; Kuh, et al., 2005). Unfortunately, many students have rated advising as weak and often do not find advisors to be helpful (Saving & Keim, 1998). Brown and Rivas suggested utilizing a developmental approach to interracial advising. First, advisors need to develop an awareness of diversity of cultural experiences and understand how these differences affect advising relationships. Second, advisors need to assist students in realizing their academic potential so that they may recognize and experience the benefits of college.

Driven by Tinto’s work, Shultz et al. (2001) piloted a program to retain students of color at the Kutztown University in Pennsylvania. The researchers combined academic advising and mentoring to create the role of an Adventor. Faculty members volunteered to assist students of color who were considered at risk for early withdrawal from college. Faculty members were taught to use intrusive advising methods, such as requiring weekly sessions and checking up on students’ grades and progress. Faculty members also met with student participants on a casual basis and acted as friends. The general intent of the Adventor Program was to have the students connect with the university and feel a part of the campus community. Tinto’s work suggested that outside contact with faculty helps foster this connection. While limited in scale, the study demonstrated success with regard to minority student retention. A higher percentage of the Adventor participants returned to the institution for their second year than did students from the control group. Adventor participants also had a higher mean grade point average for their first
year than students of the control group. Such a program deserves further examination, perhaps on a larger scale.

Mitchell and Rosiek (2005) describe culturally responsive academic advising as going beyond appreciating a student’s culture to really understanding it. Non-minority advisors have the potential to learn from cultural minority advisors on predominantly white campuses. When they share a cultural identity with students, cultural minority advisors are uniquely situated to develop strong advising relationships. There is a level of understanding of culture that can be learned by outsiders, but not easily. Such understanding requires commitment on the part of the advisor. Cultural minority advisors are in a position to contribute to the cultural understanding as well as the personal and professional growth of non-minority advisors.

In addition to understanding and appreciating students’ cultural identities, advising relationships can be more effective if advisors recognize themselves as cultural beings. On predominantly white campuses, advisors are much more likely to be white. Advisors are in a position to serve as racial justice allies for students from traditionally oppressed groups. On a predominantly white campus, racial justice allies are members of the dominant culture who strive to create a campus environment that nurtures all students equally (Reason & Davis, 2005). The development of an understanding of white racial identity provides a foundation for assisting in the overall educational and personal development of students from diverse racial and ethnic backgrounds (Reason & Broido, 2005; Reason, Scales, & Millar, 2005). Three broad steps encompass the process by which advisors can emerge as racial justice allies, “(1) understanding racism, power, and privilege both intellectually and affectively; (2) developing a new white consciousness; and (3) encouraging racial justice action” (Reason, et al., p. 56). Advisors cannot
develop as racial allies without understanding the dynamics of racism and privilege as well as their influence in society.

**Culturally Responsive Teaching and Multicultural Counseling**

Humans are cultural beings. Culture is part of individual identity, an identity that includes more than just race and ethnicity, but also gender, socioeconomic class, religion, sexual orientation, nationality, and physical ability (Constantine, Hage, Kindaichi, & Bryant, 2007; Robinson & Howard-Hamilton, 2000). Culture is fundamental to human development, so much so that individuals are often unaware of its existence or the impact that it has on their worldviews (Robinson & Howard-Hamilton). Advising students from a developmental or constructivist perspective requires a holistic approach. Such an approach necessitates an advising method that not only considers students’ cultural perspectives, but advisors’ as well. Being that advising relationships incorporate teaching and, to some extent, counseling, a mention of the culturally responsive teaching and multicultural counseling literature is warranted.

Culturally responsive teaching places student culture at the center of learning (Howard-Hamilton, 2000; Nawang, 1998). Cultural differences among students and teachers are real and researchers believe such differences are best not ignored so that all involved in the learning process can benefit from the experience of others (Lee, 2001). Educational researchers have studied the impact of culture on the classroom setting and how culture can be used to enhance learning for students. Transformative pedagogy incorporates an awareness of race, gender, and class throughout the teaching process (hooks, 1994). Transformative learning theory integrates the learner’s frame of reference into the process and uses students’ unique perspectives as a function of learning (Mezirow, 1997). Ways in which individuals see themselves and the world around them are challenged (Brown, 2004). Through transformative learning, educators force
students to rethink who they are and acknowledge that individual differences cause people to understand environments in unique ways.

Ladson-Billings (2000) emphasizes that in order to effectively educate African American students, educators must recognize and pay attention to the impact that race and racism have on students’ lives. She goes on to say that while cultural minority students may share similar experiences of discrimination and racism, their experiences are not equivalent. Respecting each student’s individual perspective and the ways in which each can contribute to the learning process enhances the classroom environment for all students. Offering the same treatment to students does not necessarily mean treating them equally. Because students come from unique cultural backgrounds and their strengths vary greatly, different teaching approaches are necessary based on individual needs. In fact, Ladson-Billings indicates that teaching African American students using mainstream methods will not only fail to meet their educational needs, but the disparity that exists between African American and non-minority student success will continue to grow.

Most courses continue to be taught from the perspective of mainstream Euro-American culture and unfortunately this perspective leaves out culturally minorities (Cross, 1995; McPhail & Costner, 2004). Teaching from one perspective is damaging in multiple ways; not only does it limit the participation and learning experience of cultural minority students, but students of mainstream culture are not given the opportunity to learn from the experiences of those from diverse backgrounds. Cross specifies that curricula should offer students the opportunity to see themselves as well as others and that student identity cannot be separated from curricula and cultural contexts. Perhaps fear prevents more teachers from using the diversity of their students to enhance the learning process. Palmer (1998) believes that many educators experience a fear
of accepting diversity in that they will likely be faced with uncomfortable realities about themselves and that diversity often leads to conflict in the classroom. Feminist teaching pedagogy values cultural diversity and sees conflict as an avenue for a positive learning experience for all participants. Because this pedagogy incorporates individual differences into the learning process, Smith-Adcock, Ropers-Huilman, and Choate (2004) propose ways in which the five basic tenets of feminist teaching can serve to inform the ways prospective counselors learn about counseling culturally diverse clients: (1) Feminist educators value experience as knowledge. In a multicultural counseling course, students can learn about diverse cultures through sharing experiences and working through conflicts. (2) Feminist teachers appreciate experiential and scholarly knowledge. By incorporating both types of knowledge into the learning process, students are able to interconnect research and scholarship with their personal experiences to further understand multicultural complexities. (3) Feminist pedagogy recognizes the effects that identity has on the educational process. Through the inclusion of multiple identity perspectives, students learn to appreciate the viewpoints of others. (4) Feminist teaching challenges the power hierarchy that exists between teachers and students and seeks to empower students. Such an approach allows teachers to participate in the learning experience along with students and share their own personal experience regarding cultural biases. (5) Finally, feminist teaching advocates social change. Multicultural counseling students are in an ideal position to serve as catalysts for social change by tackling issues of institutional oppression through their work as counselors.

Like education, traditional counseling was born out of white culture (Richardson & Molinaro, 1996). Robinson and Howard-Hamilton (2000) explain how “the traditional counseling paradigm, as it is known in Western society, was framed by cultural nuances” (p. 5).
There are three models of cultural differences that have evolved over time as identified by Sue and Sue (1990): the genetic deficiency model, the cultural deficiency model, and the culturally diverse model. In the 1950’s scientists professed that minorities were genetically inferior to whites (Robinson & Howard-Hamilton). The cultural deficiency model explained minority inferiority by pointing out the cultural depravity of those with family and economic lifestyles different from mainstream society (Robinson & Howard-Hamilton). The third model supports the current notion of multicultural counseling; this model accepts that cultural differences exist and those differences should be incorporated and considered throughout the counseling process (Robinson & Howard-Hamilton).

Studies confirm that clients from diverse ethnic and cultural groups tend to mistrust and hold low expectations of white counselors (Richardson & Molinaro, 1996). Most counselor education programs now include multicultural counseling courses or incorporate multicultural issues into all counseling courses in order to meet national accreditation. While multicultural counseling courses are offered through many counseling graduate programs, studies indicate that personal interracial experience provides a stronger influence in counselors’ perceived multicultural competency than multicultural counseling courses or workshops (Heppner & O’Brien, 1994). Likewise, another study found that training in multicultural counseling does not guarantee the acceptance and practice of multicultural counseling skills (Steward, Morales, Bartell, Miller, & Weeks, 1998). Researchers believe that in order to properly train counselors to meet the needs of diverse populations of clients, counselor educators must look beyond the goals of multicultural counseling competency and focus on the process of developing such competencies (Collins & Pieterse, 2007).
The American Psychological Association stated a need for cultural competency for those in counseling professions (Paniagua, 1994). The organization indicated that counselors should be aware of cultural, individual, and role differences including those due to age, gender, race, ethnicity, national origin, religion, language, and socioeconomic status. Awareness of one’s own assumptions, values, and biases has been considered the basis of multicultural competency (Arrendondo, 1999). The American Counseling Association’s understanding and expectations of multicultural and cross-cultural competencies, standards, and objectives are outlined in the work of Sue, Arredondo, and McDavis (1992). Adopted in 1991, the competencies and standards, outlined in the article continue to serve as the preferred model of multicultural counseling (http://www.counseling.org/Counselors/). Sue, Arredondo, and McDavis discussed three major components of multicultural counseling competency: (1) the awareness of one’s own culture, (2) the awareness of clients’ worldview, and (3) the use of culturally appropriate counseling and intervention strategies.

Respect for the cultural perspectives of clients is considered to be the counselor’s ethical responsibility as well as developing awareness of other cultures and the necessary skills to work with a diverse population of clients (Arrendondo, 1999; Collins & Pieterse, 2007). Counselors are expected to use understanding to cultivate appropriate intervention strategies and techniques that match the culture of the client with whom he or she is working (Arrendondo). As the American Counseling Association’s Code of Ethics mandates, counselors are obliged to appreciate that each individual has a unique perspective seen through his or her own cultural lens (Robinson & Howard-Hamilton, 2000).

Panigua (1994) described the importance of openly discussing racial issues with clients and the need of counselors’ acknowledgement of their own values and morals as they relate to
their own culture. However, counselors have been urged not to make generalizations based on a person’s culture, but rather should be open to talking about cultural issues, keep informed of these issues, and acknowledge that differences exist. Issues related to race that arise during a counseling session are best addressed immediately; counselors should not avoid talking about race (Collins & Peiterse, 2007). Multicultural counseling research has indicated that a counselor’s competency as a mental health professional is more important than a counselor’s race (Robinson & Howard-Hamilton, 2000).

In order to provide effective counseling to individuals of diverse racial and ethnic backgrounds, counselors must develop an awareness of their own worldview, cultural value system, and racial identity. Through awareness, counselors have the potential to positively influence the counseling process and outcomes for culturally diverse clients (Ottavi, Pope-Davis, & Dings, 1994) and in a broader sense, act as agents of positive social change (Constantine et al., 2007).

As somewhat of a cross-section of teaching and counseling, the study of advising stands to benefit from culturally responsive teaching and multicultural counseling literature. The common themes established throughout this literature are the importance of developing awareness of one’s own culture and acknowledging and respecting the cultural differences of others. There are implications for advising in that successful relationships with students from diverse cultures are best developed through the awareness and acknowledgement of the impact of culture.

Advising Minority Students Applying to Medical School

Advising is a critical component for students enrolled in any premedical program. Premedical advisors serve as a liaison between medical schools and applicants (www.naahp.org).
Advisors are in a position to provide students not only with information regarding the medical school application process, but also about what grade point averages, test scores, and types of activities are needed to be competitive. This type of information is valuable to students. In a recent survey of the 2004 medical school matriculants, 54.3 percent of respondents reported that the advice from a premedical advisor was “somewhat important” to “very important” (www.aamc.org.data/facts.start.htm, 2004).

Premedical African American students are a small population on most PWI campuses. African American students attending PWIs often have unique needs and face considerable challenges. The addition of the desire to perform well academically in order to secure admission to medical school exacerbates the stress that African American students often feel. Van Houten (1998) offers some suggestions to underrepresented minorities applying to medical school. Students should get to know their premedical advisor at their institutions; this person will likely be able to answer questions and offer advice. Students should familiarize themselves with important publications related to medical school, such as the Medical School Admissions Requirements guide. Van Houten encourages minority students to get involved in extracurricular organizations and participate in enrichment programs that are offered through most medical colleges. While they may be helpful, the suggestions Van Houten presents in this article are not really different from advice that would be considered beneficial for any applicant, regardless of race, further substantiating the need for guidance specific to African American students.

Premedical advising has been shown to have a positive impact on minority admission to medical school. Atkinson et al. (1994) compared the medical school admission rates among nine HBCUs. Among several factors that contributed to students’ admission to medical schools was
the strength of the institution’s premedical advising program. They found that when grade point averages and MCAT scores for all applicants were comparable, students who applied from schools with stronger advising programs were more likely to be admitted to medical school. Stronger advising programs were noted as having advisors who had relationships with medical schools admissions staff and membership in national health advising organizations. Despite the focus on HBCUs, this study has implications for PWIs as well. Developing strong advising programs through interaction with medical schools and continuous professional development can be practiced at all undergraduate institutions; however, perceptions of advising programs of African American students attending PWIs would most likely be much different than African Americans attending HBCUs.

HBCUs have been noted as offering more nurturing environments for African American students than PWIs (Polite & Davis, 1999). Some HBCUs, for example, Xavier University in New Orleans, LA, have stood out by having particularly high acceptance rates to medical school (Oyewole, 2001). Xavier University produces more African American medical school matriculants than any other undergraduate institution in the nation (Curtis, 2003; Moller, 2005). Xavier University has been able to offer personal attention to each student, which may have contributed to such a high acceptance rate to medical school.

One key difference between schools such as Xavier University and some predominantly white institutions is size. Many HBCUs are relatively small compared to large PWIs. Xavier has an enrollment of less than 3,500, similar to many HBCUs with a handful of exceptions. Most of the large HBCUs are around 10,000 students, still quite small compared to 20,000 or 30,000 students attending a research extensive PWI. Premedical advisors may be responsible for hundreds of students at large institutions. While it is difficult to find a consensus on an
appropriate advising load, Habley (2004) suggests that 300:1 is a preferable number of students per full-time advisor. According to the 2000 NACADA survey of academic advisors, 32% of advisors from public research institutions were responsible for advising more than 500 students. Advising such a large student population makes it difficult for advisors to give personal attention to African American students that the literature demonstrates is critical (Gilbert, 2003).

Summary

My review of the literature indicates the existence of a shortage of underrepresented minorities in medicine. This shortage is seen as a crisis by the American Association of Medical Colleges, leading to formal initiatives, the most recent of which began in the fall of 2006, to increase URM enrollment in medical school. The shortage of underrepresented minorities in medicine, and in healthcare in general, will continue to have a negative impact on society, especially in poorer and medically underserved communities. An increase in the number of African American physicians will take more than the use of affirmative action in professional education. Students must persist and succeed at the undergraduate level in order to enter medical school. Academic and faculty advisors are nicely situated to help African American students succeed at the undergraduate level by fostering a connection between students and the institution as well as by sharing available resources. Advisors are also in a position to give information regarding the medical school application process while taking into consideration the unique needs of each student.

Through this study, I learned about the advising that is taking place at PWIs for African American students. In speaking with premedical advisors, I obtained an understanding of their perceptions in working with this specific population of students. Evidence suggested that effective advising is critical for African American students attending PWIs. In order to move
toward more effective models of advising premedical African American students, an
examination of existing programs was conducted. Part of this examination involved establishing
the existing norms and understanding how advisors perceived the advising in place at their
institutions, as well as their role in increasing African American admission to medical school.
Since there is little to no experimental research on the different perspectives of professional and
faculty advisors or on how student enrollment affects those perspectives, I have included these
dimensions in this study. Coming from divergent philosophical angles, distinct advising
approaches of faculty and professional advisors were expected, however most of the differences
that emerged were related to institutional size.
CHAPTER III – RESEARCH METHODS

Due to the gap in the existing literature with regard to the advisement of premedical African American students attending predominantly white institutions, I conducted a large-scale examination in order to collect data from a comprehensive and diverse array of participants. A substantial sample was necessary to provide meaningful descriptive and inferential statistics and best represent the population (Lewin, 2005). At the same time, gathering rich qualitative information permitted me to understand in more depth premedical advisors’ individual and collective perspectives. To satisfy both objectives, I implemented a mixed methods study (Tashakkori & Teddlie, 1998). By using a combination of qualitative and quantitative methods, I was able to gather narrative data as well as descriptive and inferential statistics that informed me about the advisement that is taking place, differences that exist, and how advisors view their role in increasing African American students’ admission to medical school.

Tashakkori and Teddlie (2003) highlight three major reasons for utilizing mixed methods. First, mixed methods research can answer questions that qualitative or quantitative inquiry alone cannot answer. Because mixed methods research can be exploratory and confirmatory, studies utilizing these techniques can generate and lend support for theories at the same time. Second, mixed methods research provides better and stronger inferences through the juxtaposition of different approaches. A carefully designed mixed methods study has the potential to have each method cancel out the weaknesses of the other. The combination of qualitative and quantitative inquiry can add breadth and depth to a study. The third advantage to using mixed methods is to allow for a greater diversity of views. Utilizing different approaches within a single research project provides the potential to find conflicting results. Contradictions can then lead to a necessary reexamination of existing theory.
Orellana and Bowman (2003) suggested the use of both qualitative and quantitative methods when conducting diversity research so as not to treat race, ethnicity, culture, and social class as fixed categories rather than the complex social ecologies that they are. This study was designed to examine perceptions of advising relationships with African American students. The utilization of both qualitative and quantitative methods allowed a thorough investigation of the complexities of those relationships.

I implemented a sequential QUAL/quan two-phase mixed model design, exploratory in nature (Tashakkori & Teddlie, 2003). The design includes two phases: the first involved conducting case studies; the second entailed performing a survey/questionnaire. While my main interest was in the qualitative data that I obtained from in-depth interviews, it was beneficial to gather survey data in the second stage of my study as a follow-up to the qualitative data analysis. Questionnaires are an effective venue for gathering information from a large number of participants (Gall et al., 1996). The survey includes questions regarding demographics as well as general information about counselor and advisor attitudes toward culturally diverse student interactions, with the focus being placed on their interactions with African American premedical students. This study includes two separate, but interconnected stages, one qualitative and one quantitative, each applied separately.

This sequential design worked well because it allowed me to use data from the first phase of the study to develop appropriate questionnaire items. The interview responses permitted me to explore advisors’ perspectives on the challenges they face with regard to advising African American students and tailor a survey that got to the core of these perceived challenges. By first conducting in-depth interviews, I learned about what concerns related to advising African
American premedical students were pertinent to advisors. I was then able to formulate questionnaire items representative of those concerns.

The survey data broadly illustrated demographic information including the total number of premedical students, number of African American premedical students, faculty versus professional advisors, educational background of advisors, whether advisors received any formal multicultural counseling or diversity training, their attitudes toward advising African American premedical students, and whether or not advisors utilized unique approaches when advising African American premedical students. Questionnaire responses revealed whether there were any particular patterns in the attitudes of advisors and counselors who work in similar academic settings, serve in like positions, and have comparable educational backgrounds.

Including both quantitative and qualitative methods gave depth and breadth to the study. The interviews gave me direction regarding what items to include in the questionnaire; the survey provided information about advisor preferences as well as demographic information. From the interview data I learned about what advisors perceived to be challenging about advising African American students as well as their feelings and attitudes toward culturally diverse counseling and advising. It would have been difficult to obtain this type of data quantitatively, without first assessing what advisors viewed as relevant advising struggles related to African American premedical students. The qualitative data analysis provided the basis for a meaningful questionnaire.

**Research Questions**

In order to effectively study the type of advising that is in place for African Americans attending PWIs, I formulated specific questions with which to guide this study:
Q1. In what ways, if at all, do advisors at predominantly white institutions consider the race and/or ethnicity of their premedical advisees?

Q2. In what ways, if at all, do advisors at predominantly white institutions consider the larger institutional and societal contexts in advising African American premedical students?

Q3. How do premedical advisors at predominantly white institutions perceive their role in increasing African American enrollment in medical school?

Each research question was analyzed both qualitatively and quantitatively. Through the quantitative analysis the research questions were evaluated using the dimensions of advisor differences in attitude across variables of advisors’ primary institutional roles (faculty advisor versus full-time professional advisor) and enrollment size of their institutions (<15,000 versus ≥15,000). The null hypothesis (H₀) utilized for the quantitative analysis was: No differences exist between advisors’ perspectives on advising African American premedical students based on their primary institutional role and/or institutional enrollment size.

Sample

Sampling methods for qualitative and quantitative research differ greatly. Mixed methods studies require the use of multiple sampling strategies in order to strengthen a study’s inference quality and inference transferability (Kemper, Stringfield, & Teddlie, 2003). In this study, two sampling strategies were utilized: purposeful and probability. I utilized the population of advisor members of the Southeast Regional Association of Advisors for the Health Professions (SAAHP) members from which to draw my qualitative sample and the population of advisor members of the National Association of Advisors for the Health Professions (NAAHP) for the quantitative sample. NAAHP is an organization that draws membership of nearly 800
pre-health advisors. Membership in NAAHP automatically provides membership in one of the four regional organizations. I chose to draw my samples from SAAHP and NAAHP because I believe that membership demonstrates a degree of professionalism and an interest in current issues affecting pre-professional students. Membership also indicates that an advisor is part of an active pre-professional advising program. Also, I believe my involvement in this organization made it easier for me to obtain a sample by allowing me to approach advisors as a colleague.

For the qualitative portion of this study it was important to select a small sample of advisors who could provide rich information regarding their perspectives of advising African American premedical students. I accomplished this through purposeful sampling (Patton, 1990). For the qualitative phase of the study, I selected a purposeful sample in three stages: criterion, maximum variation, and stratified sampling (Patton). First, subjects had to meet the criterion of advising premedical students attending a predominantly white institution. Secondly, I utilized a maximum variation strategy (Patton). Implementing a maximum variation sampling approach, I constructed a sample that was representative of the different types of advisors across various types of predominantly white institutions. Such a sample not only yields findings unique to individual cases, but also reveals common themes that emerge despite individual differences (Patton; Stage & Manning, 2003). Creswell (1998) asserts that maximum variation sampling allows the researcher to discover differences as well as identify shared patterns among subjects. Finally, the sample was stratified by primary role of the advisor (faculty member versus professional advisor), and institution size. Since this is an exploratory study, the findings indicated areas for further research.

The targeted population for the quantitative phase of this study was the members of NAAHP. Because this population was relatively small and accessible, all members of the
population who met the criterion of working for a predominantly white institution were selected to receive the questionnaire. Further, the sample was stratified into two groups: faculty and professional advisors. A random sample indicates that all members of the intended population have an equal chance of being selected (Gall et al., 1996). Through the sampling procedures employed in the quantitative phase of this study, all members of the intended population were selected (n=789). Since individual participation was self-selected and not necessarily reflective of the entire population, the sample was non-proportional.

Phase I Qualitative Sample

I selected each participant for Phase I based on institution size and type. Being interested in the differences between faculty advisors and professional advisors, I stratified the sample by advisors’ primary role at the institution. More specifically, I selected participants from large (≥15,000 students) and small (<15,000 students) as well as private and public predominantly white institutions. I focused on institutions located in states that have African American populations larger than that of the national average. For example, African Americans make up 32.5% of the population in Louisiana compared to 12.3% of the national population (U.S. Census Bureau, 2000). The assumption was that institutions in the Southeast region of the U.S. would be more likely to have higher enrollments of African American students and therefore advisors within this region would have more experience from which to draw during an interview. The assumption was that interviews with participants from the southeast region would produce rich data.

Because the qualitative sample came from a population of advisors who are regionally located, I conducted face-to-face interviews over the course of several months beginning in February 2006 and ending in September of 2006. Collecting data from a regional sample
strengthens the results of this study by including advisors who were diverse with regard to their geographic location in seven different states. I interviewed sixteen participants; seven were faculty advisors and nine were professional advisors. For the purpose of maximum variation, my intention was to have a substantial number of advisors from each stratus: large public universities with enrollments of greater than or equal to 15,000, smaller public institutions of less than 15,000 students, large private universities, and small private schools. What I found through the sampling process was that there are few large private institutions and few small public four-year institutions in the United States. The sample meets maximum variation sampling standards in that the sample includes a representation of typical institutions in the nation. All participants were selected from predominantly white institutions. Potential participants were selected from the membership list of the Southeastern regional organization of NAAHP based on geographic location, primary institutional role, and institutional size and type. Invitations to participate in the qualitative phase of the study were sent via email (Appendix A). Advisors who responded and agreed to participate were then contacted to set up an on-site interview. The interviews were conducted during six separate trips. The first trip included participants one through six, the second included participants seven through twelve, and the remaining trips included one participant each.

The sample included sixteen advisors from fourteen institutions in seven states located in the Southeast region of the United States. The sample consisted of advisors from the following states: Alabama, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Types of institutions represented were six large schools with total enrollment ranging from 15,306 to 23,333 and eight smaller schools with total enrollment ranging from less than 800 to 11,300. Seven institutions were private and seven institutions were public. All of
the private institutions had a student enrollment of less than 12,000; there were no private
schools that fit the description of large institutions located in the Southeast region of the United
States. Seven of the participants were faculty advisors while nine of the participants served as
full-time professional advisors. An overview of the interview participants is presented in Table
1. To protect the anonymity of participants, detailed information regarding individual
institutions has been excluded from Table 1.

Table 1. Phase I Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Type</th>
<th>Carnegie Classification</th>
<th>Total Enrollment</th>
<th>African American Enrollment</th>
<th>Primary Advisor Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Charyl</td>
<td>Private Lib Arts, Religiously-affiliated</td>
<td>Bac/A&amp;S: Baccalaureate Colleges-Arts &amp; Sciences</td>
<td>&lt; 5,000</td>
<td>6.5%</td>
<td>Faculty</td>
</tr>
<tr>
<td>2: Chuck</td>
<td>Large Public</td>
<td>RU/H: Research Universities</td>
<td>&gt;15,000</td>
<td>6.7%</td>
<td>Faculty</td>
</tr>
<tr>
<td>3: Gary</td>
<td>Large Public</td>
<td>RU/H: Research Universities</td>
<td>&gt;15,000</td>
<td>20%</td>
<td>Faculty</td>
</tr>
<tr>
<td>4: Karen</td>
<td>Large Public</td>
<td>DRU: Doctoral/Research Universities</td>
<td>&gt;20,000</td>
<td>15%</td>
<td>Professional w/faculty experience</td>
</tr>
<tr>
<td>5: Ed</td>
<td>Private Religiously-affiliated</td>
<td>Master's S: Master's Colleges and Universities (smaller programs)</td>
<td>&lt;5,000</td>
<td>9%</td>
<td>Faculty</td>
</tr>
<tr>
<td>6: Allen</td>
<td>Small Public</td>
<td>Bac/A&amp;S: Baccalaureate Colleges-Arts &amp; Sciences</td>
<td>&lt;5,000</td>
<td>2%</td>
<td>Professional w/Faculty role</td>
</tr>
<tr>
<td>7: Debra</td>
<td>Private</td>
<td>Master's L: Master's Colleges and Universities</td>
<td>&lt;1,000</td>
<td>12.5%</td>
<td>Faculty</td>
</tr>
<tr>
<td>8: Kelly</td>
<td>Private Religiously-affiliated</td>
<td>RU/VH: Research Universities</td>
<td>&lt;12,000</td>
<td>9%</td>
<td>Professional</td>
</tr>
<tr>
<td>9: Pam</td>
<td>Large Public</td>
<td>RU/VH: Research Universities</td>
<td>&gt;15,000</td>
<td>32%</td>
<td>Professional</td>
</tr>
</tbody>
</table>

(table continued)
The membership directory for the National Association of Advisors for the Health Professions was utilized to develop a list of names and email addresses for advisors who would receive the questionnaire. Members from Historically Black Colleges and Universities and members from professional schools were not included. An online questionnaire created through SurveyMonkey.com was sent to 789 faculty and professional advisors in November 2006. Email invitations were sent out in groups of 200 in an effort to avoid messages being rejected as spam (Appendix B). Eighty-five of the 789 email invitations came back as undeliverable; 704 advisors received email invitations. Researchers suggest a sample size of at least 100 in each major subgroup for survey research (Gall et al., 1996). The literature on response rates for surveys and questionnaires varies widely. Heberlein and Baumgartner (1978) conducted a comprehensive study of mail survey response rates and found an average rate of 48% for initial mailings and up to 89% with three follow-ups. Dillman (1991) discovered that response rates
ranged from 60% to 80% for samples that do not include participants with limited education. In contrast, Sax, Gilmartin, and Bryant (2003) conducted a web-based survey with college students and received back only 21% of the surveys.

In November 2006, faculty and professional advisors working for PWIs from this population were sent an email letter explaining my study and an invitation to participate via a link to the online questionnaire (see Appendix B). Of the 704 advisors who received the initial invitation, 155 advisors responded and 141 submitted completed surveys. Reminder email notices were sent in December requesting participation from advisors if they had not already done so (Appendix C). A total of 204 advisors responded and 175 completed the entire questionnaire, by the close of the survey on December 18, 2006. The reminder increased the response rate from 20% to nearly 25%. It is worth noting that the response rate from advisors at large institutions was somewhat lower than advisors from smaller institutions, with only 25% being from institutions with a student enrollment of 15,000 or more. Sample sizes for each subgroup are presented in Table 2.

Table 2. Phase II Participants

<table>
<thead>
<tr>
<th>Item</th>
<th>Response Choices</th>
<th>Percentage</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total student enrollment at institution (including graduate students)</td>
<td>Less than 1,000</td>
<td>5.7%</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>1,000 to 10,000</strong></td>
<td><strong>61.1%</strong></td>
<td><strong>107</strong></td>
</tr>
<tr>
<td></td>
<td>10,000 to 15,000</td>
<td>8%</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>15,000 to 25,000</td>
<td>15.4%</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>More than 25,000</td>
<td>9.7%</td>
<td>17</td>
</tr>
<tr>
<td>2. Institutional Type</td>
<td>Public</td>
<td>42.9%</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td><strong>Private</strong></td>
<td><strong>57.1%</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>3. Primary role at institution</td>
<td>Faculty Member</td>
<td>57.1%</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Professional Advisor</td>
<td>32.6%</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Career Counselor</td>
<td>4%</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Minority Affairs Staff</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Other (please specify)</td>
<td>6.3%</td>
<td>11</td>
</tr>
</tbody>
</table>

(table continued)
4. Highest level of education

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's Degree</td>
<td>4%</td>
<td>7</td>
</tr>
<tr>
<td>Master's Degree</td>
<td>29.7%</td>
<td>52</td>
</tr>
<tr>
<td>Doctorate</td>
<td>66.3%</td>
<td>116</td>
</tr>
</tbody>
</table>

5. Racial and/or ethnic group(s) with which you identify

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>African</td>
<td>0.6%</td>
<td>1</td>
</tr>
<tr>
<td>African American</td>
<td>4.1%</td>
<td>7</td>
</tr>
<tr>
<td>Asian</td>
<td>1.2%</td>
<td>2</td>
</tr>
<tr>
<td>Asian American</td>
<td>1.2%</td>
<td>2</td>
</tr>
<tr>
<td>Caucasian</td>
<td>90.6%</td>
<td>155</td>
</tr>
<tr>
<td>Hispanic-Latino/a</td>
<td>1.8%</td>
<td>3</td>
</tr>
<tr>
<td>Native American</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>1.2%</td>
<td>2</td>
</tr>
</tbody>
</table>

6. Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>59.9%</td>
<td>103</td>
</tr>
<tr>
<td>Male</td>
<td>40.1%</td>
<td>69</td>
</tr>
</tbody>
</table>

7. Years of pre-health advising experience

<table>
<thead>
<tr>
<th>Experience Period</th>
<th>Percentage</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>1 to 5 years</td>
<td>24.6%</td>
<td>43</td>
</tr>
<tr>
<td>5 to 10 years</td>
<td>25.1%</td>
<td>44</td>
</tr>
<tr>
<td>10 to 20 years</td>
<td>32.6%</td>
<td>57</td>
</tr>
<tr>
<td>Over 20 years</td>
<td>17.7%</td>
<td>31</td>
</tr>
</tbody>
</table>

Data Collection

Phase I included sixteen in-depth interviews utilizing a semi-structured open-ended format (Stage & Manning, 2003). The interviews were in-depth. Each participant was asked the same questions, but not necessarily in the same sequence. The open-ended nature of the questions allowed advisors the freedom to elaborate on their answers, yet ensured that all research interests were covered. Through these interviews I gained an understanding of advisors’ attitudes toward working with African American premedical students and differences in advising strategies. Data obtained through interviews helped to further explain the “how” and “what” research questions. According to Gall, Borg, and Gall (1996), interviews allow researchers to adapt questions to the respondents and obtain information that could not be inferred from answers on questionnaires. In addition, an interview based on a semi-structured
(Stage & Manning, 2003) or standardized open-ended protocol is not as time-consuming as other interview methods and therefore is respectful of participants’ time (Patton, 1990).

The purpose of conducting the interviews was to learn more about the ways advisors approach advising African American premedical students as well as advisors’ perceptions of working with this population of students. Responses to the interview questions indicated what type of advising was taking place for African American students attending PWIs and what complications advisors faced when working with this population. Further, interview responses allowed for a cross-case comparison that was instrumental in developing the questionnaire for the second phase of the study. Interviews were audio recorded and transcribed. I also took notes during and after the interviews. Field notes served as a back-up resource in case of any malfunction of recording equipment and initial interview interpretation to help with data analysis (Stage & Manning, 2003). Post-interview reflexive journaling provided an avenue for immediate preliminary interpretation of data.

To enhance the validity of the data from this portion of the study, I conducted a pilot study using premedical advising colleagues. The pilot study allowed me to receive feedback on the interview questions. By pre-testing the interview questions, I received feedback from colleagues about the wording of the questions and found that the questions were understood as I intended (Gall et al., 1996). Comments from these advising colleagues regarding the meaning of the interview questions increased the likelihood that respondents would also understand all of the questions and therefore instilled confidence that the questions generated valid data. In addition, feedback from colleagues indicated the saliency of questionnaire items; I was not alerted to any pertinent constructs that were not initially included. The sample interview protocol for the pilot study is located in Appendix D.
In addition to collecting data regarding the advisors’ perceptions of premedical advising for African American students, I reviewed secondary information related to premedical programs at each of the institutions of the sixteen interview participants. For example, some of this secondary information included premedical advising websites, printed literature, the physical environment, and the existence of premedical student organizations and unique programs for underrepresented minority students. The purpose of reviewing this information was to add to the validity of the qualitative portion of the study through the process of triangulation. Triangulation is accomplished by assembling evidence that supports participants’ responses which in turn helps to minimize researcher bias (Gall et al., 1996). From this secondary information I looked for documentation that supported or disputed advisor responses to interview questions regarding an institution’s advising practices.

An important aspect of the interviews was to explore different perspectives on advising African American premedical students and develop a standardized instrument that was to be utilized to survey a large number of advisors. The patterns and differences that emerged from the interview data were used to formulate items for the quantitative portion of the study. Through interviewing a sample of premedical advisors, I learned more about what the current concerns were with regard to advising premedical African American students. Interview responses allowed me to assess similarities and differences among advisor perspectives and therefore formulate a questionnaire that addressed the challenges most important and salient to premedical advisors.

Each interview was recorded and transcribed. Responses to interview questions were analyzed line-by-line and coded based on interpretation and meaning. Codes were then categorized according to general themes that tied back to the research questions leading the
study. A tentative questionnaire was then developed utilizing these general themes and codes. The instrument was then presented to a committee of faculty members who provided feedback and recommendations for edits. It was necessary to conduct a pilot study, as there was not an existing instrument that assessed advisors’ perceptions of advising relationships that was appropriate for this study. Through the pilot study I established face validity for the instrument. I administered the edited questionnaire to a small group of premedical advising colleagues. Based on feedback from the pilot sample, the questionnaire was edited further.

Study participants completed a closed and open-ended questionnaire during Phase II (Appendix E). Using a questionnaire to collect data gives researchers the ability to reach a large number of participants in a relatively short amount of time and is also cost efficient (Gall et al., 1996). The data from the questionnaire further informed me about advisors’ attitudes toward advising premedical African American students, illustrated demographic information, and indicated whether or not advisors had participated in diversity training. Questions related to the advising program in place at the participants’ institutions were included as well as questions regarding the style of advising employed (i.e. developmental and prescriptive). I also asked participants to rate their level of comfort and perceived level of competency in advising African American students. Questionnaire items included close-ended questions that were designed to measure advisors’ attitudes utilizing a five point Likert-type scale ranging from strongly agree to strongly disagree. These close-ended items aided in answering the research questions with regard to the differences in perspectives of professional and faculty advisors and advisors from large and small institutions. The questionnaire also included some open-ended questions, for example participants had the opportunity to enter in “other” options and were able to include their own comments at the end of the instrument. Each participant received an email letter
describing my study. Participants were assured of their anonymity if they chose to complete and submit the survey.

**Ethical Procedures**

In order to abide by ethical and institutional protocol, I submitted the proper paperwork to the Institutional Review Board (IRB) for exemption. All interview participants received a written explanation and purpose of the study and were assured of anonymity. Interview participants were asked to sign a consent form through which they were informed of their right to withdraw from the study at any time (see Appendix F). Potential questionnaire respondents received a letter via e-mail explaining research study objectives. Interview participants were given the opportunity to review transcripts of their interviews. The names and institutions of participants were not revealed.

**Data Analyses**

Data were analyzed in two separate phases. Since the qualitative data analysis was used to create the questionnaire, the qualitative data were analyzed before the quantitative data collection and analysis began. First, the interview recordings were transcribed verbatim. The interview transcripts were then reviewed as cross-case studies (Creswell, 1998), searching for similarities and differences among responses utilizing the constant comparative method (Lincoln & Guba, 1985; Tashakkori & Teddlie, 1998). Lincoln and Guba describe the constant comparative method as incorporating two broad steps. First, the researcher unitizes information into like units that will serve to establish future categories. Next, the researcher continues reading and comparing data until all data is organized into mutually exclusive categories (Tashakkori & Teddlie). After the initial examination of the interview transcripts, I unitized the data by developing preliminary groupings of similar data that I then further developed into
categories (Lincoln & Guba, 1985; Tashakkori & Teddlie, 1998). Throughout the process of qualitative data analysis, units and categories were established for themes that emerged from the transcripts.

Marshall and Rossman (1999) identify six phases of typical qualitative analytical procedures: “organizing the data; generating categories, themes, and patterns; coding the data; testing the emergent understandings; searching for alternative explanations; and writing the report” (p. 152). Following these procedures allows for arranging data into manageable chunks that may then be interpreted (Marshall & Rossman). I discovered themes that emerged from the data after repeatedly reviewing the data. This process continued to the point of saturation, or until new themes ceased to emerge (Creswell, 1998).

Phase II generated demographic data as well as information regarding advising styles and attitudes of premedical advisors at PWIs. Data were analyzed in various ways depending on what statistical test was most appropriate. Several questionnaire items asked participants to select all applicable choices from a list that included “none” and “other.” These data were analyzed descriptively only along with the demographic data. In order to learn whether or not differences existed between professional and faculty advisors and advisors from large and small institutions, factorial analysis of variance was utilized (Appendix G). While theoretically, items that are scored using a Likert-Type scale are considered to be ordinal, it is common practice in the social sciences to conduct inferential analyses in survey research (Clason & Dormody, 1994; Harwell & Gatti, 2001). Both descriptive and inferential statistical approaches were used to draw conclusions.

Factorial analyses of variance (2 x 2 ANOVA) were performed using the SPSS software program (Cohen & Lea, 2004) for cross-group analyses. Factorial ANOVA allows researchers
to compare means of one dependent variable across levels of more than one independent variable (Morgan, Reichert, & Harrison, 2002). Factorial ANOVA was used to look for any significant influences that the independent variables of primary role (faculty versus professional advisor) and enrollment size (<15,000 versus ≥15,000) might have had on the dependent variable for each research question. For the purpose of data analysis, responses from those who indicated that their primary role was career counselor or minority affairs staff were included with professional advisor responses. Respondents who indicated other were included with either faculty advisors or professional advisors depending on whether their reported position was related to academic affairs or student affairs. Dependent variables included responsiveness in advising African American students, consideration of societal context, consideration of institutional context, and advisor role in increasing African American admission to medical school. The statistical analyses were also designed to identify any significant interactions or influences that the independent variables had on each other in relation to the dependent variable. Assumptions for ANOVA include independent observations from random samples from populations with normal distribution and equal variance (Corston & Colman, 2000). The factorial ANOVA design is robust against violations of normality. Additional measures were used to test for homogeneity of variance and in cases where violations of assumptions existed, adjustments were utilized to compensate for these violations. Due to the nature of the response-rate, there were unequal sample sizes for the ANOVA cells. Unequal sample size limits the inferences that can be made from the ANOVA results. To address the violation of unbalanced cell sizes, the Type III sum of squares method was employed. This method is invariant with regard to cell frequencies (Corston & Colman). Regardless, the sample distribution should be taken into account and limit the generalizability of the quantitative portion of this study. The use of descriptive statistics as well
as qualitative analyses serves to offset the limitations of the inferential statistics. Cell sample sizes are presented in Table 3.

Table 3. Quantitative Cell Samples

<table>
<thead>
<tr>
<th>Primary Institutional Role</th>
<th>Quantitative Sample</th>
<th>Institution Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Small &lt;15,000</td>
</tr>
<tr>
<td>Faculty Advisor</td>
<td>n=94</td>
<td></td>
</tr>
<tr>
<td>Professional Advisor</td>
<td>n=37</td>
<td></td>
</tr>
</tbody>
</table>

Data analyses from Phase II allowed me to make cautionary inferences about advisors’ attitudes toward premedical advising of African Americans across various types of PWIs; analyses also detected whether any differences of attitudes existed among groups of advisors. Inferences were limited due to the sample sizes for some treatment groups. Descriptive statistics were generated from the survey data. Data collected through the questionnaire provided information regarding “the distribution of characteristics, attitudes, or beliefs” (Marshall & Rossman, 1999, p. 129).

Inference Quality and Inference Transferability

Inference quality is a mixed methods term introduced by Tashakkori and Teddlie (2003) to encompass the concepts of internal validity (quantitative) and credibility (qualitative). Inference quality indicates not only that a study measures and answers what was intended, but that it has met the standards of the types of methodology employed. Inference quality is comprised of design quality and interpretive rigor. Due to the overuse and misuse of validity
terms, inference quality is unique to mixed methods research and incorporates both quantitative and qualitative validity concepts (Tashakkori & Teddlie).

In order to enhance inference quality, specifically interpretive agreement, I utilized member checking by having the participants read through my conclusions. To do this, each interview participant was given the opportunity to review transcriptions of his or her interview. Member checking offered participants an opportunity to point out any statements that may have been taken out of context by the researcher. The researcher can then make any necessary adjustments to his or her conclusions in order to avoid making false inferences (Creswell, 1998). I also conferred with my advisor and other colleagues regarding the results of the study to address issues of interpretive agreement (Tashakkori & Teddlie, 2003). Employing peer debriefing or having others read over my procedures and results and offer their perspectives on my work provided additional external opinions of my analyses (Creswell, 1998).

For the quantitative part of the study, I addressed any violations of the assumptions of the factorial analysis of variance (ANOVA), assumptions being independent observations from random samples from populations with normal distributions and equal variance (Corston & Colman, 2000). Using a pilot study to test the questionnaire addresses potential with-in design consistency concerns. By employing these precautionary measures and through using both quantitative and qualitative approaches, I feel confident about the inference quality of my results.

Inference transferability, a term also unique to mixed methods research, refers to the “applicability of inferences obtained in a study to other individuals or entities” (Tashakkori & Teddlie, 2003, p. 710). Inference transferability embodies the quantitative terms external validity and generalizability and the qualitative term transferability. To address inference transferability, I have described in great detail the context of my study as well as the sample.
Thick description allows the reader to make his or her own decisions about the transferability of my work (Creswell, 1998). My description includes a thorough literature review introducing existing research related to my area of study, an explanation of my theoretical framework, details regarding my chosen methods of data collection and analysis, and the reasoning behind the drawn conclusions. Also, I have clarified my own biases by providing information about my background, including my interest in this topic based on personal values. Again, I believe that using mixed methods allows me to overcome some of the weaknesses of each method employed in this study.

Phase I: Qualitative

Sixteen advisors participated in the qualitative phase of this study. The interviews took place over a six-month period. Interviews were conducted on site at fourteen institutions in seven states in the Southeast region of the United States. Seven participants were faculty advisors and nine were professional advisors. Eight participants were from large public institutions, one was from a small public institution, and seven were from small private institutions. Participants ranged in years of pre-health advising experience from less than one year to over 30 years. Fifteen participants were Caucasian and one participant was Phillipina. Nine advisors were female and seven were male.

Participants were contacted via email and informed of the purpose of and procedures for the study as well as informed of their rights as participants. Advisors were invited to participate based on their membership in the Southeastern Association of Advisors for the Health Professions (SAAHP) and NAAHP, their position as a faculty or professional pre-health advisor at a predominantly white institution, and their geographic location. Once advisors agreed to participate, each was contacted to set up an interview time. Email invitations were sent out in
four separate intervals based on geographic region for the purpose of being able to conduct multiple interviews during the same trip. Participants were located at institutions in Alabama, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee. Approximately one half of the advisors who were contacted agreed to participate in the study. A description of participants and their institutions follow.

Charyl is a science faculty member at a small private liberal arts school in the southeast. There are less than 5,000 students enrolled at her institution with approximately 600 students being premedical. She has about 30 medical school applicants each year, few of whom are African American. Charyl has advised premedical students for several years and has taught biology at the college for close to 20 years. She enjoys working for a small university because she has the opportunity to get to know her students on a personal level. Charyl’s personal academic experience has influenced the way she advises students; she sees student potential and works to help her students realize their dreams through encouragement and support.

Chuck has been a sciences professor at a large public institution in the southeast for close to 30 years and has been advising premedical students for almost 25 years. His institution enrolls over 15,000 students. He has been actively involved in the national organization for many years. Chuck stays actively involved with his students and has an open-door policy. He goes the extra mile for students while also holding them accountable for their own destinies.

Gary is a faculty member in science at a large public institution in the southeast. He has been advising premedical majors for over 30 years. The institution enrolls over 15,000 students, a significant portion of whom are underrepresented minorities. There are about 250 to 300 premedical students at the university and 25 students apply to medical school each year. Approximately 30 to 50 premedical students are African American and usually there are less
than five African American students who apply to medical school. Gary is upfront with students and incorporates his sense of humor into the advising process.

Karen has been a professional advisor at a large public institution in the southeast for less than a year. She has previous experience as a faculty member in science. The university enrolls over 15,000 students with about 200 being premedical. Between 20 and 30 students apply to medical school each year. Twenty premedical students are African American, less than five of whom apply to medical school each year. Karen has a positive attitude and comes across as eager to continue learning new ways to help her students.

Ed is a science faculty member at a small private religiously-affiliated college in the south. He has been the chief premedical advisor for fifteen years. Ed’s institution has a relatively small enrollment and very few African American students who are premedical. About 8 to 10 total students apply to medical school each year. He also chairs the pre-health committee and teaches a pre-health orientation course.

Allen works for a small public school in the southeast. Even though he is considered faculty at his institution and he teaches a freshman seminar course, I have included him as a professional advisor. His background is in public health and he has been advising premedical students for less than five years. The institution has an enrollment of less than 5,000 with about 40 being premedical. Only one or two premedical students are African American. He has approximately 12 students apply to medical school each year. Allen is energetic and has a sincere interest in his students. He works closely with the premedical student organization at his institution and gets to know his students quite well.

Debra is a science faculty member at a small private college in the southeast. Only one to three students apply to medical school each year. She does not have any African American
advisees who are premedical. Debra has been advising premed students for roughly three or four years and has taken on this role on her own. She cares enough about her students to juggle premedical advising along with teaching a regular course load.

Kelly is a professional advisor in the career services office at a private religiously-affiliated institution of less than 15,000 students in the south. There is a large number of premedical students at the institution with about five percent being African American. Around 300 students apply to medical school each year; fifteen or so applicants are African American.

Pam is a full-time professional advisor who has a master’s degree in a science field. She works for a large public university in the deep south. Pam has ten years experience advising premedical students, but now serves primarily as an academic advisor for biology majors. There are over 15,000 students enrolled at the university. About 100 students apply to medical school each year, one third of whom are African American. Pam’s institution enrolls a significant portion of African American students.

Peter, Susan, and Julie work at a large public university in the deep south with an enrollment of over 20,000. Peter is a faculty member in biology as well as an associate dean of the science college and has worked with premedical students for nearly twenty-five years. Susan and Julie are full time professional advisors. Susan taught high school for over 20 years and has been advising premedical students for ten years. Julie has been an advisor at the institution for almost ten years and has a background in communication studies.

Brenda is a professional advisor in the career services office of a small private religiously-affiliated institution in the deep south. There are over 5,000 students enrolled at the college with about 200 students who are premedical. Approximately 40 students apply to medical school annually. Nine percent of the total enrollment is African American. Brenda has
worked for the college for over five years. Her primary responsibility is career counseling, but she has also taken on the role of premedical advisor. One of the challenges she faces is letting students know that she is there to help them.

Claire works for a private university of 11,300 students in the deep south. She has close to 20 years experience working with medical and premedical students. Between 200 and 300 students apply to medical school each year, five to ten of whom are African American.

James is a biology faculty member at a small private religiously-affiliated college in the deep south. He has advised premedical students for close to 30 years and has served on the school’s premedical committee for many years. He works with approximately 40 students who apply to medical school each year; very few applicants are African American.

Jeff advises premedical students as a full-time advisor in an academic dean’s office at a large public institution in the deep south. Over 20,000 students are enrolled at the university; close to 1,000 students are interested in premedicine. Jeff has been advising premedical students for less than five years; prior to his current position, he advised students in a different discipline. Of the 100 or so students who apply to medical school each year, three to five are African American.

**Phase II: Quantitative**

The questionnaire was created using the themes that emerged from the qualitative data. Items were developed based on the interview responses that were broken down into four general categories: consideration of race of advisees, consideration of societal and institutional contexts, advisor’s role in increasing the enrollment of African Americans in medical school, and advising styles. Specific responses from participants were used to develop survey items as well as item choices. The qualitative phase of the study resulted in the inclusion of several additional
questionnaire items than were initially presented in the tentative questionnaire developed before the study began. A copy of the questionnaire can be found in Appendix E.

The revised questionnaire was presented to a committee of faculty members who reviewed the instrument and provided feedback. The instrument was then edited and updated. A pilot study was conducted utilizing the same participants from the qualitative pilot study. Pilot study participants provided further feedback for questionnaire items. A final copy of the questionnaire was sent to each committee member for further review.

Of the 204 advisors who responded to the online questionnaire, 175 completed the instrument. 174 questionnaires were submitted electronically; one was mailed in hard-copy format and entered manually by the researcher upon receipt. One hundred (57.1%) respondents were primarily faculty members, 57 (32.6%) were full-time professional advisors, 7 (4%) were career counselors, and 11 (6.3%) indicated having multiple professional responsibilities or were deans, directors, or admissions counselors. For the purpose of statistical analysis, career counselors were categorized as professional advisors along with those in the other category who worked in student affairs divisions. Participants who were deans or directors of academic units were classified as faculty members.

Advisors’ years of experience ranged from 1 to over 20 with a fairly even distribution. Forty-three participants had 1 to 5 years of experience, 44 had 5 to 10 years, 57 had 10 to 20 years, and 31 had over 20 years of pre-health advising experience.

One hundred (57.1%) participants worked for private institutions and 75 (42.9%) worked for public institutions. A greater number of respondents were from smaller institutions; 10 (5.7%) were from schools that enrolled less than 1000 students, 107 (61.1%) from institutions that enrolled 1,000 to 10,000 students, 14 (8%) were from institutions of 10,000 to 15,000
students, 27 (15.4%) were from institutions of 15,000 to 25,000, and 17 (9.7%) were from institutions with student enrollment of over 25,000.

Participants worked for institutions with premedical populations ranging from less than 50 (46 or 26.3%), to over 1,000 (21 or 12%). Sixty-eight (38.9%) advisors were on campuses with 50 to 200 premedical students, 25 (14.3%) were on campuses with 200 to 500 premedical students, and 15 (8.6%) were on campuses with 500 to 1,000 premedical students. Over half (93 or 53.1%) of the respondents were from institutions enrolling less than 15 African American premedical students. Thirty-six (20.6%) worked for universities enrolling 15 to 30 African American premedical students, 15 (8.6%) worked for universities enrolling 30 to 60 African American premedical students, 8 (4.6%) were from institutions enrolling 60 to 100 African American premedical students, and 23 (13.1%) were from institutions enrolling over 100 African American students.

The majority of respondents were women (103); 3 participants chose to withhold their gender. One hundred fifty-five (90.6%) participants identified as Caucasian, 7 (4.1%) as African American, 2 (1.2%) as Asian, 2 (1.2%) as Asian American, 3 (1.8%) as Hispanic-Latino/a, 2 (1.2%) selected “other,” and 3 chose to withhold. Of the two respondents who selected “other,” one specified, “black,” and the other indicated that it was a “bad question” due to the verbiage, “with which you identify” included in the item. A demographic summary of the sample for Phase II is provided in Table 2.

Summary

In this study, I investigated what type of premedical advising is in place for African American students attending PWIs as well as the attitudes of the advisors at these institutions. By conducting in-depth interviews with premedical advisors at PWIs, I learned about what these
advisors were doing to assist African American premedical students and how they felt about their advising techniques and relationships with students of this population. In order to gather information from a large number of advisors, I also conducted a survey assessing advisors’ perspectives on advising African American medical applicants as well as the advising techniques utilized. By learning more about the type of advising that is occurring at these institutions, readers can learn more about the strengths and weaknesses that exist in the advising programs at PWIs with regard to African American students.
CHAPTER IV - FINDINGS

The purpose of this study was to gain insight into the ways advisors work with African American premedical students attending predominantly white institutions and their perspectives on advising this specific population. In this chapter I present the qualitative and quantitative research findings.

In order to attain an understanding of how advisors at Predominantly White Institutions (PWIs) perceive and carry out the responsibility of advising African American premedical students, I interviewed sixteen advisors. In the interest of protecting the identity of participants as well as their institutions, specific identifying information regarding participants and their institutions is not presented in detail. However, an overall description of the individual and professional traits as well as institutional types gives the reader a sense of the sample.

Participants came from fourteen institutions in seven states in the Southeast region of the United States: Alabama, Georgia, Mississippi, Louisiana, North Carolina, South Carolina, and Tennessee. Institutions ranged in total student enrollment from approximately 800 to 24,000. The sample included advisors from small, mid-sized, and large institutions as well as public and private institutions. Seven of the participants were classified primarily as faculty members in biology or chemistry, whereas the others were classified as professional advisors. The background of professional advisors included student affairs, counseling, public health, master’s degree in biology, and communications. The sample was comprised of advisors with less than one year of advising experience extending to those with over 30 years of experience. Nine of the participants were female. Fifteen advisors identified as Caucasian and one as Filipina. Religious-affiliations of private schools included Baptist, Catholic, and Methodist. One women’s college was included in the sample.
All interviews were conducted face-to-face and on-site. Speaking with advisors in person added richness to the data and allowed for observation of advising settings and in some instances interaction between advisors and students. The average interview length was approximately one hour; the interviews ranged from 30 minutes to 1 hour and 45 minutes. Each interview was recorded and transcribed. Each transcript was then evaluated for meaning and coded line-by-line. These individual codes were then organized into larger themes.

In the next section, I discuss the themes I discovered through the qualitative analysis of Phase I of the study and how these themes relate to my original research questions. When appropriate, results from the quantitative portion that relate to the qualitative themes are integrated.

**Data Analyses**

Through the initial review of the interview transcripts four major themes emerged: consideration of the race and/or ethnicity of advisees, consideration of societal and institutional contexts, role in increasing African American enrollment in medical school, and advising styles. The first three themes relate directly to the original research questions driving this study. The fourth theme of advising styles surfaced as a result of general conversation about advising; included in this chapter are the advising styles and approaches that participants typically employed when working with African American students. Findings on advisors’ consideration of societal and institutional contexts are presented separately.

It is worthwhile to mention that these qualitative themes were developed from the personal observations and experiences of the interviewees. The intent of this chapter is not to attempt to lump all African American premedical students into one category, but rather use advisors’ experiences of working with this population of students to gain a general understanding
of their approach to advising African American students. While participants demonstrated respect for all students as individuals, there is value in acquiring knowledge about general differences among various populations of students as observed by advisors as well as how these observations informed their advising techniques.

**Consideration of Race and/or Ethnicity of Advisees**

This section incorporates feedback from advisors regarding the ways they directly or indirectly considered the race and/or ethnicity of African American students. The responses included comments on students’ academic preparedness and progress, working with advisees who are first-generation college students, differences of advising approaches with African American students, and advisors’ perspectives on advising African American students.

**Preparation for College**

When asked about advising African American premedical students, most advisors initially responded that they did not consider the race or ethnicity of their advisees. Upon further discussion it became apparent that many advisors did indeed utilize some different approaches when working with African American premedical students or at the very least felt compelled to provide information specific to this population. To some extent, the differences of advising approaches were directly related to students’ academic preparedness upon entering college as well as academic performance in college rather than race and/or ethnicity. Ed commented, “I don't break it down black versus white, I break it down, I guess, advantaged versus disadvantaged high schools. So, I have a little Rah Rah speech.” While academic preparedness is a factor that influences the way participants advise most students, considering that the 2004 national average ACT score of African American students is 17.1 compared to the overall national average of 20.9, one would expect more African American students to be entering
college with lower ACT scores than non-minority students (ACT, 2007). Most advisors said that they consider students’ academic preparedness rather than race and/or ethnicity, but some advisors observed through their experience that a number of African American students enter college with lower ACT/SAT scores, tended to come from high schools that may be considered academically weaker, and, as a group, did not perform as well on the Medical College Admission Test. One of the initial steps in advising for most participants was to assess students’ academic preparedness and performance by looking at test scores, high school grades (if available), the academic strength of high school programs, and students’ current college grades. Chuck found that some minority students graduating from rural high schools were less prepared for college:

Years ago we found out that we can’t offer minority scholarships; you just can’t do that. But we do offer scholarships to all the valedictorians and salutatorians of the high school classes in the state, every one of them. We do gather quite a few intelligent people from the rural low-country high schools, who are minority students. Even though they are the valedictorian, some of them are not the most well-prepared students for [a large university]. I don’t think you treat them [differently]. You make them think about their background and what they want to do and how confident they want to be and then you try to help them as much as you can within the context of what they decided to do.

Karen had noticed that a significant portion of her African American students entered her institution with lower test scores:

I do notice that when I look at transcripts right up front when we start these conversations with students, the SAT scores from the African American students, I’d say as a group, I haven’t written any of this down, but my observation is that they are lower coming in. I tend to correlate when I see an SAT that’s 1000 or below, usually I’m floored by the correlation of the student’s grade performance along with those SAT scores, especially when you start getting below 1000.

Concerned about low ACT scores and the lack of high school preparedness that she had observed, Karen said she wished she “had a way to make more of an impact [on students who are struggling academically], but I don’t know how, at this point of the game, how you take a student
who obviously didn’t have that [primary and secondary] preparation and boost them.” Brenda commented on advising African American premedical students:

I kind of look for the cues and I ask them some questions to help me to understand what's the probability that they're going to do well at [the institution] and why they might not. Often times I'll ask them, and I'm just folksy and I'll ask them these questions like, "oh, where did you go to high school?" If I get an idea that this is a public school student then I may be looking at someone who didn't have the economic resources to put that cushion under them that maybe other students who went to private schools have had those resources that have always been supportive. So, I just want to kind of see if [a student’s] GPA issue is going to [cause a] struggle here, this may be why and so maybe saying at that moment, "how are you finding your classes" and just exploring a little bit more, "are you staying on track, are you finding that these are tough?" Any freshman can fall off the page, but so much more so if it's a student who came through the door with maybe a lower GPA, maybe because it was a public school, not enough resources, those kinds of things. I just want to make sure they know about all the resources that are here.

Some advisors recommended that students limit the number of science and math courses initially if there was apprehension about students’ high school preparation. When talking about African American premedical students, Charyl said “I do know that many of those students are going to struggle here and I’m very conscious of how we spread their classes out and what classes match with other classes, so that they don’t get overloaded.” The feeling was that by taking a lighter course load, these students had a better chance at being successful and maintaining good grades as opposed to taking on heavier loads that they may not have been equipped to handle starting off as freshmen. In general, Chuck would rather see students start out with a lighter course load and come back the second semester with the realization that they can handle a much heavier schedule. The intent of advisors was to push students toward success and build confidence; some participants were concerned that more African American students lacked self-confidence than non-minority students. Charyl had “the feeling that a lot of my minority students are not very self-confident. So a lot of [the advising process] is working to let them realize their abilities.”
A few advisors also mentioned that some African American students are first-generation college students and therefore may not have had the opportunity to get advice from parents or other family members who had an understanding of what college was like. James was unsettled that some of the students entering his institution were ill-prepared coming out of high schools with poor reputations in his state; “the high school of course reflects the socioeconomic level of it's populous, so they come from families where they probably never got read a bedtime story and like Brad, maybe have been passed on without being able to read.” Participants recognized that parents often served as a resource for students by sharing their experiences with their children about college. While first-generation college students may have families who provide emotional support, these students may need further guidance when it comes to selecting courses and making career plans. Advisors perceived first-generation college students as needing some additional assistance. Susan, who was a first-generation college student herself, shared this fact with her students and used this as a way to connect with her students.

Some advisors were inclined to be more nurturing toward and protective of African American students. After a sigh, Charyl responded, “I think I try to be much more positive with [African American students] because they tend to come in very defeated.” Being aware of the unique barriers that African American students face such as racism and possible feelings of alienation on a predominantly white campus, some advisors had a particular interest in doing what they could to help African American students succeed. For example, Brenda, a professional advisor at a small private institution, said that she tends to offer more support to African American students because she feels that helping this specific population is a bigger calling. “Since there’s a huge need in the African American community as well as some of the other minority communities, I’m trying to do my part to patch that gap.” Many participants gave
more of their time to African American students to ensure that students felt comfortable and would therefore be more likely to return for advising. When asked if his advising approach differed at all when working with African American students, Ed smiled and replied, “Subconsciously or consciously? Subconsciously I'm trying to, I don't know if the right word is to protect them more. I guess I have a stigma that they may not be quite as ready as some of the others.” There are very few African American students enrolled at Allen’s small public institution and he commented that if working with an African American premedical student who was struggling, his department “would implement a lot of other [advising strategies], we would make considerable efforts to bring that student along.”

Based on this feedback from interviewees, questionnaire respondents were asked to answer the following item: “My approach to advising African American premedical students may differ from my approach with non-minority students in the following ways (check all that apply). They were given the following options: “I tend to spend more time in an individual advising session, I am more developmental, I am more prescriptive, I look for cues from students’ body language, I try to engage students in personal conversation, none of the above, and/or “other.” The overall results from this item are included in Table 4.

Table 4. Different approaches to advising African American students.

<table>
<thead>
<tr>
<th>Item Choices</th>
<th>Number of Responses</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>More time</td>
<td>55</td>
<td>31.4%</td>
</tr>
<tr>
<td>More developmental</td>
<td>38</td>
<td>21.7%</td>
</tr>
<tr>
<td>More prescriptive</td>
<td>19</td>
<td>10.9%</td>
</tr>
<tr>
<td>Use body language</td>
<td>19</td>
<td>10.9%</td>
</tr>
<tr>
<td>Personal conversation</td>
<td>46</td>
<td>26.3%</td>
</tr>
<tr>
<td>None</td>
<td>72</td>
<td>41.1%</td>
</tr>
<tr>
<td>Other</td>
<td>43</td>
<td>24.6%</td>
</tr>
</tbody>
</table>
For the open-ended choice of “other,” questionnaire respondents’ comments were along the same lines of interviewees. Some indicated that they did not utilize any unique advising approaches when working with African American students, while some said that they were more encouraging. Many advisors talked to African American students about specific educational programs for which they may qualify.

**Enrichment Programs and Campus Resources**

Almost all interviewees regularly discuss summer enrichment programs geared toward underrepresented minority and disadvantaged students with African American premedical students. Upon being asked about differences of advising approaches with African American students, the majority of advisors responded that they mention programs designed to prepare students for medical school, medical careers, and the medical school application process. Charyl notifies African American students about such programs:

> Well, one would be these special summer programs. Yes, and I really push those. Now, that can be a problem especially in the south, because the black family structure is very strong and they don’t like to go away, so a lot of times that takes a real incentive to get them to apply and actually do something like that. That is one thing that I definitely try to do is make sure that they know about all of these summer programs. Now, again, because of my workload, I show them where to find that information and then have to leave it up to them.

Karen shares this type of information with African American students early on in their academic careers:

> I usually try, especially if they are at the beginning of the process. Most of the juniors and seniors are aware of some of the things that are available to them, but most of the new people do not. So I make an effort to provide them with information. I have some information on enrichment programs in state that I’m aware of. I do try to share that information. I don’t think I’ve ever failed to make this type of information available in the beginning, early the process, if they’re not aware of it.

While Chuck spoke about premedical enrichment programs with African American students, he expected students to make their own decisions about participating in such programs:
If there is any consideration at all with a minority student, it’s probably the fact that I do know that there are a lot of programs out there, like the [national] programs and things like that, that are no longer minority-directed, but disadvantaged, underserved, all the other buzz words-directed. So while I don’t single them out, I do try to mention those kinds of programs that are available if they would like a summer experience that would take them in that direction. So, if anything I may do a little bit of that, but outside of that, I don’t. I think I’m relatively color-blind in that regard. I don’t try to influence them out of the idea or into the idea. I’m not going to say, “you’re a minority student, you need to be involved in this.” I don’t much feel like it’s my position to make them feel like they’re any different than any of the other students [here] until they bring up the opportunities they might get as being a minority student and what can I tell them about those opportunities.

James did not typically talk about summer enrichment programs with African American students because the undergraduate and the medical school minority affairs offices worked closely with these students. The undergraduate institution has a separate office dedicated to assisting underrepresented minority students. Because of this, he did not usually address programs for which African American students may qualify:

Well now, with respect to that [summer enrichment programs], I don't deal with that very much. We do have a minority affairs office and the medical school has a very active minority affairs office. They come over here all the time. Their minority people work with our minority person and so they'll have a meeting and anybody can go to it, but the fact of the matter is that they're addressing the black students. They do have a summer program and during the year programs for both high school and college students. So, we'll have a lot of students who wind up in their program and they get maybe help during the summer or some shadowing program during the summer. I don't deal with that particularly, but they do.

Providing information on enrichment programs to African American students was the most frequent response of interviewees when asked about differences in advising techniques. Supporting this qualitative data, 84% of survey participants also provided information on summer enrichment programs available for underrepresented in medicine and/or disadvantaged students to African American students.

In line with presenting information on special summer programs for which African American students may qualify, some advisors suggested additional opportunities and resources
ranging from MCAT preparatory courses to post-baccalaureate programs. Brenda found it important to share resources that may be helpful for African American students who might be struggling academically:

I think I really do work very hard and when a student walks in and they are a minority student, I make sure they walk out of here knowing about NIH and all the grants and all the resources and the opportunities if they're not making the cutoff and they didn't get accepted, that they know about the NIH two year program or the one year program, so they can kind of see mostly that they end up going whether they wanted to go anyway theoretically, which I don't say to every student. We've got a short [advising] session, and they spend an hour, but it's a short session to try and pour everything that might pertain to them into their heads. So, I have to kind of judiciously move that time along, but I make sure that I explore that a little bit more if it's a minority student.

Advisors frequently encouraged African American students to seek out institutional support resources such as academic tutoring or minority affairs services. Being on a large campus, Julie routinely made African American students aware of campus support that was available for minority students:

Well, I certainly discuss the minority programs, we have special tutoring funded through the minority programs office that is good and they do have a future faculty club for students who are interested in becoming professors, and professional school bound students are really included in that. So, I certainly mention all of those things.

Claire encouraged a number of different activities depending on students’ needs and the competitiveness of their medical school applications:

When it comes to the med prep programs and internships, and prep classes, and everything else, I do encourage that and try to emphasize how helpful [they are]. I think internships, in general, I have a big listing, I have my own; I made up a whole listing of my own websites. If they're good students and they have good test scores, I don't always tell them they have to do a med prep program, but I think a good internship somewhere else is always [a good idea], somewhere else where they might be interested in going [to medical school].

Discussion of Affirmative Action and HBCU Medical Schools

A few advisors said they were more likely to mention the possibility of applying to medical schools affiliated with Historically Black Colleges & Universities (HBCUs) to African
American students. Gary was more likely to talk about applying to HBCU medical schools with African American students who he knew fairly well, but found that students who were able to compete for admission to these private institutions were usually also admissible to the local state institutions. His students typically opted to attend medical school in-state because the tuition was much more affordable:

For [state] residents, in addition to the [state] medical schools that you can apply to, be sure to be thinking about the historically black medical schools. You know, we have [several HBCU medical schools] so be sure to give them a look as part of the application process. We have a student currently at [HBCU medical school], we've had students over the years go to [HBCU medical school], not very many, because most of them can usually get into one of the [state-supported] schools and it's a lot cheaper. But I will say something specifically about that. Usually after I've gotten to know the student a little better maybe.

Likewise, when asked, Chuck shared the information he had on medical schools affiliated with HBCUs with African American students and gave them contact names if they were interested in learning more about applying to these schools:

Sometimes they are interested in the historically black colleges. I don’t know as much about them as I do the ones here in the state. I do know something and I know contacts and so sometimes they’re interested in those kinds of things and so I sort of steer them in the directions of academic advisor people, recruiter people in those schools.

Advisors were also more likely to discuss affirmative action practices of medical schools with African American students. Some participants felt more comfortable discussing affirmative action than others. A few advisors did not address the affirmative action procedures of medical schools because their students seemed to be aware of these practices. While he has discussed affirmative action with students at times, Jeff felt that if he knew how to better address some of these issues with African American students they would be more likely to stay in the pipeline and not get discouraged. He described his experience:

Yes, it is tricky. It seems that the students I talk to kind of have the sense that that is already a reality for them, that there is some wiggle room. I have said that to students
sometimes [who] were borderline. I said, "Well, yes, let's go ahead and apply. I think that you might be competitive with these numbers." But I'm sure that I lose some because I don't know how to adequately deal with that.

Others were unsure how to address the implications of affirmative action with students. Charyl viewed affirmative action as a difficult subject to broach with students:

There again, this is where I know in my heart that they’re going to get in, even though they’re not as, if their numbers aren’t as good as my white students, my non-minority students. I know that they’re going to get in, but I don’t want to tell them up front, “well, you’re an African American you can have a lower GPA and you’ll still get in.” You just don’t want to do that.

Pam also found affirmative action to be a delicate subject to discuss with African American students:

You might really be saying, "You will probably be cut some slack because you're a minority applicant and the schools really want you." Well, because you want to continue to be a good motivator and have them not just sort of say, "oh well, I can get in because I'm black." No, you don't want to do that!

Claire wanted her African American students to be informed about affirmative action practices taking place in medical schools and to understand that they may be competitive for prestigious schools despite a slightly lower grade point average or test score. She found the topic to be easier to approach with students with whom she had a closer relationship:

I don't really feel comfortable all the time saying, "Look, because you're African American and you have a 3.0 in your science GPA and you do okay on your [test], well you might be interviewed because of a certain quota that med schools like to have or the diversity they're looking for in a pre-health program." You know, I don't know if I always feel comfortable, it just depends on how the conversation is going and if I feel like, like with [name omitted], I was really close with him and I said, "Look, you're an African American male, you're a good student," and when it came to his list of schools, I said, "I want you to put some reach schools." I wanted him to realize that he was a pretty good student and he could interview at some of the schools that he was dreaming of, you know what I mean? I felt comfortable with that and I guess it depends on how the conversation is going, their personality, how I feel. I don't want them not to get an advantage, I know that it might be helpful in a way, but I don't want to feel like I'm treating them any different. So, I try to be level-headed about it with them.
Claire also expressed some uneasiness about the possibility of coming across to African American students who she did not know well as being focused on race: “Then they'll walk out of here and go, ‘Oh, yes, because I'm black, I can go to this school.’ Or say, ‘Oh, she wants to help the black people.’” Because she wants students to realize all of their possibilities, Claire talks to students about affirmative action sensitively:

I don't want them not to be able to think of a school [for which they would like to apply]. Like with [student] and [medical school], that's why I kind of said, "There are some schools that you can apply to that you may not be considering." So that's when I always like to make sure I look at their list and say, "You know you can try these schools, it's okay," and they're like, "Really?" "I think they might look at you," without trying to say, "Because you're black and you're a really dynamic student, I want you to put these schools on." I want him to get the point that it's okay to mix up his list in a tactful way.

Kelly, on the other hand, advised African American students utilizing the national statistics and did not discuss affirmative action practices of medical schools with students: “If I had a student who came in with a 25 MCAT and 3.3 GPA, I would probably say, statistically speaking you are not competitive at this time.”

A few advisors said that while they might talk about affirmative action in a one-on-one session with a student, they avoid addressing such practices in heterogeneous groups. Ed teaches a freshman-level health professions orientation course. As one of the assignments for this class, he has students research the entrance statistics for the medical schools to which students are interested in applying:

That's one of the homework problems in my course; they've got to go to their two most likely med schools and find out what it takes to get in, find out what last year's average was. But now, I don't, for the African Americans, tell them to go and get the African American average, I ask them to go get just the average. I don't, in class, break apart the two populations. And I try not to deal with it in a group. It's only individually.

Jeff also found it best not to discuss affirmative action in a group setting in order to avoid potential conversations about reverse discrimination with non-minority students. “It's a difficult
subject to broach in a group and then you get the white student with the 27 [MCAT score] who is furious that he didn't get in. And how do you calm that guy down?” Jeff did not have a problem talking with students, regardless of their race and/or ethnicity, about affirmative action and the societal implications of affirmative action behind closed doors and one-on-one.

**Mentoring**

Two advisors said that they set up mentoring relationships between freshman or sophomore African American premedical students and junior or senior African American premedical students and believed that students were more trusting of one another and may benefit from the experience of other students. While Chuck had not developed a formal mentoring program, he did try to put students in contact with one another when he believed they needed a little extra guidance:

Now I’ve had once in a while a freshman minority student who I did put in touch with a minority student who was a sophomore or junior who was well on their way and say “If you’d like to talk to this person.” I might talk to the minority junior or senior and say “I’ve got another student coming out of [the same] high school who needs a little concrete back patting and things like that, would you mind giving them a call and see if you could help out?” So usually they’ll take that on, but we’ve never done it in a formal way of saying, “we’re going to try and round up all of the minority pre-meds and make sure that they have a mentor in their freshman year.”

Charyl also viewed junior and senior underrepresented minority students as important resources for younger African American students and found her students were eager to help:

[I use] my junior and senior minority students as mentors [for] my freshmen and sophomores. If I know I have a strong minority student that I can link with a freshman or sophomore, especially a freshman, to get them tied into a senior who has been through it all who can act as a mentor, I try to do that. Usually the students are fine with that. Or I’ll shoot them an email and say, I’d like you two to meet each other because you have similar interests, or you’re from the same state. I might say, “Mary you’ve already jumped through these hoops and know how to do it, can you help Carly?” Something like that.
Societal Impact of African American Physicians

Some participants were more likely to discuss the societal impact of African American students becoming physicians and how that can play a part in students’ applications to medical school. Allen talked about communicating this idea to students:

Well, what I might say to a young African American man or woman who wants to go into medicine is here is your chance to make a difference. Look at this as a sideline goal, not only are you going to do something for yourself and your family and your patient panel, but if you look at this as part of your responsibility to your community, you'd have an opportunity to make an impact far beyond just those patients that you're treating.

The better the rapport and the closer the relationship the advisor had with an African American student, the easier it was for advisors to discuss how students’ race and/or ethnicity could impact their applications to medical school. Claire also felt strongly about making sure African American students were aware of societal implications of attending medical school:

I really want them to succeed. Just like all my students, I want them to, but I know that it's important that we have more [African American physicians], that they have more information so that I can tell them that, but also what their abilities are and possibilities are. You know, a lot of them do want to go back to their home where they're from to start working in their population. There are a lot of things that they want to do.

Comfort and Confidence

With regard to advisors’ perspectives on advising African American premedical students, there were mixed reactions. Some advisors were more comfortable than others when working with African American students. Most were confident in their ability to meet students’ needs, but some were concerned about how they are perceived by African American students and were sometimes anxious about unintentionally offending African American students or coming across as racist. Being in advising for less than a year, Karen talked about being nervous about saying the wrong thing to students:

Well, you know, you talk to people and you’ll say a word, I had a kid in here yesterday from Lebanon and we were talking about current issues in medicine and I mentioned bio-
terrorism and thought, “Oh my Gosh!” So I’m constantly concerned about saying the wrong thing, using the wrong word. Hopefully I don’t step on toes, but eventually you do, you know, you can’t help it. That would be perhaps helpful, sometimes I wish I had a better understanding of what they’ve been through to get here.

When it came to fear of being perceived as racist, the most prevalent concern involved delivering bad news to African American students who were not competitive for medical school. A few participants were concerned about lacking credibility with African American students due to their insufficient understanding of what it was like to be African American. Some advisors worried about being approachable and not having African American students shy away after not hearing what they wanted to hear during an advising session. The thought was that some African American students might view honesty about their competitiveness for medical school as discrimination. Many advisors felt more comfortable sharing bad news, such as the lack of competitiveness of a student’s application for medical school, with non-minority students than with African American students. Some participants were nervous about being perceived as racist after such an encounter. Because of this concern, many advisors felt the need to choose their words carefully so as not to come across as offensive to African American students.

One advisor, Susan, observed the body language of African American students in order to look for cues as to how she was being received by a student, especially when the student was having academic difficulty:

I think I modify my approach more based on what body language I'm getting from them and I look and see if they're tearing up a little bit. You can sort of tell when they come in and they're fragile, but I don't think I really sugar coat what I say. I think there is some resistance on the part of students and yes, I feel like minority students sometimes feel like you don't understand.

Likewise, there have been times that Julie has observed students who appear to be tense and/or apprehensive during an advising meeting. In order to help relieve some of that tension she draws
from her communications background and makes an effort to personally connect with African American students:

I think sometimes it's hard to make connections. I think sometimes I try a little harder to make a connection. Sometimes I feel like there's a little more resistance on their side. That what we have in common is not apparent and maybe they feel like I don't understand them as well as I think I do or something. So, I think I do spend a little bit more time trying to earn their trust and earn the right to say some realities.

After informing an African American student about her lack of competitiveness for medical school, Kelly was accused of being racist:

So when I kind of give that wake-up call to students it sometimes, you know, that's when mom will call and get upset with me. I have been called racist before for telling students that [they were not competitive for medical school]. We had an incident where we did have a student whose mom drove down to meet with the president of the university without an appointment, and you know how universities work, that just doesn't happen. [She basically came] and wanted to get me fired. She said that in our office we were just a bunch of "rich white people" and we didn't understand what it was like [to be African American] and then when she found out that not only my direct supervisor, but also the director of our career center [are] black, that [silenced her] pretty quickly.

During a discussion about student perceptions, Julie talked about times when she felt that some African American students did not receive her honesty about their competitiveness for medical school well:

I do think that's there and that they seem to think that you're acting really not in their best interest, but the reality is that sometimes bad news really is in the student's best interest even if they don't see it at that point. I think when I say something to a white student, maybe they get their feelings hurt whereas if I [say] the exact same words to a black student it's interpreted entirely differently and they become more defensive, less willing to really hear what I'm saying. [The advising staff has] talked about this too, that the group that seems to sort of be the most persistent in the face of all evidence to the contrary, to me, are black women. I think it's that sort of defensive posture that contributes to that to a large extent because I think they say, "Oh, I'm going to show her."

Claire worried that at times some African American students may perceive her as not wanting to help them because she is not African American. She had greater concerns about students who
she viewed as having a lack of competitiveness for medical school and that these students may not return for advising:

I don't want them to feel like they can't be a professional person in some aspect, rather than just keep trying and trying [to get into medical school] and I never see them again because they're so frustrated they want to give up and that's it. I don't want them to get like that either. So, I mean, I'm not black and sometimes I think, I do feel like sometimes too they might not think I'm trying to help them because I'm not black, you know? That happens too and it's frustrating.

Peter articulated the uneasiness described by several advisors very well:

I think there's a concern on our part that when we deliver, we'll just say bad news, realistic news, to a minority student … Our concern is that we're being viewed as someone who is kind of putting down a black person, saying, "you just can't do this." In a sense we are saying that, but we're not saying it in a motive of race, but we're concerned that we're being interpreted that way. I think if I was really being candid, I think that we're also concerned that sometimes minority students, although there are programs for more equal opportunity, that minority students sometimes or there's a perception in our minds that they extend that to areas that are beyond what reality is. That yes, if you're a minority student and you have maybe a 24 on an MCAT you may still get into medical school, but if you have a 17, it's not going to make any difference. Yet there's sometimes I think a concern on our part that minority students over-expect.

Five questionnaire items were developed using the previous interview responses. Item 19 requested respondents to indicate advising strategies employed with African American students:

“I sometimes utilize the following strategies with African American premedical students that may differ from the strategies I utilize with non-minority students (check all that apply): I discuss societal impacts of African American physicians, I provide information on summer enrichment programs available for Underrepresented Minority and/or Disadvantaged students, I mention the option of applying to medical schools at Historically Black Colleges and Universities, I facilitate formal or informal peer mentor relationships, I discuss affirmative action practices occurring in medical school admissions, I am more likely to discuss various campus support services, I am more likely to discuss the financial aspects of attending medical school, none of the above, and/or other. Advisor responses are shown below in Table 5.
Table 5. Advising strategies utilized with African American students.

<table>
<thead>
<tr>
<th>Item Choice</th>
<th>Number of Responses</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societal Impact</td>
<td>41</td>
<td>23.4%</td>
</tr>
<tr>
<td>Enrichment Programs</td>
<td>147</td>
<td>84%</td>
</tr>
<tr>
<td>HBCUs</td>
<td>68</td>
<td>38.9%</td>
</tr>
<tr>
<td>Peer Mentoring</td>
<td>41</td>
<td>23.4%</td>
</tr>
<tr>
<td>Affirmative Action</td>
<td>47</td>
<td>26.9%</td>
</tr>
<tr>
<td>Campus Support Services</td>
<td>31</td>
<td>17.7%</td>
</tr>
<tr>
<td>Financial</td>
<td>12</td>
<td>6.9%</td>
</tr>
<tr>
<td>None of the Above</td>
<td>17</td>
<td>9.7%</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

Several additional items were developed to assess advisors’ attitudes toward and comfort level when advising African American premedical students. Items 16, 20, and 22 requested advisor responses on a Likert-type scale: Strongly Agree, Agree, Neither Agree/Nor Disagree, Disagree, or Strongly Disagree. Item 16 revealed differences between the qualitative and quantitative samples; it stated: “When advising a student whose grades and/or test scores are well below what is considered to be competitive for medical school, I feel less comfortable if the student is African American than if the student is non-minority.” Nineteen (10.9%) advisors indicated that they either agreed or strongly agreed with the statement, while 132 (75.5%) disagreed or strongly disagreed with the statement. Figure 1 illustrates survey responses for Item 16 by professional role and institution size.

Item 20 was developed to determine whether advisors believed that their race and/or ethnicity had an impact on the way they were perceived by African American premedical students: “I believe that my race and/or ethnicity affects the way premedical African American students respond to my advice.” The largest number (79 or 45.1%) selected “Neither Agree nor Disagree.” Thirty-four (19.5%) either agreed or strongly agreed, while 62 (35.4%) of the
participants disagreed or strongly disagreed with the statement. Figure 2 represents advisor responses by professional role and institution size for Item 20.

**Academic Difficulty**

![Academic Difficulty Chart]

Figure 1. Item 16: When advising a student whose grades and/or test scores are well below what is considered to be competitive for medical school, I feel less comfortable if the student is African American than if the student is non-minority.

Item 22 was included in the questionnaire as a result of interviewees commenting that they were more at ease discussing issues related to race and/or ethnicity with African American students once they had developed fairly strong relationships with students. Questionnaire respondents were asked to reply to the following: “I find it easier to discuss topics related directly or indirectly to a student’s race once I have developed a relationship with the student.” Most (116 or 66.3%) advisors agreed or strongly agreed with the statement. Twenty-four percent (42) neither agreed nor disagreed and 17 (9.7%) disagreed or strongly disagreed with the assertion. Opinions regarding Item 22 are further emphasized in Figure 3.
Figure 2. Item 20: I believe that my race and/or ethnicity affects the way premedical African American students respond to my advice.

Figure 3. Item 22: I find it easier to discuss topics related directly or indirectly to a student’s race once I have developed a relationship with the student.
Item 21 was also developed to assess advisors’ perspectives regarding comfort level in advising African American premedical students: “I sometimes feel uncomfortable when advising African American premedical students for the following reasons (check all that apply)” with the following choices: I am concerned about unintentionally offending African American premedical students, I am concerned that African American premedical students may not perceive me as having credibility, I am concerned about African American premedical students feeling comfortable and welcome, none of the above, and/or other. Most respondents did not have the concerns included in the item; the overall results for item 21 are included in Table 6 below on the following page.

Table 6. Discomfort in advising African American students.

<table>
<thead>
<tr>
<th>Item Choice</th>
<th>Number of Responses</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unintentionally Offending</td>
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<tr>
<td>Lack of Credibility</td>
<td>11</td>
<td>6.3%</td>
</tr>
<tr>
<td>Comfortable &amp; Welcome</td>
<td>47</td>
<td>26.9%</td>
</tr>
<tr>
<td>None of the Above</td>
<td>99</td>
<td>56.6%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>4%</td>
</tr>
</tbody>
</table>

There was a desire on the part of most advisors to do what they can to help African American students get into medical school. Many advisors saw African American students as possibly needing some extra guidance and assistance and were eager to aid, but also held students accountable and had them take responsibility for their academic and career goals.

Race-Neutral Advising

Not all advisors utilized unique approaches when working with African American students. For example, Chuck mentioned the following:

There is some detriment to feeling like you need to spoon feed your minority students with things that they may or may not have thought of. I think that our minority students, like our majority students, should be smart enough to look at their futures and decide for themselves whether they need some kind of additional work and then have some idea that
they can come to me and ask questions about that kind of thing. Once they voice the concern, I will do the best I can to give them all kinds of additional information.

Gary expected his students to prepare themselves for medical school through active involvement in service activities as well maintaining competitive grades. When asked if his approach to advising differed at all when he counseled African American students, Gary responded:

I hope not. I don't think it really does. Sometimes I get pretty harsh with students. We've had some really bright premed students and all they had was high grades and high scores and no service related activities and I've tried pretty strongly to get them to think that when you say you want to help people, but you've never helped anybody, how is that going to be perceived? But for students with really high grades and really high scores, sometimes they can, sometimes it doesn't really matter too much depending on where they're applying to medical school. But I would hope that I do not treat African American students any different. I've made both minority and non-minority students cry, so that's kind of equal opportunity here.

Like Gary, several advisors said they hoped they didn’t advise African American students any differently than non-minority students. In fact, Jeff and Kelly found that most of the African American students with whom they worked preferred not to be treated any differently than non-minority students, wanted to be considered competitive for medical school utilizing the same admissions statistics as non-minority students, and that they sought the same information as any premedical student. Jeff commented on this notion:

Maybe this is my perception, but the African American premed students that I work with seem to want to compete and kind of be treated - they don't want special consideration. So, they want to compete on the same playing field that everyone else is. So a lot of times, they're just looking for the same advice as [non-minority students], like, "I know I need to do some shadowing; who do I need to talk to about that, what programs are in town," or "what do you think about Kaplan and should I take that?"

Moreover, Kelly saw her African American students as needing the same type of assistance as her non-minority students and felt that race and/or ethnicity did not influence her approach to advising:

For some of my students their race is very much, I don't want to say a secondary issue, but it's not what they came in for help with. They're not struggling with how do I as a
black male student apply to medical school? They come in as, “how do I, as a desperate [college] undergrad, get into medical school? I need to know.” So, I think that we would do a lot of rationalizations if every student came in and I said, “Oh, okay well, they’re coming in as this ethnicity or this gender so I need to apply my Women’s Way of Knowing Theory that I learned in grad school to deal with this female student.”

Claire also experienced some similar situations with African American students who took issue with being treated as underrepresented minorities and preferred to attribute their accomplishments to their talents and abilities.

With regard to the consideration of the race and/or ethnicity of their advisees, interviewee feedback about confidence in and comfort with advising African American premedical students was incorporated into the questionnaire through items 14, 15, 24, and 25. All items required advisors to respond using a Likert-type scale extending from strongly agree to strongly disagree. Responses to items 14 and 15 indicated that the majority of advisors felt confident and comfortable advising African American premedical students. Item 14 stated, “I feel confident in my ability to advise African American premedical students.” Ninety-four percent (161) of advisors signified that they agreed or strongly agreed, 11 (6.3%) neither agreed nor disagreed, and 3 (1.7%) disagreed. Item 15 included, “I feel comfortable and at ease when advising African American premedical students.” Nearly 96% of respondents indicated that they agreed or strongly agreed, six neither agreed nor disagreed, and one person disagreed with the statement. These results were somewhat unexpected considering that a smaller proportion of interviewees shared these sentiments. Item 24 asked participants to indicate whether they were confident in their knowledge of affirmative action taking place in medical school admissions. Fifty-two percent agreed or strongly agreed, 22.3% neither agreed nor disagreed, and 25% disagreed or strongly disagreed. Item 24 required participants to specify whether they felt confident in their
knowledge of African American culture. Forty-two percent agreed or strongly agreed, 32% neither agreed nor disagreed, and 25.8% disagreed or strongly disagreed.

In order to quantitatively assess advisors’ responsiveness when advising African American premedical students, the following three items were analyzed collectively: “I feel comfortable and at ease when advising African American premedical students, when advising a student whose grades and/or test scores are well below what is considered to be competitive for medical school, I feel less comfortable if the student is African American than if the student is non-minority, and I feel confident in my ability to advise African American premedical students.” Item 16 addressed advisor discomfort and was reverse coded to reflect the scale directionality of the other two items. A 2 (faculty versus professional role) x 2 (<15,000 versus ≥15,000 enrollment) factorial ANOVA did not reveal a significant main effect for enrollment, F (1, 171) = .870, p < .352, n² = .005, nor a significant main effect for role, F (1, 171) = .237, p < .627, n² = .001. No significant interaction occurred, F (1, 171) = .000, p < .994, n² = .000. Results are presented in Tables 7, 8, and 9.

Table 7. Between-Subjects Factors for Dependent Variable: Responsiveness

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<th>Value Label</th>
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<td>&lt;15,000</td>
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<tr>
<td>≥15,000</td>
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<td>Professional advisor</td>
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Table 8. Descriptive Statistics for Dependent Variable: Responsiveness

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<tr>
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<td>Professional advisor</td>
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(table continued)
Table 9. Tests of Between-Subjects Effects for Dependent Variable: Responsiveness

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<th>Source</th>
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<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial η Squared</th>
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<td>.656</td>
<td>.580</td>
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<td>.237</td>
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<td>Enrollment x Role</td>
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<td>Error</td>
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</table>

R Squared = .011 (Adjusted R Squared = -.006)

Consideration of Societal Contexts

There were many ways in which advisors took into account the larger societal context when advising African American premedical students. Advisors discussed the positive influence that African American physicians have on the larger community, observations of personal and academic experiences more prevalent for African American students, issues regarding affirmative action practices in medical school admission, and diversity development and training.

Impact of African American Physicians on Society

Advisors were aware of the societal implications of having a greater number of African American students enrolled in medical school. Debra commented on the limited representation of African Americans in medical school:

In fact, I was just at [regional medical school] last Monday and Tuesday and I look[ed] on the walls, they have the class of 2008, 2007, 2006, and they have all the pictures of the
students. You can count one or two black [students] in there. They have more
foreigners, like Chinese, or whatever. I hardly [saw African American students].

Most advisors talked about the need for African American physicians not only for reasons of
equity and justice, but also because African American physicians have an inclination toward
treating populations that are medically underserved. Several advisors also mentioned the
positive consequences of having African American physicians within the community by serving
as role models for younger generations. Peter saw the value of having more African American
physicians:

As a society we need to have more successful minority students becoming physicians,
treating physicians and as a society to help heal all the racism that's happened, there's
hardly more confidence than anyone ever has is in their physician. One of the most
beloved physicians in this community for a number of years was an oncologist who was
an African American. I've thought many times what that does for the community and for
people who were touched by his competence and his personality and whatever and if we
could replicate that many times what it would do to heal the land in terms of [racism].

Jeff also viewed African American physicians as having a positive impact on society:

I really do believe that there is this great inequity and there is such a need in underserved
parts of the state and from what little anecdotal evidence I've seen, it seems that African
Americans are more likely to want to fill that need than the folks that want to go into
radiology. People trying to treat their own community.

He witnessed first-hand the strong influence that African American doctors have on African
American communities:

I was new in town, didn't know anybody, had no connection to the state and wasn't
working yet, so I really didn't know anybody. I needed to go to the doctor and one of my
wife's colleagues said, "I really like my doctor" and he was a black guy, "I really like Dr.
[name omitted], call him," because I needed a physical for insurance or whatever. I went
and made an appointment with Dr. [name omitted] and there were probably 50 people
either in the waiting room, the nurses, the people at the front desk, the pharmaceutical
reps, this was a booming practice. I was the only Caucasian in the building. That's huge
because maybe these people would not be as comfortable going to a white physician and
they were clearly comfortable with him.
James understood the worth of having a diverse pool of medical students, but was not sure how he could contribute:

I think that diversity is a good idea. I think there's a big point to this, but I don't exactly, I'm not sure what to do about it. I'm not sure that I can do much about it, but I think that's going to be a bigger and bigger concern in medical school admissions and therefore in [premedical advising].

Peter believed that there was a particular need for African American males interested in health professions. He was concerned that not as many African American males were enrolling in science and felt that this may be due to the limited number of African American role models in the health professions. Peter thought that an increase in the number of African American men in professions such as medicine would have a positive influence on younger generations of African Americans by inspiring children to seek out similar vocations:

If we could get more [African American graduates] out there and have role models in the community that are black physicians and not all successful black males being athletes and things like that, again it comes back to us, we would have more of them too [enrolled in college].

Chuck recognized the benefit to having African American physicians serve as role models:

I think that one of the big problems is that there are a fairly minor group of black doctors out there, so the role models at the level when the black child goes to see a doctor, they don’t often see a black doctor so all of the sudden, right off the bat they say, “can I aspire to this goal, he doesn’t look like me?” I think if there were a lot of black professionals out there I think we would see more black students entering college thinking, “this is where I want to go, this is what I want to do.”

**African American Cultural Influences**

Many participants verbalized an understanding of and appreciation for the African American culture in their community. While race and/or ethnicity was not typically the focus during an advising session, some advisors noticed that certain topics came up more often with their African American students. Pam had observed over the years that her African American
students were more likely to be dealing with family influences and obligations that may interfere
with school:

It may be that family issues come up more often. It does seem that I have more, well first
of all, they're more likely to be from [local city] and have more family responsibilities
one way or another, but very often they're telling me that they have to go home early to
pick up a sister from school or something because the mother or somebody is at work. So
it seems like they are picking up more of that. And I have a lot of girls that have a baby
and so they may be living at home with their mother, but that's also a pull and a draw.
Right, if the baby is sick or whatever and they're taking the baby to [local] hospital and
missing a class or something. So, I think maybe I probably end up discussing [more of]
those types of problems with African American students than I would with my majority
students.

Peter found some African American students at his institution to be coping with challenges that
go way beyond what college students typically encounter:

I think that an issue that I see with a lot of minority students is the baggage that they
carry into the university in terms of, again, often being first generation college students,
many coming from single parent families, that in one way or another [have an] impact on
something that's happened, issues, in terms of poor poverty issues, that impact on their
college performance in one way or another, that often are of an order [less] trackable than
majority students. So, whether that be that they didn't get a loan or there's no money or
they have their family back at home with a single parent and their mother is sick or
there's just [numerous] sort[s] of entangling things that I think overburden them in terms
of things that affect like, I need to drop a course after mid-semester or I have to resign
because there's this horrible thing at home that I have to take care of. I just see that they
are overburdened with more of those sorts of things.

Peter’s observations were of great consequence because students who are encumbered by outside
responsibilities and personal troubles will more than likely struggle academically which can in
turn negatively affect their chances of being accepted to medical school.

Interestingly, Susan found that some African American students may perceive themselves
as dealing with issues related to race and/or ethnicity, but that sometimes these students are
experiencing troubles that are common to most students. While she did not give specific
examples of these issues, Susan commented:
Recently I had a minority student who expressed some concerns about what he felt were some minority issues and so before he left I said, "Why don't we sit down and talk? You're in school now, no holds barred. Tell me what the concerns are." They really turned out to be personal issues that really were not at all related to minority issues. Now, I'm not discounting at all that that's how he saw the issues, but they were very much, I think he would have been stunned and I wish I could have gotten a majority student in there to say, "hey, we deal with some of these same things." These are not issues specifically dealt with by minorities. I have done that, which was maybe a little bit of training, but I was surprised that they were really not issues specific to minority students that he presented.

Peter and Susan had observed that African American students on their campus had experiences that were both uniquely individual and comparable with that of most students. Both advisors seemed to appreciate how students’ cultural identities frame their experiences.

Based on conversations with interviewees about their understanding and appreciation of African American culture within their regions, questionnaire participants were asked to respond, using a Likert-type scale ranging from strongly agree to strongly disagree, to the following item: “I feel confident in my knowledge of African American culture within my geographic region.” Seventy-four or 42.3% of survey participants indicated that they agreed or strongly agreed with their knowledge of African American culture. Fifty-six or 32% neither agreed nor disagreed with the statement and 45 or 25.8% either disagreed or strongly disagreed. Figure 5 further breaks down responses based on primary role and size of institution.

Affirmative Action

Most advisors were aware that medical schools were using affirmative action in the admissions process, but some expressed frustration that medical schools are not forthcoming with information regarding such policies. Kelly wanted medical schools to address affirmative action so that she could appropriately advise her students:

I think that it's really time for us to have a dialog about this whole situation. If it was an aggregate forum and the medical schools didn't want to be identified, like this is what [one medical school] says, and this is what [another medical school] or this is what
[another medical school] says about it, that's fine, but I think that if I had a student that had [a] 3.3 and [a] 25 [MCAT score], I would say, yes, I'm not preventing you from applying in this cycle, but recognize that [medical school], or whatever school that is, states a 3.7 and a 30 on the MCAT. That might discourage some students right there from applying if they look in the MSAR and they see those numbers kind of in raw form like that. I would imagine that could get to be a pretty messy discussion because, you know, they're putting themselves up for a lot of lawsuits and frustration and angry feelings.

African American Culture

Figure 4. Item 25: I feel confident in my knowledge of African American culture within my geographic region.

Brenda expressed some frustration about unspoken affirmative action policies at medical schools because she had to figure it out on her own:

Well, I think initially, I was not so aware that a minority student could be admitted with a lower GPA. We were just hearing globally these are GPA's that are probably not going to get you through the door and MCAT scores and things like that. I think it would've been helpful had I known that up front. But then again, it's not publicly announced or anything like that, but when you're looking at statistics like that, that would be helpful. You do hear it through the grapevine, as you're walking around and interfacing with the dean of the medical school when you go on a tour, he'll say, "well, you know, your minority student" and it's just a matter of you have to kind of gather that information through the underground.
Almost all interviewees seemed to be alert to the fact that there was some consideration with regard to applicants’ race and/or ethnicity in the medical school applications process. Debra, however, was not knowledgeable of this information and seemed surprised: “I didn’t know that! I think that they should just treat everybody equally. I mean, if I’m white and I have real good grades, well that’s not fair.”

Item 24 was included in the questionnaire to assess advisors’ confidence in their knowledge of affirmative action in the medical school admissions process. This item requested participants to respond using a Likert-type scale ranging from strongly agree to strongly disagree: “I feel confident in my knowledge of affirmative action practices taking place in the medical school admissions process.” The majority (91 or 52%) of participants agreed or strongly agreed. Thirty-nine (22.3%) individuals neither agreed nor disagreed with the statement, while 45 (25%) either disagreed or strongly disagreed. Results from Item 24 are illustrated in Figure 5.

Figure 5. Item 24: I feel confident in my knowledge of affirmative action practices taking place in the medical school admissions process.
The two questionnaire items related to consideration of societal context were statistically analyzed collectively to assess whether differences regarding consideration of societal context existed among groups of advisors. The following items were included: “I feel confident in my knowledge of affirmative action practices taking place in the medical school admissions process” and “I feel confident in my knowledge of African American culture within my geographic region.” A factorial ANOVA was used to analyze the potential interaction effects of advisor role to institutional size. Specifically, the levels for the two independent variables were defined as (1) faculty versus professional role and (2) enrollment size for institutions with less than or greater than or equal to 15,000. The results of the ANOVA indicated that enrollment size did not significantly impact “societal context,” $F (1, 171) = .046, p < .831, n^2 = .000$, nor did primary role, $F (1, 171) = .073, p < .788, n^2 = .000$. The ANOVA results did not reveal any significant interaction effects between the factors of enrollment or role, $F (1, 171) = .395, p < .530, n^2 = .001$. The combination of advisor role and institution size did not distort the main effects of the dependent variable. The results are presented in Tables 10, 11, and 12.

Table 10. Between-Subjects Factors for Consideration of Societal Context

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<th>Enrollment</th>
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<tr>
<td>&lt;15,000</td>
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<td>≥15,000</td>
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<table>
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<th>Professional Role</th>
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<tr>
<td>Faculty member</td>
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<td>Professional advisor</td>
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Table 11. Descriptive Statistics for Dependent Variable: Societal Context

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<td>Professional advisor</td>
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(table continued)
Table 12. Tests of Between-Subjects Effects for Dependent Variable: Societal Context

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<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
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<td>.125</td>
<td>.181</td>
<td>.909</td>
<td>.003</td>
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<td>778.777</td>
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<td>.000</td>
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<td>.046</td>
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<tr>
<td>Role</td>
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<td>.073</td>
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</table>

R Squared = .003 (Adjusted R Squared = -.014)

Personal and Professional Diversity Development

Some participants articulated a general appreciation of what it was like to be in the minority based on personal experiences. Advisors were aware that racism exists and some attempted to seize opportunities to ensure equal opportunity for African American premedical students through advising. Being a lesbian, one participant felt that she identified with her African American students’ feelings of alienation although her differences were not readily apparent from the outside:

I think also from the student’s side too, I understand that when you feel a little bit different then the most important thing is to find somebody that makes you feel less different or that at least you feel like understands how you're different and what that might mean in the rest of your life.

Despite the fact that nearly every advisor had participated in some sort of diversity or multicultural training, most felt that they had learned more about interacting with African
American students from their personal experience. Personal experiences varied widely and included growing up in diverse neighborhoods, attending predominantly African American high schools, working in public health during the 1960’s, and working for a charity organization that served mostly African Americans. When asked whether or not the diversity training she received influenced the way she worked with African American students, Pam responded:

I don't know if it has really or not and I think I came in fairly sort of open-minded about African American students anyway and maybe because part of our Peace Corps experience was in Botswana teaching in a school with nothing but Africans. So at least I came in knowing that they could be just as smart as anybody else.

Brenda felt that her experience serving African Americans in her community through a charity organization made a bigger impact on her work than the multicultural counseling courses she took through her graduate program:

I think in some ways [the courses helped]. I think I was already kind of pointing in that direction. Gosh, before I got to this position and before I worked [here], I worked for [a religiously-affiliated job search program] and I was mainly working with minority participants. Everyday I felt like this is probably the best it's going to get to use my skills to do what I can to level that playing field. It was a huge support for people that were economically disadvantaged as well as being minority and in [local city] that's a double dip against you. So, I did what I could. So that preparation, I think, was more compelling than taking a class. I think it broadened my scope of other cultures beyond the African American, I think I had a lot of exposure to that already and I kind of had developed my own understanding of all that and knew where I fit in.

Some advisors found diversity training to be helpful in working with African American students while some felt that formal training was not particularly beneficial. Jeff made an interesting comment:

I've never attended a good diversity workshop. Really, that may be my prejudices going in, it may not be that I've never gone to a good diversity workshop, it might be that I've never been open to what one had to say. Just exposure. If you're in workshop with 12 other white people talking about how to interact with people of other cultures [it is not helpful.]
Some advisors discovered what advising approaches work well with African American students through trial and error. Julie completed an online graduate certificate in advising through a national advising organization and found the multicultural counseling course informative, but not necessarily practical:

Yes, it was good. I think the most important piece to me was studying some of the identity theory models and identity development and getting sort of that perspective. I had studied some of that on the gender side in other classes, but I thought that was interesting. In terms of rubber hits the road life skills, no. The best trainer there is doing it and having a student walk out and say “that worked” and “oh, that didn't and we won't do that again.” Just in terms of sort of raising my consciousness and really sort of thinking about some of the underlying issues, yes, I thought it was good.

Interview responses on advisor diversity development were the basis for items 31, 32, 33, and 34. Each of these items requested responses from participants using the same Likert-type scale. Item 31 stated, “Information I acquire from national professional organizations has helped me to further develop my advising skills in working with African American premedical students.” Ninety-one (52%) advisors agreed or strongly agreed, 54 (30.9%) neither agreed nor disagreed, and 30 (17.1%) disagreed or strongly disagreed. Item 33: “The diversity training I received has helped me to further develop my advising skills in working with African American premedical students.” Forty-nine percent of respondents agreed or strongly agreed, 43% neither agreed nor disagreed, and 7% disagree. Fifty-five percent of advisors agreed or strongly agreed that their life experiences were more helpful in allowing them to further develop their advising skills in working with African American premedical students than any formal diversity training they may have received. Forty-one percent neither agreed nor disagreed and only 4% disagreed. Survey participants were asked to indicate whether or not they found themselves to be more anxious after participating in diversity training. Only 3.4% of advisors agreed with this
statement. Item 32 asked participants to indicate whether they had participated in diversity training, and if so, what type(s). Results are presented in Table 13.

Table 13. Participation in diversity training

<table>
<thead>
<tr>
<th>Item Choices</th>
<th>Number of Responses</th>
<th>Percentage of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional workshops or seminars</td>
<td>118</td>
<td>67%</td>
</tr>
<tr>
<td>College level course</td>
<td>32</td>
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<tr>
<td>Professional organization</td>
<td>84</td>
<td>48%</td>
</tr>
<tr>
<td>None</td>
<td>37</td>
<td>21%</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>4.6%</td>
</tr>
</tbody>
</table>

**Consideration of Institutional Contexts**

Advisors took into account institutional contexts in a variety of ways. Advisors did not feel comfortable discussing the impact race can have on a student’s medical school application in a diverse group setting. In fact, several advisors gave examples of uncomfortable situations where non-minority students brought up the issue of reverse discrimination. Some advisors felt more comfortable than others explaining affirmative action practices as well as the implications these practices have on society. Advisors were not inclined to single out African American students in a culturally heterogeneous group; some advisors did not single out African American students in an individual advising session and would only give information related to race and/or ethnicity if a student made an inquiry.

**Segregation and Campus Climate**

Several of the interviewees observed what they perceived as self-segregation on the part of African American students and a lack of participation in department-sponsored premedical events. Some advisors supported the creation of minority premedical student organizations and others saw such organizations as furthering the issue of racial segregation among students. Pros and cons existed for the development of these organizations. Minority premedical student
organizations served as a network with which underrepresented minority students can identify, but in some instances such groups may also end up separating themselves from other student groups.

As the chief health-professions advisor on her campus, Susan was responsible for developing and coordinating premedical campus programs. She has observed through her experience at a large public institution a lack of African American student participation:

Another point of frustration for me is that we have, through our [premedical honor society] group and through other services through my office, we have lots of opportunities for [African American students] to get information that would help them reach those goals and they do not participate despite efforts to outreach to them. [African American students] don't come to a lot of the meetings. When I talk to some of the minority students who I've gotten to know better, it's sort of like, “Well, we don't feel welcome.” We don't extend a welcome, everybody is welcome, we invite everybody, but we really can't give you [individual invitations], well, I mean, I've tried; I've seen students in the hall and asked if they were coming to [premedical honor society meeting] tonight. It's not that we haven't tried to make [African American students] feel welcome, but they don't. It's frustrating that we provide all of this for their benefit and they don't take advantage of it.

Charyl worried that some African American students on her campus were not in the loop about information regarding the medical school application process. Her hope was that the minority premedical student organization on her campus would help keep African American students informed:

The big thing that I found and this was I think a really good reason to get the [minority student premedical organization] going, and by the way, I did not do it, I had two students who got it going. When I meet with my [premedical honor society] students it’s very clear that they know all the ropes and all the hoops they have to jump through. They know all the deadlines, all the timing, they know what’s required of their application. When I talk to the [minority student premedical organization] students, they are clueless. They’re clueless about what medical school is about, how to apply to medical school, what is needed for the MCAT, when the MCAT’s are, timing the classes they need to take. I think what happens is that the minority students tend to congregate together and their social network is together. When they do that, they’re not talking to the other students, non-minority students who have it together and know what’s going on and taking more of the opportunities and they’re getting left out and they’re using each other as a network. That network is not connected to the rest of the world. That, I think, is a
serious problem with our minority pre-professional students; they are not connected the way the rest of the students are because they are not using those juniors and seniors as resources and they’re not coming to me.

Peter prevented the start-up of a minority pre-health student organization on his campus because he feared that such a group would further separate students along racial and/or ethnic lines:

We had somewhat of an attempt last year to start a minority pre-health student organization and I proactively put the kibosh on it. Well, I thought it simply magnified some of the [segregation] issues that we were talking about. On the other hand I’ve also encouraged [our pre-health director] to do what she can to bring minority speakers into the program.

Jeff was supportive of students wanting to start up a minority pre-health organization, but had some reservations about the newly created club on his campus:

My concern is that they will not go to the regular [premedical honor society] meetings. When the students came to me and said they wanted to do this, I said, "well, I think it's a good idea, but I hope that you will not plan on meeting so frequently as to compete with the groups that are already there." Because it's going to be hard to get the same speakers to come to a group of 15 as you can get to a group of 150 and it's hard to get some of the speakers that I think are really good to come twice in one semester.

On a few campuses, the premedical student organizations were diverse in leadership as well as general membership. On Kelly’s campus, the minority premedical student organization had a well-integrated leadership and involvement. She was still working to change the culture of the club from one of strictly a minority membership to one of students seeking to serve minority and disadvantaged people in the community:

Our officer panel is very diverse, which I love and it helps break down that self-segregation, but I'll still have students, especially the freshmen, say, well they do a lot of stuff and I'd like to join them, but I'm not a minority. You don't have to be a minority.

She found one of the benefits of being the advisor to this organization was the opportunity to develop stronger relationships with some of her African American students. On Brenda’s campus, the minority premedical student organization was the most popular premedical organization and drew a diverse leadership and participation:
It was the hottest club for pre-health students, they were the ones that were doing everything, they were the ones that were arranging the tour of [the two local medical schools] and had good speakers coming in and everything, so everybody wanted in. It was really meant to be a support. It was launched by some minority students many years ago, but since then, last year they had a Caucasian president.

There were mixed reactions from survey participants with respect to observations of racial segregation on campuses. Forty-three percent of respondents agreed or strongly agreed that they had observed segregation among some African American and non-minority premedical students. Twenty-three percent neither agreed nor disagreed and 34% disagreed or strongly disagreed. Sixty-five percent of advisors were not concerned that racial segregation on campus prevented some African American premedical students from being informed about the medical school application process, with only 19% agreeing or strongly agreeing. Like interviewees, some survey respondents had observed a lack of participation of some African American students in school-sponsored premedical events, but others had not made such observations. Thirty-one percent of participants indicated that there was a lack of participation, while 45% did not agree.

Several advisors noticed that African American premedical students did not seek out advising at as high of a rate as non-minority students; one problem with this was the possibility of missing out on important time-sensitive information. Despite being at a prestigious private school with about 150 students applying to medical school each year, Claire typically had only five to ten African American applicants. She was concerned that African American students were not seeking her assistance with premedical advising:

Like I said, when I first started here, we had a lot more African Americans. It's just really dwindled down, just like nationally. We had the multicultural affairs office here, who hasn't really been very helpful in working with me all the time. I'm not really sure why. I don't know. Even though I'm friends with them and we've worked closely, I've found that some of the premeds were trying to go there and were talking to them [rather] than trying to work their way over here. Eventually they find their way over here. I usually try to
encourage [minority affairs office staff member] to make sure if [she] know[s] any of them, send them because we can help them. [The African American students are] very receptive though. They come in here and once they start developing a relationship, they start coming in here.

Kelly’s student database system allowed her to track students who came in for premedical advising appointments with her. While she had noticed that many of her African American students did not seek advising if they did not believe they were competitive for medical school, she was disturbed when she saw the report of the low number of African American students who had come to her for assistance.

Quantitative data supported the interview data in that many, but not all, advisors had observed that African American premedical students did not seek advising at as high of a rate as non-minority students. Fifty-eight percent of survey participants were concerned that African American premedical students may not seek advising. Fifteen percent neither agreed nor disagreed and 38% disagreed or strongly disagreed. To further flesh out differences regarding institutional contexts, a 2 x 2 factorial ANOVA was performed to look for advisor differences across the factors of primary role and institution size as well as the potential influence of factors on one another relative to the dependent variable of institutional context.

Specific observations made by interviewees included instances of perceived segregation on campus, low participation of some African American students in department-sponsored premedical events, concern that African American students did not appear to seek out premedical advising at as high of a rate as non-minority students, and concern that African American students may not be up to date regarding important premedical information. In order to quantitatively measure the qualitative theme of consideration of institutional contexts, scores from the questionnaire items that represented this theme were analyzed collectively using a factorial ANOVA.
A 2 (faculty versus professional role) x 2 (small versus large enrollment) factorial ANOVA detected a significant main effect for enrollment, F (1, 171) = 4.53, p < .035, \( n^2 = .026 \). There was no significant main effect for role, F (1, 171) = .955, p < .330, \( n^2 = .006 \). No significant interaction effects were revealed, F (1, 171) = .047, p < .829, \( n^2 = .000 \). No post-hoc tests were performed since there were only two independent variables. The eta-squared (\( n^2 \)) statistic describes the proportion of total variability in the dependent variable that can be attributed to the independent variables. Eta\(^2\) is a measure of association, however, it is a partial effect size measure that also describes the individual variance in the dependent variable by each independent variable while holding the second variable constant.

The ANOVA results indicated that advisors from larger institutions (\( \geq 15,000 \) enrollment) differed significantly from advisors from smaller institutions (\(< 15,000 \) enrollment) on their perceptions of institutional context. An examination of the ANOVA outcomes and descriptive statistics indicated that advisors from larger institutions when compared with those from smaller institutions more often agreed with statements regarding observed segregation on campus, low participation of some African American students in department-sponsored premedical events, concern that African American students did not appear to seek out premedical advising at as high of a rate as non-minority students, and concern that African American students may not be up to date regarding important premedical information. The results of the ANOVA are presented in Tables 14, 15, and 16.

Table 14. Between-Subjects Factors for Dependent Variable: Institutional Context

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<tr>
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Table 15. Descriptive Statistics for Dependent Variable: Institutional Context

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Table 16. Tests of Between-Subjects Effects for Dependent Variable: Institutional Context

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<th>F</th>
<th>Sig.</th>
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<td>.006</td>
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<td>.034</td>
<td>.047</td>
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</table>

R Squared = .055 (Adjusted R Squared = .038)

Peer Trust and Student Networks

A few participants observed that African American students who had a positive experience with an advisor often told other students within their network; others within that network, in turn, sought advice from the same advisor. Julie shared her perspective regarding how students often took the word of their friends and classmates over a professor or advisor:

I think they will take each other's recommendations, completely, they certainly have a network and if they, if I have a good interaction with a student, then a lot of times they'll say, “So and so told me to come see you or somebody said that I should talk to you about this.” So, a lot of times, you really don't have to save the world as a group if you'll start with having a really great interaction with one single student. Now, you've got to hold that up, you know, you can't interact really well with that one and do a terrible job with next four and have them still come and talk to you. But they will talk to each other about who they [feel] comfortable with and you get the reputation of either being somebody that they can talk to or somebody that they don't feel as comfortable [with]. And they
will take that, those personal recommendations, over absolutely anything that we do as an office. So, if you can't get them to support you from a one on one and within their own, their group, whatever group that is, whether it's girls or black students or Hispanic students or whatever else you're talking about, it doesn't matter how much effort you put into programs and trying to make them feel comfortable, they won't respond to it.

It was this same notion of peer trust that led Charyl and Chuck to develop informal mentoring relationships between students. Allen also found students to be more trusting of one another. He commented on having college students talk to high school students:

Because when the students talk to students, they believe it. I work the open house, the series of open house sessions, this little board behind us is what I take with us. I can stand there and say to this prospective freshman, well you would need to do this and this and they'll look at the student and say, "is that right, is that what I need to do?" and the student will say, "yes" and then they believe it. We used to say in my generation don't trust anyone over 30 and it's almost the same kind of thing.

Many advisors asserted that they were aware that institutional context impacted African American premedical students. Advisors on larger campuses were struggling with how to reach out to the population of African American students in an effort to ensure they received advising. Other advisors were concerned about how campus climate might negatively impact African American students. Most advisors reflected on the context of the institution when advising African American students.

**Advisors' Roles in Increasing African American Enrollment in Medical School**

There were mixed feelings about how advisors perceived their role in increasing African American enrollment in medical school. Many advisors did not see themselves as having the opportunity to make a difference due to the limited number of African American premedical students with whom they worked. Charyl felt that she did not have a strong role because her institution had a difficult time enrolling African American students:

Well, I work with my specific students. [At the university], I work with what they send me and [the university] has a really hard time getting minority students here. I would say
the majority of the minority students who are here, are headed to health professions, whether they make it or not is usually decided in the freshman year.

Ed shared the same feelings: “Not with the small number I have. I hate to be negative, but I just don’t, I feel a great deal of, I don't know, satisfaction and perhaps false pride when one is successful.” While Claire believed she had somewhat of a role in increasing African American admission to medical school, she too found that her impact was restricted by the limited enrollment of this population of students at her institution:

I would think so. I think about [the limited enrollment of African American students at the institution] too. In myself, I kind of say, "Look, Claire, [the institution is] having an issue getting students to come here, you can't say your percentage in here is going to grow if they're having trouble." And then nationally they're having trouble, so it's just not all in here.

Some advisors believed that increasing African American enrollment in medical school must begin at the elementary and secondary levels. Allen participated in recruitment activities directed at these early educational levels through his involvement with a community alliance targeting underrepresented minorities:

I think we have a role. And that begins in high school. I'm on a little committee down at [the local high school] called the [business alliance]. Through this organization, beginning with things like that, we can meet teachers. Our students actually went, the [campus pre-health student organization], we had four students that went to [the local high school] twice encouraging them to look at health careers. The efforts to recruit students for this university and for pre-health begins at the high school level and at the middle school level.

Gary also spoke to a number of high school students who came to campus for visits:

You know, I talk to the admissions office, I do all sorts of recruiting events that the admissions office does, I do talk to parents and students, high school students and their parents, I take calls about meeting with them, we're coming to campus, we're taking a tour, we'd like to stop by and talk. So I do that all the time.

Upon reflecting on the question about his role in increasing African American enrollment to medical school, Chuck remarked that pre-college educational levels were beyond his scope and
reach as a university faculty advisor. Nor did he see himself as being in a position to push

entering African American freshmen into medical careers:

That question that has bothered me a lot over the years because I know that one of the big
failures of the 3000 by 2000 initiative was the failure to keep the pipeline flowing. We
can nurture the students who come to [this university] saying, “I want to go to medical
school,” and try to keep them from falling out of it. Quite frankly, I do not go out and
recruit at the high school level to try to influence minority students in the high schools to
seriously consider a medical career. I know some universities do that. I know a lot of
medical schools jump right over the university and go directly into the high school and
try to take medical students to the high schools and show them what they might be and
things like that to increase the enrollment in colleges. I then presume that they must
work somehow with those colleges to help keep those people in the pipeline as they’re
going through college. I don’t go out to the freshman class and say, “any of you minority
students out there who haven’t considered medical school, please come to my office and
let me indoctrinate you.” I’ve often wondered whether part of the failure of 3000 by
2000 was my fault, without going out and trying to [recruit minority students].

Several advisors did indeed view themselves as playing a significant part in increasing the
admission of African American students to medical school. Gary commented that advisors are in
the best position to reach out to African American undergraduates and make a difference:

Sure. I think college health, pre-med advisors certainly will have [a role]. It's not going
to be the medical schools; it's unlikely that medical school deans are going to be rooting
from the bushes. No, I think that we can do that.

Pam perceived herself as making a difference because of her considerable efforts to help African
American students attain success through offering encouragement, support, and some extra
guidance. She reflected on her interactions with African American students, most who happen to
be first-generation college students at her institution:

Yes. Well, in being there as the nurturing person…so where with the majority students
you might have mom and dad saying, "Well, don't you think this is too heavy a load or
too light a load” and they're often second guessing the advising. But I think with the
minority students, they're really coming in just not knowing and often worried and so,
yes, I think you really do - to sort of say, "this will work if you just do this, and let's get
some clinical experience, and so forth.” It probably is [more important for African
American students] to just not feel lost in the shuffle.
Peter and Kelly responded to the question from an institutional perspective based on departmental goals. Peter’s comments:

Well, I think we all do in this office because one of the mandates and goals for the college is to increase the number of minority students. Since health professional students are by far the biggest group of students in our college, I think then almost by definition and certainly [we] would all want our students to not just come [here], but to be successful. So, I think if the only reason were is who[m] we work for, the answer is yes.

Kelly felt that it was her responsibility to make great efforts in moving all of her students who are capable of and well suited for a medical profession toward their goals:

I do think that's part of the role, but I think even a broader term, it's not just the underrepresented group, I think it's any qualified candidate that has that compassion of serving others in that capacity. I think that is part of my mission.

A few advisors were unsure of their role, but sincerely hoped they made a difference.

Karen was relatively new to the field of premedical advising, but had already observed the low enrollment of African Americans in medical school and had the desire to do her part to change things:

I hope I do. I hope that I do. Having the opportunity, and hoping that I take full advantage of it. I realize there are other issues that are beyond my control, like the MCAT questions and things like that, the whole thread that runs on the listserv these last couple of weeks [about healthcare disparities for individuals in poor and rural areas] and all that kind of stuff.

Brenda too had an optimistic outlook on the potential she had to have an impact on the goals and dreams of her African American students:

I surely hope so. I buy in big time, I'm a child of the '60's and all that Civil Rights legislation and all that stuff impacted me in a huge way. I've always, I always think of myself as kind of the African American advocate, so this is a very nice role for me to be able to make sure that that happens. And I never see it as, well, if this student gets through the door, then that made that student stand outside. Because I figure the pool is very large and I'm only dealing with this one, perhaps African American student, who if I can help to give that support I think that's worthy of my time. I always feel as though I'm just leveling the playing field to protect those that did not have the advantages that the other kids did. So, if we all had the same background I wouldn't be offering this support,
but if I see a student who I can sense that they just didn't get that, it may not be [just] that this is a minority student, so wow I'm pulling out the stops.

A few advisors replied that they did not play a role or played a limited role in the increase of African American students in medical school. James commented that he might have some part, but not a big one because only in extreme cases did he do anything differently with African American advisees:

I encourage the African American students, but not, I don't go, I don't really spend a lot of time on that in particular any more than I do everybody else. Now there are some students that I really, really think have a problem [in that they have faced or continue to face extreme financial and social adversity] and they deserve all the help they can get and I will spend a little time on that.

Likewise, Jeff utilized the same advising approach with African American students as with non-minority students and while he believed that a need exists for an upsurge in the enrollment of this population of students in medical school, he felt that he was not contributing greatly to the effort. This was partly due to being from a large institution and having an advising load of nearly 1,000 students; he did not have the time that he felt was necessary to devote to African American students in order really make a difference:

Gosh, I'd love to, “but.” No more so than anybody else, I guess. If someone comes in I can look at an application and say, "okay, well, as a sophomore, here are the things you need to do," but I don't know that my advice is going to be any different. Whether it's a non-minority or an African American student. "You need to shadow, or you need to pull up your grades, or the MCAT is coming and based on your ACT scores, you're really going to have to study for this. So let's put a plan into place where maybe you take summer classes and only take 12 hours in the fall so that you've got more time to study." But that's nothing unique to African Americans. We talk about the pipeline all the time around here. It's just a limitation of where I am and what I have to do.

Debra conveyed that she saw herself as having more of an impact as a teacher rather than an advisor and that her influence on African American students occurred mostly in the classroom, but even viewed this effect as limited:
Me? I don’t know in terms of advising, but in terms of teaching, I think when I teach I usually encourage them. Like I encourage them to come to my office and get a little bit of help. [I play a role, but] not a whole bunch, some, but not a whole bunch.

Advisors interacted with students at the undergraduate level and acted as facilitators to get students to the next step: medical school.

Sixty-two percent of survey respondents saw themselves as having the potential to play a significant role in increasing African American enrollment in medical school. Only 12% did not view themselves as playing a role. Twenty-six percent of advisors neither agreed nor disagreed. Figure 6 presents survey responses according to primary role and institution size.

Figure 6. Item 29: I have the potential to play a significant role in increasing African American enrollment in medical school.

A 2 x 2 factorial ANOVA was used to statistically analyze the dependent variable of advisors’ potential role in increasing African American admission to medical school. The dependent variable was measured across two independent variables: primary role (faculty versus
professional) and institutional size (less than 15,000 versus greater than or equal to 15,000). The
analysis did not reveal significant main effects for enrollment size, F (1, 171) = 1.833, p < .178
or primary role, F (1, 171) = .539, p < .464. A significant interaction effect was not found, F (1,
171) = .037, p < .849. Results are outlined in Tables 17, 18, and 19.

Table 17. Between-Subjects Factors for Dependent Variable: Role in AA Admission

<table>
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<tr>
<th>Enrollment</th>
<th>Value Label</th>
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<td>Professional Role</td>
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<td>Faculty member</td>
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Table 18. Descriptive Statistics for Dependent Variable: Role in AA Admission

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Table 19. Tests of Between-Subjects Effects for Dependent Variable: Role in AA Admission

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<th>Source</th>
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<th>Sig.</th>
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<td>.540</td>
<td>.634</td>
<td>.594</td>
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<td>enrl x role</td>
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R Squared = .011 (Adjusted R Squared = -.006)
Participants were also asked to indicate ways in which they could potentially have a bigger role in increasing African American admission to medical school. Item choices included: “if I had more time to spend with African American premedical students, if I had a larger number of African American premedical students, if I had more information on best advising practices for African Americans premedical students, I had more information regarding medical school affirmative action practices, none of the above, and/or other.” The results of item 30 can be found in Table 20.

Table 20. Results for bigger role in African American enrollment in medical school

<table>
<thead>
<tr>
<th>Item Choices</th>
<th>Number of Responses</th>
<th>Percentage of Respondents</th>
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<tr>
<td>More time</td>
<td>39</td>
<td>22.3%</td>
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<tr>
<td>Larger enrollment of African Americans</td>
<td>105</td>
<td>60%</td>
</tr>
<tr>
<td>More advising information</td>
<td>79</td>
<td>45.1%</td>
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<tr>
<td>More affirmative action information</td>
<td>69</td>
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<tr>
<td>Other</td>
<td>10</td>
<td>5.7%</td>
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Advising Styles

Typically, advisors utilized a combination of developmental and prescriptive styles of advising when working with all students. Advising was viewed as a teaching function and students were held accountable for making their own decisions, but there was specific information that advisors felt they needed to give regarding medical school and the application process. Claire made an effort to call in African American students for advising which has been referred to as intrusive advising. She did this at times with students regardless of race and/or ethnicity, but she did so more often with African American students. When asked about how her advising style differed with African American students, Claire commented:

Well, I just it depends on what their GPA is and how they've started out their freshman year and how they feel. I do the same thing [as with all students]. I try to [keep them] on the same track, make sure they know what's going on, what their deadlines are, what I
expect of them. I stay on [the African American students] a little bit more, in a way, because sometimes I don't hear [from them]; it is different. Sometimes they just disappear. They'll be in the office a lot and all of the sudden [I] just won't see them or [I] won't hear from them. Sometimes, and I do that with a lot of students, I can't say that's any different, I just, I'm on them more because I have a handful of African American students and I feel like they really are dynamic students and I don't want them to miss the boat. This is important and I want them to understand how important this is for them to stay on track and stuff like that. Other than that, it's pretty much the same; they work hard.

Gary had a great sense of humor that he utilized in his approach to advising. He made efforts to put students at ease in his office. He kept a drawer-full of candy in his desk: “I tell students this is anti-anxiety medication. So if students are anxious, I'll actually tell them to have some of that.” He also kept stuffed animals, a fan, and a box of tissues on hand.

I observed that a few advisors were using a constructive approach integrated with the developmental model when advising African American students. These advisors listened carefully to students in order to learn what their needs were and struggled to truly understand students’ personal and academic journeys. For example, Karen wanted to know more about her students and “What it [was] like to walk in their shoes” and, in terms of educational and individual experiences, what obstacles students had overcome in order to get to college. Such interest indicates an appreciation for and an understanding of how a student’s cultural background influences their personal and academic needs; this appreciation points toward an advising approach that draws from a constructivist framework.

With regard to advising style, item 18, “My approach to advising African American premedical students may differ from my approach to advising non-minority students in the following ways,” included two advising styles as choices. Thirty-eight (21.7%) advisors indicated that they tended to utilize a “more developmental” advising style, while 19 (10.9%)
responded that they were more likely to use a prescriptive approach with African American students.

**Further Information**

When asked, “What type of information would be beneficial in increasing your confidence when advising African American students,” participants responded in a variety of ways. Karen, who had not had extensive diversity training, commented that sensitivity training would be helpful. Coming from a science background rather than a counseling background, Ed felt that further knowledge of mental health counseling would be beneficial:

> But I think I could better understand how they tick or what their choices might have been if I had a deeper psychology, sociology background or a deeper counseling background. I think this, maybe as part of your survey, sometimes at a small school where you have the faculty members doing the advising, they're not necessarily professionally trained. Just not knowing anything, or how some of that problem that's deep within them can manifest itself. Whether it, some of the behavior patterns they're showing in class or whatever else you want to say, is it due to the fact that they can't do the work or due to the fact that they're carrying some baggage? And so, here, we have a counseling center and so I find myself sometimes, not necessarily constantly, but sometimes referring to the Counseling Center. Because I just don't feel adequate.

Claire said that having a network of medical school contacts would be useful so that she could call a medical school and bring their attention to an applicant who may otherwise slip through the cracks:

> What I like is connections in certain aspects because if there's places these students, if I think that there's a school that will really look at students that maybe that they really want to go to or I just want to make sure students have, you know, I like being able to call the med school and talk to their offices and minority office or whatever they have.

Peter felt that having a premedical advisor in the department who was an underrepresented minority would help to create a welcoming atmosphere for African American students as well as contribute to the diversity competency of the entire advising staff. Peter also believed that his
office could work more closely with the minority office on campus to identify better ways to serve African American students:

And another thing would help is if we had a minority advisor in our office. So, we are an educational institution and so that should supersede everything that we do. We are the educators, the students are not the educators. So we need to do whatever we can to try to fix this thing. I think the ball is always in our court in this deal. Between us and the minority people [in the minority office] to make this thing happen because it's not healthy the way it is.

Jeff commented that he would like to know how best to address affirmative action with students:

Knowing how to present that in a way, in a group setting or one on one, in a small group setting, small or large group, how to use that information without offending anyone. Sometimes I feel like I can't, it's such a land mine.

Being primarily a career counselor, Brenda came into the field of premedical advising with no training and nobody to show her the ropes. She had put a lot of thought into information that would have helped her coming into her position over the years. She viewed the national professional organization as being in the best position to offer assistance to advisors:

And honestly, especially for a brand new advisor, it would have been very helpful for me if I had been able to go to a website where there was one composite listing of all the kinds of issues that you might encounter with minority students, including all of those resources [enrichment programs]. I would get a little email or a little physical mail from one program at such and such university and then I might find out that there's another one over there somewhere. These would trickle into the office and I would send out email as it came along to alert people, but I had no idea for a very long time just how many of them were out there. So, we could really use a resource. I think maybe one way of getting that through, because not all of us have the chance to go to a conference, I'm on the listserv and I get the bulletins and reports, which I find are very good, but what I'm thinking is if, when someone signed up for NAAHP if they got a beginner’s packet, a welcome packet that would be more than just okay, you're in, but specifically, here are some resources, we do this annual conference and things like that and here's a packet on some specific need populations that might really be a good resource for you. I think if I had had that in the beginning, kind of a toolkit, so, a welcome toolkit.

Summary

Participants seemed to be doing the best they could with the information and resources they had to assist African American premedical students. What was clear from discussions with
advisors was that they cared deeply about the welfare of their students and they were willing to go the extra mile to do what was in the best interest of their students. Acting in students’ best interest was not always popular with students and it seemed that race and/or ethnicity can further complicate the advising relationship in some instances. Peter found it important to continue discussions about race and/or ethnicity:

Then, when all is said and done, even at the end of this conversation, we are using words like, "them" and "us," that those are in a sense the worst kind of words that we want to use when we're trying to establish an advising relationship. So, I think philosophically we struggle with some of those issues. Personally, sometimes it's hard to say those things, but we've talked about them among each other. We have talked about them with the folks that work in the minority office here too. We're going to do more of that than we have in the past.

Brenda also found talking about racial and/or ethnic issues in premedical advising valuable in that it allowed her to reflect on her experience:

I was glad to talk and honestly this is very rich for me as well. It's kind of nice because just getting yet another point of view from you as well as being able to share what my experience has been. I just felt as though I had to climb my way into the information zone and it's been tough and I would love to be able to see that not be so difficult for somebody else, both in working with minority students and just in general. It's been a pleasure.

From conversations with advisors I sensed a strong desire to help all students succeed, regardless of whether or not students end up going to medical school. The majority of these individuals also articulated a particular interest in the achievement of African American students for various reasons as well as personal convictions. Jeff saw the value in affirmative action in medical school admissions and endorsed such action despite the fact that it was not in line with his other political beliefs. The thread common to most of the men and women who participated in the qualitative portion of this study, regardless of their varied advising approaches, was that they cared deeply about their students.
CHAPTER V – CONCLUSION

The purpose of this study was to investigate the ways in which premedical advisors on predominantly white campuses assist African American students in navigating their way to medical school. In this chapter I discuss the findings of the study, the implications of these findings, the limitations of the research, and directions for future research. The following research questions were the basis for this study:

Q1. In what ways, if at all, do advisors at predominantly white institutions consider the race and/or ethnicity of their premedical advisees?

Q2. In what ways, if at all, do advisors at predominantly white institutions consider the larger institutional and societal contexts in advising African American premedical students?

Q3. How do premedical advisors at predominantly white institutions perceive their role in increasing African American enrollment in medical school?

Each research question was analyzed both qualitatively and quantitatively. Through the quantitative analysis the research questions were evaluated using the dimensions of advisor differences in attitude across variables of advisors’ primary institutional roles (faculty advisor versus full-time professional advisor) and enrollment size of their institutions (<15,000 versus ≥15,000). The null hypothesis (H₀) utilized for the quantitative analysis was: No differences exist between advisors’ perspectives on advising African American premedical students based on their primary institutional role and/or institutional enrollment size.

Discussion of Research Questions

In what ways, if at all, do advisors at predominantly white institutions consider the race and/or ethnicity of their premedical advisees?
From conversations with interview participants, it became evident that many advisors did not readily acknowledge that they considered the race and/or ethnicity of their African American premedical advisees. Academic background was a much more important consideration during the advising process. A student’s race and/or ethnicity did, however, prompt many advisors to ask additional questions as well as pay close attention to potential cues that are indicative of a student needing some further assistance. Based on personal observations made throughout the course of their advising careers, many advisors had developed an awareness of academic and personal challenges that some African American students face. Advisors were more likely to discuss summer enrichment programs, affirmative action in medical school admission, the need for African American physicians in the United States, and campus support services with their African American advisees. Some advisors had a tendency to be more nurturing and encouraging when advising African American premedical students and spent additional time during a session.

My sense after reviewing the qualitative and quantitative data was that many participants perceived utilizing different advising approaches with African American students as meaning treating them unequally. They therefore saw it as negative and thought it wrong to acknowledge any differences that might exist in their advising practices with African American students. Several responses to the question regarding different advising approaches with African American students included, “I hope not.” The open-ended portion of the questionnaire included responses from several advisors indicating that they treated all students the same, regardless of race. Ladson-Billings (2000) asserted that treating African American students the same does not necessarily mean treating them equally. She went on to say that, in fact, educating African American students utilizing mainstream approaches may actually be detrimental. Because many
African American students are not in the same economic or social position as middle-class white students, their values do not necessarily reflect those present in most educational institutions. Incongruent cultural values can lead to disappointing educational experiences for African American students. Further, several researchers have argued that effective education of students requires that their identities, including race, ethnicity, and culture, be placed at the center of learning (Howard-Hamilton, 2000; Ladson-Billings, 2000; Lee, 2001; Nwang, 1998). Academic advising is an integral part of students’ education (Kuh et al., 2005; Mitchell & Rosiek, 2005). The literature indicates that advising African American students using the same approaches that may work with non-minority students will not necessarily meet their academic and personal needs.

Advisors typically utilized the same advising styles with African American premedical students as with all students. A small portion, 21.7%, indicated that they were “more developmental” when working with African American students; 10.9% signified that they used a “more prescriptive” approach. One interviewee was slightly more apt to check in with African American premedical students or use an intrusive advising approach. It was not surprising that intrusive advising was not a common advising style for most advisors. Research indicates that developmental advising is the preferred model and intrusive advising contradicts some of the underlying tenets of the developmental model, namely holding students responsible for their academic careers. Despite this contradiction, the intrusive approach has been shown to be effective with underrepresented minority students (Garing, 1992; Shultz, Colton, & Colton, 2001). While the intrusive theory of advising has held some promise as an approach that works well with minority students, the style was incongruent with those of the majority of interview participants. Chuck and Gary, for example, push students to make their own decisions about
their academic and professional futures and are available to assist students, but students must seek out their help.

What also emerged from the qualitative data were the various ways advisors altered their approaches depending on students’ year classification. Nearly every interviewee mentioned that where a student is in her or his college career greatly influences the direction of an advising session. Not only did advisors view students as having different needs depending on year classification, they expected more advanced students to have a broader knowledge base about medical school, the application process, and the level of competition. It was along this vein that Cheryl and Chuck sometimes asked their junior and senior minority students to develop informal mentoring relationships with freshman and sophomore minority students. Expecting students to mature and take on more responsibility as they progress through their college years is supported by research and is believed to assist in the development of students’ autonomy (Baxter Magolda, 2003).

Some interviewees indicated that race and/or ethnicity was not an issue for their African American advisees. Jeff had the impression from his African American students that they desired to compete on the “same playing field” as non-minority students and wanted to attain admission to medical school on their own merit, not as a result of affirmative action. Kelly had made the same observation for many of the African American students at her prestigious private institution. Kelly also talked about how the consideration of race and/or ethnicity of advisees would require constant rationalizations regarding the consideration of identities, such as culture, gender, sexual preference, socioeconomic status, of all of her students. Some incongruency exists with these responses. Kelly and Jeff did not typically address how race influences students’ applications to medical school. Unless their students brought up the topic, their
statements are based on their impression of what African American premedical students’ feelings about the way they wish to compete for medical school.

Quantitative results indicated that there was no significant difference between faculty and professional advisors’ responsiveness toward advising African American premedical students. There were no significant differences detected between advisors from large and small institutions nor were there any significant interaction effects. The overwhelming majority (92%) of respondents reported feeling confident in their ability to advise this population of students. Likewise, over 96% of advisors communicated that they were comfortable and at ease when advising African American students. These results were favorable in that advisors who lack confidence and experience feelings of uneasiness may take a timid approach to the advising process and such an approach would not likely result in a rewarding experience for the student or advisor.

In contrast to the quantitative results, qualitative findings showed that over half of the interviewees were not always comfortable advising African American premedical students. While most interviewees were fairly confident in their ability to assist this population of students, many had concerns regarding student perceptions of the advising process and were unsure about whether or how to address race and/or ethnicity as it relates to the medical school admission process. Interviewees had the opportunity to elaborate on their responses. It is possible that follow up interviews with survey participants would have revealed that fewer respondents were as comfortable and confident than what they indicated on the questionnaire. Responses regarding survey participants’ confidence in knowledge of affirmative action and familiarity with African American culture imply that advisors may not be as confident and comfortable advising African American students as indicated by the quantitative results. Nearly
50% of respondents replied that they disagreed or neither agreed nor disagreed that they felt confident about their knowledge of affirmative action and African American culture. Perhaps their comfort and confidence in advising African American students is based on race neutral advising approaches.

In what ways, if at all, do advisors at predominantly white institutions consider the larger institutional and societal contexts in advising African American premedical students?

It became apparent early on in the study that the majority of advisors were very much aware of the ways that societal context affected African American premedical students. For some advisors, this awareness impacted their approach to advising African American students. Approximately 30% of questionnaire respondents reported that they talked about affirmative action when advising African American students. Knowledge of affirmative action occurring in medical school admissions led some advisors to advise African American students using slightly lower grade point and MCAT score averages. Others did not feel comfortable or believed they did not have enough knowledge about affirmative action to use this information to advise African American premedical students. Some did not want to make assumptions about students based on race and/or ethnicity and did not want to be perceived as racist. Claire voiced this key tension when she said, “I don't want them not to get an advantage, I know that it might be helpful in a way, but I don't want to feel like I'm treating them any different.” Several interviewees echoed this sentiment. Many advisors appeared to have the perception that they were “walking a fine line” between ensuring that African American students were well-informed and offending African American students by focusing on race. To avoid the hazards of walking this fine line, many advisors chose instead to “go with flow” and either ignore the saliency of an advisee’s race entirely or deal with the issue of race on a case by case basis. By doing so, many advisors avoided uncomfortable situations that can result from making waves. Addressing the impact that
race has on African American students’ applications was more comfortable for advisors once they had developed stronger relationships with students. Over 60% of the survey participants reported that they found it easier to discuss topics directly or indirectly related to a student’s race once they had developed a rapport.

In general, interview participants hoped to see their African American students succeed at the undergraduate level and make it to and through medical school. While advisors wanted all of their students having academic talent and hearts for service to become physicians, there was a particular interest in the success of African American students primarily because of the societal benefits and the need for equity and justice. Nearly all interviewees talked about the positive impact that African American physicians have on society as a whole and seemed to be aware of the fact that African American medical doctors tend to treat populations who are medically underserved. Of concern was the fact that only a fourth of the participants discussed the societal implications of having a greater number of African American physicians with their African American students. Not sharing their beliefs about need for more African American physicians may be a result of the “color-blind” approach of many participants to advising. Literature suggests that the effect of race and racism cannot be separated from the educational experience of African American students (Ladson-Billings, 2000). Some advisors mentioned not wanting to “single out” African American students. These comments are reflected in the literature as “cultural representation” where minority students feel pressed to “represent their entire race, culture, or community in the classroom” (Odom et al., 2007, p 150). This illustrates the predicament that advisors often find themselves in when deciding whether and how to deal with race as it relates to advising.
Most advisors had participated in some type of diversity training and many felt that training had proven to be somewhat beneficial in working with African American premedical students. Some believed that it was their personal experience interacting with culturally diverse populations that was most helpful. Only a few advisors indicated that they were more apprehensive about advising African American students after participating in diversity workshops. The overwhelming majority of questionnaire respondents were confident in their ability to advise African American premedical students and comfortable and at ease when doing so. These results, while positive, were unexpected since several interview participants did not share this view. I had expected advisors to feel confident in their ability, but to not necessarily feel comfortable with the process of advising African American students due to the sensitive issues the surround race and/or ethnicity. Perhaps advisors feel more comfortable than expected because most are not speaking to students about the influence that race has on students’ medical school applications.

Fifty-two percent of advisors felt confident about their knowledge of affirmative action practices of medical schools and 42% felt confident in their knowledge of the African American culture within their regions. Inferential statistics did not demonstrate any differences between faculty and professional advisors from large and small institutions regarding their attitudes toward advising African American students. As mentioned previously, the overwhelming majority of survey participants positively viewed their ability to and comfort with advising this specific population of students, though fewer felt confident about their knowledge of affirmative action and African American culture. Some participants believed that further information about the realities of the affirmative action procedures that are implemented by medical schools would help them to better advise African American premedical students. Also, some advisors felt that
having a larger representation of African American faculty and staff members on campus would benefit students as well as allow non-minority advisors to learn through their example. Mitchell & Rosiek (2005) support the idea that cultural minority advisors who share some common cultural identities with their students are in a position to develop particularly strong advising relationships. In addition to directly benefiting students, cultural minority advisors can indirectly serve students by contributing to the professional development of non-minority advisors.

Some had concerns about institutional racial segregation and how minority pre-health student organizations may further separate African American premedical students. Many acknowledged the impact that being an African American student on a predominantly white campus can have on students and worried that some African American students may not seek premedical advising. While survey participants did not generally appear to believe their race and/or ethnicity affected the way African American students received their advice, several of the Caucasian interviewees worried that they may be perceived as racist by African American students and therefore approached advisement of this population of students cautiously, but not apprehensively. Because only eleven survey participants identified as being from underrepresented minority groups, the sample was too small for responses to be statistically analyzed. However, for the eleven individuals who identified as African, African American, Latina/o, or multi-ethnic, six (44.6%) strongly agreed or agreed that their race and/or ethnicity affected the way African American students responded to their advice, two (18.2%) neither agreed nor disagreed, and three (27.3%) disagreed. Many Caucasian interviewees saw their race and/or ethnicity as having the potential to influence an African American student’s perception and therefore affect the advising session in a negative way. Advisors felt that sessions with
African American students were much more beneficial to students once they had established a relationship.

Consideration of institutional context was more prevalent on larger campuses. By defining large institutions as those with a total enrollment of 15,000 and higher and small institutions as those with enrollments of less than 15,000, inferential statistics indicated significant differences of advisors’ perspectives on the consideration of institutional context. This factor included questionnaire items addressing the following areas: the concern that African American premedical students may not seek advising, observation of racial and/or ethnic segregation on campus, concern that segregation prevented African American students from being informed, and an observed lack of participation of some African American students in campus premedical activities. Respondents working for large institutions had greater concern that African American students may not seek premedical advising than did advisors at smaller institutions. Advisors at larger institutions were more likely to agree that they had made observations of racial segregation than advisors at smaller institutions.

These results were not surprising in that the literature indicates that without a critical mass of underrepresented minority students, African American students can feel lost on a large predominantly white campus (Fries-Britt & Turner, 2002; Schwitzer, et al., 1999). Also, the institutional missions of larger institutions are often significantly different than those of smaller institutions. It may be that the missions of larger institutions do not meet the needs of African American students (Seifert, Drummond, & Pascarella, 2006). College students are socially drawn toward others who share common backgrounds and interests (Mack, et al., 1995). It seems natural that on larger campuses African American students would form bonds with one another and develop strong student networks. Additionally, this may provide further evidence of
the chilly climate of many predominantly white institutions as indicated by the literature (Fries-Britt & Turner, 2002; Suarez-Balcazar, 2003).

For advisors at larger institutions, there was concern that some African American student networks prevented students from interacting with larger campus groups. Advisors wanted all students to benefit from campus activities designed to enhance students’ academic and personal development. After putting great effort into developing premedical programs that were inclusive of the needs and interests of a diverse population of students, Susan expressed frustration that her African American students did not usually attend the programs. She alluded to a chilly campus climate through her concern that African American students did not feel welcome, but was not sure how to make them feel welcome.

Bothered by the racial segregation he had observed at his institution of over 20,000, Peter proactively stopped the formation of a student minority pre-health organization. He believed that such a student group would further exacerbate the issue of racial segregation on campus and result in a greater lack of minority student participation in departmental pre-health events and advising. As an administrator, Peter was well aware of the significance of addressing the advising needs of African American and other cultural minority students. One of his goals as an administrator was to continue discussions on the matter with his staff as well as with the minority affairs office staff in an effort to improve the current advising situation in his department.

While advisors on larger campuses were more likely to observe racial segregation and a lack of participation of some African American students in premedical programs and advising, similar instances were observed on smaller campuses as well. Interviewees often struggled with the formation of minority pre-health student organizations. On Charyl’s small liberal arts campus, she observed that often her minority students did not appear to be well-informed about
the medical school application process. She worried that because the minority student network was isolated, these students were out of the information loop. Charyl viewed the start of a minority pre-health organization as a way for her to keep these students informed by addressing members as a group. Alternatively, like Peter, some advisors were apprehensive about the creation of such groups fearing that they would serve to further racially segregate students and prevent minority students from participating in other campus events and organizations. However, at the same time, advisors saw the benefits of having students develop a cohesive group in which the issues of particular interest to underrepresented minorities would be brought to the forefront.

How do premedical advisors at predominantly white institutions perceive their role in increasing African American enrollment in medical school?

There were mixed reactions from interviewees and questionnaire participants regarding how they perceived their role in increasing African American enrollment in medical school. Advisors seemed to be split on this issue. Some of the interviewees saw themselves as playing a role because they were there to assist African American students succeed at the undergraduate level, while others felt that they just did not have a large enough population of African American students to make a positive impact. Being from a large institution, Jeff believed that time constraints interfered with his ability to have any impact. Over 60% of survey participants believed that they had the potential to play a significant role in increasing African American enrollment in medical school, but 12% did not. Of concern is the number of advisors, over 25%, who gave a neutral response. To me, this indicated that these advisors had not given much thought to what their role might be. Like many interviewees, survey participants believed that they could play a bigger role if their institution had a larger enrollment of African American premedical students. Having more information on best advising practices for African American
premedical students and having more information on affirmative action taking place in the medical school admissions process were also top choices for survey participants as ways to increase their potential to play a significant role.

Implications for the Academy

The purpose of this study was to learn more about the ways in which advisors approached premedical advising with African American students on predominantly white campuses. The hope was that such exploration would uncover how advisors use their knowledge of societal and institutional contexts to help this specific population of students. Over the past two decades there has been much discussion about the need to increase those who are underrepresented in medicine by keeping the “pipeline” going. Advisors at undergraduate institutions have the potential to play a key role through their advisement of students who are in this pipeline. It seems, however, that the majority of advisors are not directly considering race and/or ethnicity of their advisees. By going with flow and not making waves, many advisors avoid unintentionally offending students, but may ultimately lose African American students from the pipeline by not providing access to information that may help them reach their goal of medical school admission. Evidence from this study showed that acknowledging race and how it relates to a student’s medical school application makes for an uncomfortable situation for many advisors. The fact that the overwhelming majority of survey participants responded that they felt comfortable and confident advising African American premedical students further suggests that the majority of advisors are not addressing issues related to race and/or ethnicity. Beyond this, some advisors alluded to the belief that it was unethical to do so. Many advisors were hesitant to admit to treating African American students any differently because they consider it politically incorrect to do so. Therefore the majority of participants advise all students in the same manner,
however treating students the same does not necessarily mean they are being treated equally (Ladson-Billings, 2000).

Some advisors’ uneasiness in working with African American premedical students stems directly from the uncertainty regarding affirmative action taking place in medical school admissions. While most advisors are aware of affirmative action in medical school admissions, specific information about how such programs are implemented is not published and, as Brenda states, such information is “gathered through the underground.” If medical schools go on the record with their admissions policies and procedures as they relate to underrepresented minority students, advisors could confidently counsel students using accurate information. Due to concerns about legal action, written medical school admissions policies regarding affirmative action are not likely to emerge.

What has been discovered through this study was not unexpected. Through both the qualitative and quantitative phases it became evident that mixed feelings exist with regard to advising African American premedical students. In some instances, emotions ran high. The discussion presented here ultimately suggests that there needs to be continued dialogue. Some advisors appeared to be utilizing, to some extent, premedical information specific to African American students during the advising process. Many were frustrated by the issue of race as it related to the advising process primarily because they were uncertain about how best to address the issue with students. Others felt that they were not in a position nor did they believe it was right to treat African American students any differently than non-minority students. Further information on advising approaches that best serve African Americans students would be helpful, but without acknowledging the saliency of race and ethnicity to students’ educational and personal development as well as to the medical school application process, such information
will not have a great impact on the enrollment of African Americans in medical school. Effective advisement and education of African American students must give attention to the impact that race and racism has had on their lives (Ladson-Billings, 2000). In order to adequately do this, we, as advisors, must first develop an awareness of ourselves as cultural beings (Gilbert, 2005). While it is not good practice under any circumstances to make assumptions about students regarding race and/or ethnicity, advisors should acknowledge, strive to understand, and ultimately appreciate cultural differences (Brown & Rivas, 1992; Cunningham, 2005).

Since all of the participants in this study were members of the National Association for Advisors of the Health Professions and most valued their membership and participation in this organization, leaders of NAAHP are likely in the best position to make a difference in the way advisors assist African American premedical students. Research has suggested that using a “color-blind” approach in the classroom or in a counseling relationship will more than likely not be productive as it assumes that all students have the same cultural perspective (Howard-Hamilton, 2000; McPhail & Costner, 2004; Robinson & Howard-Hamilton, 2000). Yet evidence presented in this study suggests that many advisors are utilizing such an approach when advising African American premedical students. This evidence implies that somewhere there is a disconnect between the existing literature on the subject of culturally responsive teaching and advising and the accepted advising strategies practiced by most premedical advisors.

This study raises the question of who is ultimately responsible for increasing the number of African American students in medical school. While approximately 60% of survey respondents and interviewees felt that they had the potential to play a significant role in the increase of African Americans students in medical school, a large portion did not. Several
advisors felt that they were not in the position to make a difference. They cited as reasons: a low enrollment of African American students at their institution, having limited information on advising African American students, having a restricted amount of time to spend with students, or not being actively involved in the recruitment of underrepresented minority students to the health professions. The findings from this study imply that many advisors do not feel directly responsible for increasing African American enrollment in medical school. The leaders of NAAHP in collaboration with leaders of AAMC may be able to help clarify what role advisors play in the movement to increase underrepresented minority students in medical school.

The results of this study have implications beyond premedical advising and have the possibility to inform the area of general academic advising on predominantly white campuses. Faculty and staff members who interact with African American students on PWI campuses may share similar experiences and observations as premedical advisors. Advisors from other academic disciplines may also find further information on the best advising practices for African American students helpful. The qualitative results elicit some concern that some advisors do not view themselves as in a position to impact the success of African American students. If advisors do not believe that they are capable of making a difference in the lives of these students, educators run the risk of losing students who are in the pipeline. Fortunately, the vast majority of questionnaire respondents believed that they played a significant role in the increase in enrollment of African Americans in medical school. Yet again, not knowing how to address the implications of race with students limits the role undergraduate advisors can play in the increase of African American enrollment in medical school.


**Limitations of the Study**

There were several limitations to this study. While efforts were made to ensure a qualitative sample that was diverse with regard to institution size and type, primary institutional role, and gender, fifteen of the sixteen participants were Caucasian. Therefore transferability of the qualitative analysis is limited. While opinions of and strategies employed by the interviewees may be similar to other premedical advisors, responses from so few cannot possibly embody the perspective of the entire population of NAAHP advisors. The divergence of opinions on a couple of questionnaire items among survey participants and interviewees further illustrates this point. For example, the overwhelming majority of survey respondents were comfortable with and confident about advising African American students. This sentiment was not shared with the majority of interviewees. Along this vein, it is important to note that the individuals who accepted the invitation to participate in an interview could have been more comfortable discussing advising issues related to race and/or ethnicity. Because of this, bias may have existed within the qualitative sample and therefore may not have accurately represented the views of the population. On the other hand, the subject of race and/or ethnicity tends to be sensitive for most and so there was a concern about whether or not participants were frank and candid with their responses. Questionnaire respondents most likely had an interest in the research topic and therefore a bias may have existed there as well. There is no guarantee that either sample is representative of the entire population of NAAHP premedical advisors on predominantly white campuses.

Many difficult decisions about the implementation of this study had to be made. While questionnaire items were based on qualitative responses, reviewed and edited by a committee of faculty members, and tested via a pilot study, the final questionnaire was not perfect. In the
interest of creating a survey that could be completed in less than 15 minutes, only demographic questions and items set up to detect differences in attitude between interviewees and survey respondents were included. Because of this, some questionnaire respondents found the instrument to be biased in that all questions, with the exception of demographic questions, inquired about *differences* of advising approaches with African American premedical students. Items asking for responses regarding advising all premedical students in the *same manner* were not included. In developing the instrument, the assumption was made that respondents would have the option of selecting the neutral response, *neither agree/nor disagree* for items that were not applicable.

In order to avoid obtaining incomplete surveys, most items were designed to require a response. The design of item 17 caused some difficulties. Advisors were asked to rank four choices from one to four with one being the most important. This item forced respondents to answer and required the answer to add up to ten (1+2+3+4=10), which did not allow advisors the flexibility of ranking choices at the same level or to select “not applicable.” The inability of advisors to complete this item was more than likely the reason that only 174 of the 204 participants were able to complete and submit the questionnaire electronically. One respondent mailed a hard copy of a completed questionnaire. Because of the difficulty that item 17 caused, the data collected for this item were not used in the quantitative analysis.

The response rate for the survey was somewhat low at less than 25%. Had all respondents completed the questionnaire, the response rate would have been over 28%. Because of the low response rate, group representation in some categories was unbalanced. Not surprisingly, there were fewer advisors from larger institutions who participated. Fewer professional advisors participated than faculty members.
Perhaps including a more detailed description of the study and how the instrument was developed in the email invitation would have piqued the interest of more advisors. Advisors were not informed about how the questionnaire was developed utilizing interview responses from sixteen advisors on 14 campuses from 7 states. This was not explained in the invitation for two reasons: to avoid adding too much length to the letter and to avoid biasing their responses to questionnaire items. In retrospect, possibly by explaining this, more advisors would have been inclined to respond.

The topic of the study provoked responses from many advisors, both positive and negative. As mentioned previously, some advisors perceived the term “different” as negative. Rewording this interview question may have resulted in responses that were more open. For example, if participants were asked if they used any additional techniques or considerations when the student who they were advising was African American.

Including geographic region as a demographic question would have allowed for additional between group statistical analyses. Since the qualitative sample was pulled from the Southeastern region of the United States, it would have been informative to compare questionnaire responses by region.

Unfortunately only a limited number of participants in both phases of the study were from racially and/or ethnically underrepresented groups. This was most likely due to the limited number of individuals from cultural minority groups present on PWI campuses. Advisors and educators can benefit greatly from the unique perspective of cultural minority advisors working on PWI campuses (Mitchell & Rosiek, 2005). A more diverse sample would have produced richer results.
Directions for Future Research

Considering such diverse responses from advisors on their beliefs and opinions about advising African American premedical students, more research in this area should be conducted. For example, nearly all of the survey respondents indicated they were comfortable and confident with advising African American students, but only half of the interview participants shared these sentiments. A qualitative study designed to reach a larger population of advisors may serve to further address these divergent viewpoints.

As mentioned earlier, additional studies on the best advising practices for African American students would be helpful for advisors. While this study examined the ways in which advisors on predominantly white campuses advise African American premedical students, it did not include a measurement of effectiveness of these advising strategies. As Peter suggested, “It's kind of like parenting, you don't find out if it was really very helpful until years later.” Whereas questionnaire respondents were asked to report the number of African American students who apply to medical school each year and the number of those students who are accepted, statistics such as these do not necessarily measure effectiveness of advising. These items were included in the questionnaire as a way to get respondents to think about and reflect on the African American students with whom they work and therefore more accurately answer subsequent items.

While an intrusive advising approach has been shown to be particularly effective with cultural minority students (Garing, 1992; Shultz, Colton, & Colton, 2001), it is not widely used by advisors. Perhaps advisors would be more accepting of an approach that is based on a developmental model, but also incorporates some of the strategies employed through intrusive advising. Many advisors do not believe it is their responsibility to follow-up or as Chuck said, “spoon-feed” their students. A compromise exists, however, if one is to consider that a follow-
up contact does not have to mean checking up. Much of the literature on the educational experiences of African American students at predominantly white institutions demonstrates that these students often times feel alienated and that the need for social support is much stronger than it is for non-minority students (Allen, et al., 1991; Fries-Britt & Turner, 2002; Hurtado, et al., 1998; Odom, et al., 2007; Polite & Davis, 1999; Schwitzer, et al., 1999). Perhaps one of the reasons that the intrusive method has been effective for African American students is due to the social support students receive from advisors and the assurance that someone has taken an interest in their personal and academic development. While some of the intrusive techniques involve requiring students to seek advisement and checking up on students to make sure they are on track, the simple act of letting the student know that someone is there to help might also have a positive impact. In this age of technology, initiating contact could be as simple as typing out a quick email to inquire about how a student is doing or to let him or her know about a summer opportunity. A simple act like this would let a student know that the advisor genuinely cares. I think this would be especially true for a student who may be feeling isolated and discouraged. Initiating informal contacts with students warrants further consideration.

This study did not include viewpoints of African American premedical students attending predominantly white institutions. While some research has included the perspective of students from this population, it is limited at best. Having a better understanding of the specific needs of this population of students is necessary in order for advisors to provide the best student assistance. Studies designed to seek information about the reason for such a limited number of African American premedical students attending predominantly white campuses could help to inform educators. It is important to know if there are other reasons preventing a larger number of African American students from pursuing a medical profession. If the reasons are directly
related to advising, it would give educators a measurement or an indication of the effectiveness of PWI advising programs relative to this specific population of students.

In addition, it may be worthwhile to look into the reasons behind why some advisors perceived using “different” techniques or approaches as negative. Different does not mean treating African American students like they are incapable. It might mean as little as asking a few extra questions based on the advisor’s knowledge of a student’s culture. Likewise, treating students the same does not necessarily mean advisors are meeting the individual needs of their students (Ladson-Billings, 2000). The literature indicates that student identity should be placed at the center of learning, but too often on predominantly white campuses, faculty and staff are part of the mainstream culture and unaware of the ways minority cultures are excluded (Howard-Hamilton, 2000; Lee, 2001; McPhail & Costner, 2004).

Similar studies could be performed in the area of academic advising in general. While literature exists on the importance of academic advising as well as expert opinions about best advising practices with African American students, absent from the advising literature are research articles that demonstrate how and if advisors are implementing recommended strategies. Such studies would serve to inform the field of academic advising through researching the reasons that advisors may or may not be altering their approaches to advising African American students attending predominantly white institutions as well as assessing the effectiveness of advising programs.

**Conclusion**

It was no surprise that the subject of race was a controversial one. Through a constructivist lens, the advising process would be viewed as best when fine-tuned to each individual student. By looking at African American students as a group, however, there are
certain societal and institutional factors that affect these students uniquely from which advisors can learn. My goal was to learn how these factors shaped the way advisors helped this particular population of students. Based on the responses from the qualitative sample, I observed that all advisors were aware of how societal and institutional contexts may influence this specific population of students. Even advisors who said there were no differences in the way they advised African American students acknowledged observations that they had made with regard to African American students and some of the issues this population of students dealt with more frequently than non-minority students. On most campuses the population of African American premedical students was so small that advisors had not worked with a sufficient number of students to definitively say what types of differences existed in the advising process. The majority of qualitative and quantitative participants were on campuses that had populations of less than 30 African American premedical students and had fewer than five African American students who were admitted to medical school each year. Although this did not come as shock, it was alarming.

Through this study I learned that some advisors are implementing additional strategies in order to further assist African American premedical students when they see that a need exists. When advisors perceive there is a special need on the part of the student, they may provide additional time or encouragement, assistance in connecting with a mentor, information regarding enrichment programs geared toward those underrepresented in medicine, and/or referrals to other campus resources. However, most advisors were not implementing these approaches with African American students. The key tension that most advisors on predominantly white campuses were struggling with or avoiding was how to talk about race with their African American premedical students without offending. This inability to comfortably and effectively
address how race may influence a student’s application was, for me, the most critical finding of this study. Advisor uncertainty about how to specifically address race may prevent some African American students from receiving the full benefit of premedical advising services. I believe that learning how to do this is the critical “next step” for advisors’ continued multicultural development. A partnership of the National Association for the Health Professions and the Association of American Medical Colleges could result in the investment of advisors to further develop their cross-cultural communication skills. By joining together as the two prominent organizations in the field of premedical advising, the leaders of these organizations could inspire advisors to take on the personal and professional challenge of making a commitment to play a significant role in the increase of African American students in medical school.

The commitment to play a significant role in the increase of African American students in medical school is a daily one. It goes beyond attending a conference workshop or a two-day diversity training session. As advisors, it is a daily choice to act as agents of social change, to accept ourselves and our students as cultural beings, and how culture plays a part in the advising process. Peter commented, “the ball is always in our court on this deal.” I agree. As advisors and as educators it is our responsibility to ensure a welcoming and inclusive environment that is designed to meet the needs of all students and foster students’ development of understanding and appreciating diverse perspectives. I believe that there are ways for advisors at predominantly white institutions to better serve the needs of African American premedical students, and I hope that research in this area will continue.
REFERENCES


Borrelli, E. (2003, October). Building a constructivist approach of academic advising. Paper presented at the meeting of the National Association of Academic Advisors, Dallas, TX.


Hopwood v. Texas, 78 F.3d 932 (5th Cir 1996).


Plessy v. Ferguson, 163 U.S. 537 (1896)


APPENDIX A: LETTER TO POTENTIAL INTERVIEW PARTICIPANTS

Date
Name
Institution
Address
Address

Dear Name,

As a fellow member of the National Association of Advisors for the Health Professions as well as a candidate of the doctoral degree in higher education administration from Louisiana State University, I am writing to request your participation in my dissertation research.

I am interested in learning about the type of advising that is employed at predominantly white institutions (PWIs) for African American premedical students as well as advisors’ perspectives of advising this population of students, and whether differences exist between faculty advisors and professional advisors. My study will take place in two separate phases: 1) interviews and 2) questionnaires.

You have been selected to participate in an interview after careful consideration regarding your primary role at your institution, the size of your institution, the African American enrollment at your institution, and your geographic location.

Because I am conducting a regional study, it is necessary for me to conduct interviews by phone. I ask that you sign the attached form to give your consent to participate in the study and to allow me to audiotape the telephone interview. All participants and their institutions will remain anonymous; you are free to withdraw from the study at any time.

This study has been approved by the Louisiana State University Institutional Review Board and by my major professor, Dr. Becky Ropers-Huilman, Associate Professor in the Department of Educational Research, Leadership, and Counseling. Should you decide to participate in this study, please contact me at (225)-578-4006 or cxjunek@lsu.edu. You may reach Dr. Ropers-Huilman at (225)-578-6900 or broper1@lsu.edu if you have any questions or concerns.

I look forward to hearing from you soon.

Sincerely,

Ashley Junek
APPENDIX B: LETTER TO POTENTIAL QUESTIONNAIRE PARTICIPANTS

Greetings,

As a pre-health advisor and a candidate for the doctoral degree in higher education administration at Louisiana State University, I am writing to request your participation in my dissertation research.

I am interested in learning about the type of advising that is employed at predominantly white institutions (PWIs) for African American premedical students as well as advisors' perspectives of advising this population of students, and whether differences exist between faculty advisors and professional advisors.

You have been selected to participate because of your role as a pre-health advisor and your membership in NAAHP. Please consider completing a survey regarding premedical advising. The information you provide will be kept anonymous; your name and institution will not be linked to your responses. Please complete the questionnaire by visiting https://www.surveymonkey.com/s.asp?u=975762768157 at your earliest convenience. The questionnaire can be completed in less than 15 minutes. By responding to this survey you are granting your consent to participate in this research.

All proper documents for this study are on file with the Louisiana State University Institutional Review Board. Should you have any questions or concerns, you may contact my major professor, Dr. Becky Ropers-Huilman, Associate Professor in the Department of Educational Theory, Policy, & Practice at (225) 578-6900 or broper1@lsu.edu. You may reach me at (225) 578-4200 or cxjunek@lsu.edu.

I look forward to receiving your response and sharing my results with you at a future NAAHP conference.

Sincerely,

Ashley R. Junek, Counselor
College of Basic Sciences
Louisiana State University
APPENDIX C: EMAIL REMINDER LETTER TO POTENTIAL QUESTIONNAIRE RESPONDENTS

Hello,

This email serves as a reminder asking for your participation in my dissertation research. If you have already completed the questionnaire please disregard this email and thank you for your participation.

If you are interested in completing the questionnaire you may still access it at https://www.surveymonkey.com/s.asp?v=975762768157 through Monday, December 18. Your responses are completely anonymous.

Thank you,

Ashley
APPENDIX D: INTERVIEW PROTOCOL

Interview Questions:

1. Tell me how you came to be a premedical advisor at this institution.

2. What is foremost on your mind when a student enters your office for premedical advising?

3. How would describe your advising style?

4. How, if at all, does this differ if the student is African American?

5. How confident do you feel when advising African American premedical students?

6. What type of information would be beneficial in increasing your confidence when advising African American students?

7. Please give me an example of what you might discuss during an advising session with an African American premedical student that relates directly or indirectly to race.

8. Do you think you have a role in increasing African American enrollment in medical school? In what ways?

9. Have you ever taken a course or participated in training on multicultural counseling? If so, did that experience affect the ways you think about your work?

10. Is there anything else that you would like to add that has not been covered?

Demographic Information:

1. Faculty or Professional advisor?

2. Race and/or ethnicity?

3. Gender?

4. Years experience?

5. How many premedical students attend your institution?
6. How many African American premedical students attend your institution?
7. How many students overall apply to medical school each year?
8. How many African American students apply to medical school each year?
9. How many students overall are admitted to medical school each year?
10. How many African American students are admitted to medical school each year?
APPENDIX E: QUESTIONNAIRE

The following survey is focused on the advising of African American premedical students at predominantly white institutions. The questionnaire should take less than 15 minutes to complete. Your participation will inform a study that will shed light on the ways in which advisors support the goals of individual students and further diversity among medical professionals.

Demographic Questions

1. Total student enrollment at institution (including graduate students)
   - Less than 1,000
   - 1,000 to 10,000
   - 10,000 to 15,000
   - 15,000 to 25,000
   - More than 25,000

2. Institutional Type
   - Public
   - Private

3. Primary role at institution
   - Faculty Member
   - Professional Advisor
   - Career Counselor
   - Minority Affairs Staff
   - Other

4. Highest level of education
   - Bachelor’s degree
   - Master’s degree
   - Doctorate

5. Racial and/or ethnic group with which you most closely identify
   - African
   - African American
   - Asian
   - Asian American
   - Caucasian
   - Hispanic – Latino/a
   - Native American
   - Pacific Islander
6. Gender

• Male
• Female

7. Years of pre-health advising experience

• Less than 1 year
• 1 to 5 years
• 5 to 10 years
• 10 to 20 years
• Over 20 years

8. Estimate of the total number of premedical students at your institution (All Classes)

• Less than 50
• 50 to 200
• 200 to 500
• 500 to 1,000
• Over 1,000

9. Estimate of the total number of African American premedical students attending your institution (All Classes)

• Less than 15
• 15 to 30
• 30 to 60
• 60 to 100
• Over 100

10. Number of students who apply to medical school each year from your institution

• Less than 20
• 20 to 40
• 40 to 60
• 60 to 100
• 100 to 200
• 200 to 400
• Over 400

11. Number of African American students who apply to medical school each year from your institution

• Less than 5
• 5 to 10
12. Number of students admitted to medical school each year from your institution

• Less than 20
• 20 to 40
• 40 to 60
• 60 to 100
• 100 to 200
• 200 to 400
• Over 400

13. Number of African American students admitted to medical school each year from your institution

• Less than 5
• 5 to 10
• 10 to 15
• 15 to 25
• Over 25

Beliefs about Advising


• Strongly Agree
• Agree
• Neither Agree nor Disagree
• Disagree
• Strongly Disagree

15. I feel comfortable and at ease when advising African American premedical students.

• Strongly Agree
• Agree
• Neither Agree nor Disagree
• Disagree
• Strongly Disagree

16. When advising a student whose grades and/or test scores are well below what is considered to be competitive for medical school, I feel less comfortable if the student is African American than if the student is non-minority.

• Strongly Agree
• Agree
• Neither Agree nor Disagree
• Disagree
• Strongly Disagree

17. The way I advise a student depends on (Please rank 1 to 4, with 1 being the most important):
__The student’s high school academic preparedness  
__The student’s ACT/SAT scores  
__The student’s racial and/or ethnic and/or cultural background  
__Whether or not the student is a first-generation college student

18. My approach to advising African American premedical students may differ from my approach with non-minority students in the following ways (Select all that apply):

• I tend to spend more time in an individual advising session.
• I am more developmental.
• I am more prescriptive.
• I look for cues from students’ body language.
• I try to engage students in personal conversation.
• None of the above  
• Other

19. I sometimes utilize the following strategies with African American premedical students that may differ from the strategies I utilize with non-minority students (Check all that apply):

• I discuss societal impacts of African American physicians.
• I provide information on summer enrichment programs available for Underrepresented Minority and/or Disadvantaged students.
• I mention the option of applying to medical schools at Historically Black Colleges or Universities.
• I facilitate peer formal or informal mentor relationships.
• I discuss affirmative action practices occurring in medical school admissions.
• I am more likely to discuss various campus support services.
• I am more likely to discuss the financial aspects of attending medical school.
• None of the above  
• Other

20. I believe that my race and/or ethnicity affects the way premedical African American students respond to my advice.

• Strongly Agree  
• Agree  
• Neither Agree nor Disagree  
• Disagree  
• Strongly Disagree

21. I sometimes feel uncomfortable when advising African American premedical students for the following reasons (Check all that apply):

• I am concerned about unintentionally offending African American premedical students.
• I am concerned that African American premedical students may not perceive me as having credibility.
• I am concerned about African American premedical students feeling comfortable and welcome.
•None of the above
•Other:

22. I find it easier to discuss topics related directly or indirectly to a student’s race once I have developed a relationship with the student.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

23. I am concerned that African American premedical students may not seek advising.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

24. I feel confident in my knowledge of affirmative action practices taking place in the medical school admissions process.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

25. I feel confident in my knowledge of African American culture within my geographic region.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

26. I have observed segregation among some African American and non-minority premedical students.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

27. I am concerned that racial segregation on campus prevents some African American premedical students from being informed about the medical school application process.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

28. I have observed a lack of participation of some African American students in school/department sponsored premedical events.
29. I have the potential to play a significant role in increasing African American enrollment in medical school.

29. I could play a bigger role in increasing African American enrollment in medical school if (Check all that apply):

• I had more time to spend with African American premedical students.
• I had a larger number of African American premedical students.
• I had more information on best advising practices for African Americans premedical students.
• I had more information regarding medical school affirmative action practices.
• None of the above
• Other

30. Information I acquire from national professional organizations has helped me to further develop my advising skills in working with African American premedical students.

31. I have participated in the following types diversity training (Select all that apply):

• Institutional workshops or seminars
• College level course
• Professional organization workshops or seminars
• Other:
• I have never participated in any type of formal diversity training (Skip to item 36).

32. The diversity training I received has helped me to further develop my advising skills in working with African American premedical students.
34. My life experiences have been more helpful in allowing me to further develop my advising skills in working with African American premedical students than formal diversity training.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

35. I found myself to be more anxious about advising African American premedical students after participating in diversity training than I was before the training.

- Strongly Agree
- Agree
- Neither Agree nor Disagree
- Disagree
- Strongly Disagree

36. Additional comments:
APPENDIX F: INFORMED CONSENT FORM FOR INTERVIEW PARTICIPANTS

Study Title: Advising Premedical African Americans Attending Predominantly White Institutions

Performance Site: Louisiana State University and Agricultural and Mechanical College

Investigators: The following investigators are available for questions about this study, Monday – Friday, 8:00 a.m. – 4:30 p.m.
Ms. Ashley R. Junek: (225) 578-4006
Dr. Becky Ropers-Huilman: (225) 578-6900

Purpose of Study: The purpose of this study is to learn about the type of advising that is in place at predominantly white institutions (PWIs) for African American premedical students as well as advisors’ perspectives of advising this population of students, and whether differences exist between faculty advisors and professional advisors.

Subject Inclusion: Members of the National Association of Advisors for the Health Professions who work for predominantly white institutions and advise premedical students.

Number of subjects: Phase I: 24; Phase II: 500

Study Procedures: The study will be conducted in two phases, each using two separate samples. The first phase will involve in-depth telephone interviews of 8 subjects; the second phase will require that subjects respond to a questionnaire. Both the interviews and the questionnaire will ask respondents to answer questions regarding advising premedical African American students.

Benefits: By participating in this study, subjects will contribute to the existing body of literature in the field of advising research.

Risks: The sensitive nature of some questions may be upsetting or make some respondents uncomfortable, but responses will be kept completely anonymous; subjects’ names and institutions will not be revealed.

Right to Refuse: Subjects may choose not to participate or to withdraw from the study at any time without penalty.

Privacy: Results of this study may be published, but names and any identifying information will be withheld from the publication.
Identity of subjects as well as the institutions for which they work will remain confidential.

Signatures:

The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects’ rights or other concerns, I can contact Robert C. Mathews, Institutional Review Board at (225) 578-8692. I agree to participate in the study described above and acknowledge the investigator’s obligation to provide me with a signed copy of this consent form.

_________________________________________________________
Signature of Subject                                        Date

_________________________________________________________
Signature of Primary Investigator                           Date
### APPENDIX G: CELL SAMPLE SIZES FOR FACTORIAL ANOVA

<table>
<thead>
<tr>
<th>Quantitative Sample</th>
<th>Institution Size</th>
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<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Small &lt;15,000</td>
<td>Large ≥15,000</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Primary Institutional Role</td>
<td>Faculty Advisor</td>
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<td>N=12</td>
<td>106</td>
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<tr>
<td></td>
<td>Professional Advisor</td>
<td>N=37</td>
<td>N=32</td>
<td>69</td>
</tr>
<tr>
<td>Total</td>
<td>131</td>
<td>44</td>
<td>175</td>
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## APPENDIX H: DATA FACTS FOR AFRICAN AMERICAN MEDICAL SCHOOL APPLICANTS

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<thead>
<tr>
<th>Year</th>
<th>Total Applicants</th>
<th>African American Applicants</th>
<th>Total Matriculants</th>
<th>African American Matriculants</th>
<th>% African American Matriculants</th>
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<td>16,253</td>
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<td>2,809</td>
<td>17,004</td>
<td>1,068</td>
<td>6.28</td>
</tr>
</tbody>
</table>

VITA

Ashley Rachelle Junek grew up in Baton Rouge, Louisiana, and graduated from Woodlawn High School. She attended Southeastern Louisiana University in Hammond, Louisiana, and graduated in May of 1994 with a Bachelor of Arts in psychology. She later continued her studies at Louisiana State University where she received a Master of Arts in education with a concentration in agency counseling in December of 1996. She also holds a license in mental health counseling. Ashley began working as an academic counselor for the College of Basic Sciences at Louisiana State University in 1997. She has advised premedical and predental students for nearly ten years and during that time has served on the university’s Premedical/Predental Review Committee. Ashley was admitted to the doctoral program in educational research and leadership in 2000 and will graduate with a Doctor of Philosophy degree in May of 2007.