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AFRICAN AMERICAN STUDENTS IN PHYSICAL THERAPY:
ENHANCING DIVERSITY

A Dissertation in Practice
presented in partial fulfillment of requirements
for the degree of Doctor of Education
in the Department of Higher Education
The University of Mississippi

by

MELANIE H. LAUDERDALE, KIMBERLY R. WILLIS, & SHERRY T. COLSON

August 2019

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ABSTRACT

Diversity within the profession of physical therapy is important to achieve optimum healthcare outcomes. Mississippi lacks African American physical therapist compared to the number of African Americans residing in the state. In order to increase the number of practicing physical therapists in Mississippi, the Department of Physical Therapy at the University of Mississippi Medical Center (UMMC) needs to increase the number of African American students who are admitted and eventually matriculate from the physical therapy program. This companion dissertation addresses the lack of African Americans in physical therapy and explores recommendations on how to improve this disparity.

First, focus groups were utilized to gain insights into the motivations and influences that prompt African American students to enter a doctoral healthcare profession. Second, the admissions process was examined using a quantitative approach to determine if the current admission process limits African American enrollment. Lastly, graduates of the UMMC physical therapy program were interviewed to explore their experiences and perceptions of their education in the department of physical therapy.

African Americans are motivated by early exposure to the profession and future expectations for their personal career path including stability, work-life balance, and helping others. The elimination of barriers such as finances, lack of support, and cultural microaggressions influences their career path. Following statistical analysis of admissions data, conclusions were made that the current admissions criteria does not successfully predict

first year success for any students, including African American students. Lastly, African American physical therapy graduates from UMMC reported excitement upon admission, concerns over quotas, lack of African American faculty, students, and physical therapists, and the presence of microaggressions while in the program.

Recommendations to improve the number of African Americans in physical therapy include 1) revision of the current admissions process that will include a more holistic approach, 2) the formation of a mentoring programs, and 3) implementation of increased cultural competency education. In addition, recruitment efforts need to be more directed at physical therapy and occur in early education.

DEDICATION

This dissertation in practice is dedicated to my family. Their love and support and encouragement were vital to completing this doctoral program. My husband, John, provided much moral support and encouragement in addition to keeping our household running when I was busy with work and school. My young children, William and Gray, were very understanding when I had to miss events or their activities in order to attend class or finish assignments. My mom and dad, Martha and Gary Hand, were very encouraging during hectic times, provided a shoulder to cry on, and were also always willing to step in and assist with my children so that I could complete this doctoral work. Without the love and support of my family, this dream would not have become reality, and I am extremely grateful for all the sacrifices they made.

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CHAPTER I: THE PROBLEM OF PRACTICE

By Melanie H. Lauderdale, Kimberly R. Willis, & Sherry T. Colson

Diversity is an important component of the educational setting and there are numerous benefits to a diverse academic setting, both inside and outside the classroom (Gurin, Dey, Hurtado, & Gurin, 2011). Without having any specific data, a look around the classroom in the physical therapy program at the University of Mississippi Medical Center (UMMC) indicates that racial diversity is limited. According to the United States Census Bureau's (2016) population estimates of 2015, 38% of the Mississippi population is Black or African American while 13% of the United States population falls in the same racial category. Sixty percent of the Mississippi population is White or Caucasian while 77% of the United States population is White or Caucasian. Compared to the nation, Mississippi has a larger percentage of African Americans in comparison to other minority groups. For this reason, the lack of African American racial diversity in a graduate level physical therapy program, as opposed to other racial diversity, is a specific area that this research will address.

The lack of African American students is not specific to physical therapy education programs. Many graduate health care academic programs struggle with achieving a diverse student body, including medical schools (Thomas, 2014). Graduate healthcare programs essentially control the diversity of the workforce in a licensed profession because the students must graduate from an accredited program in order to become licensed and practice in the field. Metz (2013) revealed the continued lack of African American physicians in the workforce, despite many efforts to increase diversity, and detailed some reasons for the lack including

underperformance in undergraduate education and on standardized tests, cultural stereotypes, and exposure to microaggressions.

Education in general is a large umbrella which encompasses elementary through high school as well as collegiate and graduate education. One individual cannot address the gaps in the entire educational system, but graduate physical therapist education, specifically in the state of Mississippi, is a small area of education where this research can have an impact to improve equity and social justice. Also, by addressing diversity in a healthcare education program, health disparities in Mississippi can also be impacted. Due to the breadth of this topic, this dissertation will be conducted as a companion dissertation to more completely address the multiple aspects of this problem.

Problem of Practice

The problem of practice is to enhance the racial diversity of the physical therapy program at UMMC. The Department of Physical Therapy is a part of the School of Health Related Professions at UMMC. While UMMC's mission statement does not directly address the importance of diversity, the School of Health Related Profession's mission statement does.

In keeping with the vision of the University of Mississippi Medical Center, the School of Health Related Professions is dedicated to improving lives by achieving the highest standards of performance in education, research and health care; promoting the value of professionalism and lifelong learning among students, faculty and staff; finding solutions to the challenges of health disparities in Mississippi; embracing diversity; recruiting and retaining high performing students and faculty; and graduating outstanding health care professionals. (University of Mississippi Medical Center, 2018, p. 185)

As part of a school that embraces diversity, it is essential to reveal ways to increase the diversity in the physical therapy program. Not only does the mission statement embrace diversity, it also discusses health disparities and the importance of finding solutions to those disparities. One way to attempt to improve the health disparities is to increase the diversity of the workforce of healthcare providers (Nelson, 2002). The Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004) gives several reasons that increasing diversity may impact health disparities:

- Minorities are more likely to serve their own culture or race following graduation than their white counterpart thus increasing access to healthcare for minorities and in particular, African Americans.
- Minorities are also more likely to treat and serve indigent patients, thus increasing access to healthcare for more Americans.
- Patient satisfaction of their healthcare services is also greater when they are treated by someone of their own race.

Due to the fact that physical therapy is a licensed profession and individuals must graduate from an accredited physical therapy education program in order to apply for a license to practice, the educational programs essentially “control” the diversity of the profession. The racial makeup of the physical therapy profession does not mimic the demographics of the nation or of the state of Mississippi. Eighty one percent of the physical therapists in the United States are White or Caucasian and only 77% of the United States population is White or Caucasian while 4% of the United States physical therapists are Black or African American and 13% of the United States population is Black or African American. Eighty-seven percent of the Mississippi physical therapists are White or Caucasian and only 60% of the Mississippi population is White

or Caucasian while 11% of the Mississippi physical therapists are Black or African American, and 38% of the Mississippi population is Black or African American (U.S. Census Bureau, 2010, 2016). According to Nuciforo (2015), enrollment in physical therapy education programs has increased by about 55% since 2003, yet Caucasian student enrollment remains steady at 80%, despite an increase in diversity of the United States population. In fact, African American enrollment in physical therapy education programs has declined from 4.7% in 2007 to 3.0% in 2016 (Commission on Accreditation in Physical Therapist Education, 2017). All of these figures demonstrate that the current state of the physical therapy profession is lacking African American representation. The lack of African American diversity is a multifaceted national problem with many reasons that contribute to the problem. When considering these contributing factors from a local level, the UMMC physical therapy program is definitely impacted by many of them, and they must be considered when addressing the problem of lack of African American diversity in physical therapy.

Generally, physical therapy faculty members are licensed members of the profession. Therefore, based on the above data, along with other factors, one can imagine that there is also a lack of diversity in the physical therapy faculty nationally. There are 74 core Black or African American physical therapist faculty members nationally while there are 2,525 White or Caucasian faculty members (Commission on Accreditation in Physical Therapist Education, 2017). As Turner, Gonzalez, & Wood (2011) reported, having faculty of color is not a problem specific to physical therapy but is a problem throughout higher education. There are two physical therapy programs in the state of Mississippi and between those two programs, there is one faculty member who could be considered Black by the color of his skin, but he emigrated from Nigeria as an adult and considers himself Nigerian American and not African American.

Therefore, there are no African American physical therapy faculty members in the state of Mississippi. Wilcox, Weber, & Andrew (2005) found that one of the factors that influences minority students' choices of physical therapy programs is ethnic, cultural, and gender consideration which includes having faculty of similar racial or cultural backgrounds to the students. Therefore, African American students may be less inclined to choose a physical therapy education program due to the fact that there are no African American faculty members.

Wilcox, Weber, & Andrew (2005) also found that cost has a significant influence when minority students are choosing a physical therapy education program. Recently, the Mississippi College Board approved tuition rate increases for the public universities. Overall, UMMC experienced a 7.1% tuition increase (Ablaza, 2017). The tuition increase for the Department of Physical Therapy was a 4% increase, resulting in a yearly tuition of \$19,299 (University of Mississippi Medical Center, 2017). Currently, there is one public and one private physical therapy education program in the state of Mississippi. The yearly tuition for the private physical therapy program at William Carey University is \$30,000 ("Physical therapy: William Carey University," n.d.). UMMC gives preference to in-state students and only considers out-of-state students when all qualified Mississippi residents have been admitted (University of Mississippi Medical Center, n.d.-a). Because cost is a factor affecting minority student selection of a physical therapy program and UMMC has the lowest cost in the state while giving preference to in-state students, there is potential to attract more minority candidates to UMMC.

Minority students are more likely to be from a lower socioeconomic status and are more likely to be a first generation student (Center for Disease Control, 2013). Students from low socioeconomic backgrounds and students who are first generation college students face many struggles that other college students may not encounter (Fenderson & Fenderson, 2015). Some

of these challenges include difficulty navigating the application process of colleges, determining ways to pay for college, and gaining family support for college. While Fenderson & Fenderson (2015) explored undergraduate students, these challenges still hold true for students in a graduate education program, but they may manifest in other ways.

Mompremier (2009) examined issues that affect students of low socioeconomic status in graduate education. Some of the things that may impact a student's decision to pursue graduate education include length of program, family stress, and financial related considerations.

Students must decide if they are willing to forgo a full time salary in the workplace in order to pursue graduate education for several years. Many graduate programs, including the physical therapy program at UMMC, are demanding of time and do not allow an abundance of time to work even a part-time job or as a graduate assistant. Therefore, students have the added cost of graduate education along with the lack of time to work for a salary. Families of first generation students may not understand the demands of graduate education which may even ostracize the students from their families (Mompremier, 2009). With these considerations, the choice of pursuing graduate education may be a more difficult choice for African American students.

Nuciforo, Litvinsky, & Rheault (2014) explored variables that predict admission to physical therapist education programs and found that cumulative graduate record exam (GRE) scores were found to be predictive of admission to physical therapy programs. Most physical therapy education programs require GRE scores and use them in some way during the admissions process. The UMMC physical therapy program uses GRE scores as one of several admission criteria. With a lack of African American students in physical therapy education programs, one must consider the downfalls of the GRE scores as a primary criteria for admission. There are documented test disparities in the GRE scores that place African

Americans at a disadvantage, and according to Miller & Stassun (2014), African Americans score 200 points lower than their Caucasian counterparts. Another idea that Steele & Aronson (1995) explored is that of stereotype threat:

Whenever African American students perform an explicitly scholastic or intellectual task, they face the threat of confirming or being judged by a negative societal stereotype—a suspicion—about their group's intellectual ability and competence. This threat is not borne by people not stereotyped in this way. And the self-threat it causes—through a variety of mechanisms—may interfere with the intellectual functioning of these students, particularly during standardized tests. (p. 797)

Williams (1997) argued that GRE scores only weakly predict first year graduate school grades and have no predictive value after the first year. By considering the information regarding multiple downfalls of the GRE scores in graduate education, one can conclude that using GRE scores as admission criteria and having GRE scores be predictive of admission to physical therapy education programs may contribute to the lack of African Americans applying to and being admitted to these programs.

While this introduction has given a basis for the problem, there are still many aspects of the problem to explore. Before considering the problem in further detail, we must consider our personal and professional backgrounds and discuss how this problem became something that we are passionate about addressing. We will also attempt to reveal any biases we may possess so that we can be aware of them when conducting the research. In the next section, each researcher will individually discuss her professional positionality. While we are all working to address a common problem, we recognize that we all come from different backgrounds that will hopefully

strengthen our research, but we also know that we need to be aware of how our backgrounds may influence our research.

Professional Positionality

Sherry Colson

Background. I grew up as an only child of a single working mother. I attended public school and I never remember a time when acquiring a college degree was not a goal. My social circle was more affluent than I, but I admit I never felt financially deprived as my mother made sure I had what I needed. With the help of a school counselor, my mother completed the paperwork needed for me to attend The University of Mississippi (“Ole Miss”) with financial assistance, and I was able to pursue a degree with grant money. When I decided to pursue physical therapy, I applied and was accepted to the UMMC. I took out loans to continue my education, and upon graduation, I was able to secure a job and repaid my loans. If I could go to college and get a degree in spite of my financial limitations, then everyone should be able to, or so I thought.

My interaction with African American students was very limited growing up and even in college. My high school was equally mixed between African Americans and Caucasians. Ole Miss was predominately Caucasian. During both of these phases of growing, my circle of friends was Caucasian, and I had very little interaction with any other culture or race. However, during the 37 years I have been practicing in the clinic as a physical therapist, I have interacted with a variety of African American patients and African American therapist coworkers. In retrospect, I had very few minority co-workers, but when I did, I viewed my African American co-workers as just another physical therapist. I was not consciously aware of the fact that there were very few African American physical therapists. In contrast, I would say that in many of my

areas of clinical practice, African American patients were the majority. My African American patients were patients to be treated equally, and I never thought that the lack of minority therapists would be an issue. However, when I became a faculty member within the physical therapy department at UMMC four years ago, I recognized the very limited number of African American students and faculty. I felt this was important but did not really grasp the significance of this disparity until I began pursuing my degree in higher education.

During my first year as an EdD student, the research and readings revealed to me the benefits of a diverse student cohort and physical therapist staff. According to the articles and books I read, diversity within a cohort improves the quality of education and prepares students to fulfill the needs of a diverse patient population (Fenton et al., 2016; Metz, 2013; National Conference of State Legislators, 2014; Rao & Flores, 2007). A diverse physical therapist staff allows improved treatment options for a larger segment of the population (Nuciforo, 2015). All the research confirmed the benefits of a diverse workforce within health care population (Fenton et al., 2016; Metz, 2013; National Conference of State Legislators, 2014; Rao & Flores, 2007). However, The UMMC physical therapy program struggles to admit a diverse class. Why? The lack of diversity within the physical therapy program at UMMC is the line of research I am pursuing.

Assumptions. I bring to this research certain assumptions. These assumptions will need to be explored, and a critical analysis will need to be performed to ascertain flaws and errors within those assumptions. Because I am only in the early stages of my research, the following assumptions are broad:

1. I believe that college, and possibly even high school counselors, steer the academically gifted African American students towards the more prestigious careers of medical doctor, dentist, or pharmacist.
2. Physical Therapy, while a good paying career, does not pay as well as the medical doctor, dentist, or pharmacy field, and this could be a motivating factor for prospective students.
3. African American students may be motivated differently than Caucasian students when choosing a career.
4. A preliminary review of the GRE scores and GPAs among applicants reveals African American students as a whole have lower GRE scores and GPAs than their Caucasian counterparts. These scores will affect the admissions rate of African Americans. I need to disclose that at this point, the data has not been confirmed, and we will need to perform a fact finding search on GRE and GPA scores to compare between Caucasian and African American applicants of the physical therapy program.
5. The cost of postgraduate education is steep. Many students, including African Americans, may chose not to pursue higher education because of the time and money involved.

These assumptions lead to many questions that need to be addressed. Are UMMC physical therapy admission standards biased towards Caucasian students? Do African American students even know about physical therapy as a career choice? Why do so few African Americans apply to physical therapy programs?

I was fortunate to interview Dr. LaVenita Cottrell, Associate Director of the Career Service Center at Jackson State University, as part of an assignment within the EdD program.

The line of questions for the interview was centered on her experiences with African American students who are interested in medicine. I gathered very valuable insights from Dr. Cottrell and she countered or challenged some of my assumptions and affirmed others. Mostly, the interview served to further peak my interest in the reasons why African Americans select the particular fields of study in healthcare for a career.

I have been a physical therapist for over 35 years and I love what I do and know how physical therapy services can make an impact on another person's life. I entered the teaching profession four years ago, and I sincerely want to educate the best and the brightest to enter the profession. At the same time, I now recognize the need for diversity and how graduating a diverse class of students can only strengthen the profession. I am driven to provide society with the best physical therapists, hence this is why diversity is so important to me. If I can discover what motivates a student to choose a particular healthcare field, I can use this information to attract more African American students to the field of physical therapy. The best way to understand this motivation is through individual, personal contact, and getting to know the students and the reasons behind the career choices they make. This type of interpretive philosophical stance lends itself well to qualitative research and my personality type only compliments this approach.

Melanie Lauderdale

I currently serve as an associate professor in the Department of Physical Therapy at UMMC and am also a practicing physical therapist in the state of Mississippi. In my primary role as an associate professor, my responsibilities include teaching and preparing physical therapy students for a job in the physical therapy profession. I feel it is my responsibility to educate future physical therapists to prepare them to provide superior healthcare to their patients.

I have worked as a practicing physical therapist for almost 13 years and have witnessed first-hand the disparities that occur in healthcare and feel that I can help in a small way to decrease the disparities. During my time as a student in higher education, I was not acutely aware of the importance of diversity in the educational setting, but throughout my career, I have developed an increased sense of the importance of diversity. In my academic role, I also serve as the co-chair of the physical therapy program admissions committee. While my role does not give me the sole responsibility of selecting students for the program, I do have the opportunity to impact admissions policies and procedures that could affect diversity.

Background. In order to understand my views surrounding the topic of diversity, I feel it is important to have an understanding of my background in order to understand why and how this topic became important to me. I grew up as a conservative Christian in a suburban neighborhood outside of Jackson, Mississippi, in a two-parent home with one brother and a dog. I attended a predominantly white, high-performing high school where the majority of the students, including myself, had a similar middle to upper class lifestyle provided by their parents. The parking lot of the high school was full of new to slightly used cars driven by students, including myself, and few students over the age of 16 rode the bus to school. College was discussed frequently in my junior and senior year, both at school and at home. In my world, college was just the next step in life, and I would guess that a majority of students from my high school began college after graduation. My parents and grandparents were all very strong supporters of higher education and were willing and able to help from a financial perspective.

Most likely due in part to my strong high school education, I was able to receive the Mississippi Eminent Scholars Grant along with some other scholarships, which together covered my tuition at Mississippi State University and provided enough extra money for the rest of my

college expenses. I majored in biological engineering with a focus on the pre-med track. Again, I found myself in predominantly Caucasian classes, especially when I moved into the smaller biological engineering classes. I lived in the freshman dorm, and I joined a predominantly Caucasian sorority and moved into the sorority house for my sophomore and junior year and then moved into an off campus house for my final year. I completed my undergraduate degree and applied to physical therapy school and was accepted on my first application cycle. Once again, I found myself in a predominately Caucasian cohort of students. Because of the willingness and ability of my parents and grandparents to assist with education expenses, I was able to complete physical therapy school without taking out any loans. I completed physical therapy school and got my first job, which was really when I realized that my life experiences and viewpoints had been very limited for my entire life.

I took a job at UMMC as a physical therapist. Because of the nature of an academic medical center and the nature of physical therapy treatment sessions, I had the opportunity to have many interactions for long periods of time with patients from different races, background, and socioeconomic statuses. I begin to recognize that I had been afforded many opportunities that others did not have, but I still think I had a limited understanding of the problems on a large scale. As I transitioned into the academic side of physical therapy, I became more aware of the lack of racial diversity in not only the physical therapy profession but in healthcare as a whole. Since the academic programs are essentially the gatekeepers to many healthcare professions, I began to notice the impact the academic programs were having on the lack of racial diversity in healthcare providers, especially in comparison to the patient population, but I still did not understand the reasons for this. Upon entering the EdD program in Higher Education at the

University of Mississippi, I finally began to understand some possible reasons for the lack of diversity in the physical therapy profession.

Acknowledging my strengths and weaknesses, I can say that I am dedicated and believe hard work is an excellent way to build character, while I am not very good at expressing emotions or reading emotions of others. I also usually take a positivist philosophical view on things most of the time which lends itself to my interest in figuring out what observable facts may be contributing to the problem of practice I have defined. With my interest in observable facts, my research plan is geared to a quantitative study, but I recognize the importance of an interpretative perspective in order to understand the more subjective reasons that the data may exist. Luckily, in my companion dissertation, I will have some qualitative data from my companions to assist with more of a complete viewpoint.

I plan to gather pre-existing data used in the admissions process in order to determine what admission factors (i.e. GPA, GRE, etc.) predict success in the physical therapy program as defined by first year GPA. With the data I gather and analyze, I want to find ways to improve the admissions process for the UMMC physical therapy program while still admitting students that will be successful in the program. Using this data, I hope to reveal factors in the admission process that are limiting the admission of African Americans who could be successful in the physical therapy program at UMMC and make changes to those processes to allow for a more inclusive approach. By working with my companions, my goal is to ultimately recruit, admit, and graduate a higher percentage of African American students and ensure their experiences while in school are similar to those of their Caucasian classmates. By increasing the number of African American graduates from the physical therapy program, the number of practicing

African American physical therapists will increase and thereby help in the fight to end health disparities.

Assumptions. As a researcher exploring the reasons for a lack of African Americans in the physical therapy program, I must reflect on some assumptions that I have in regards to the problem and participants. I assume that qualified African American candidates are not applying to the program because they are being counseled to pursue other, more “glamorous” healthcare professions (medicine, dental, etc.). I assume that most African American candidates are aware of the physical therapy profession but do not have adequate counseling to pursue this career path if they want. I assume that cost of graduate school is a factor in deciding to pursue an advanced degree. While I want to believe that there is no bias in the admission committee, I have to address the potential for implicit bias impacting African American applicants, given the fact that the majority of the physical therapy admissions committee is Caucasian. In fact, there is one committee member who is Nigerian American and one who is Chinese. After taking a Project Implicit (2011) implicit association test about race, I found that I have a slight preference to European Americans over African Americans. While I do not have any explicit biases towards African Americans, it appears that I have a slight implicit bias and must be aware of it as I conduct my research. I also have to acknowledge that the admissions committee may also have implicit biases that the members need to acknowledge, and together, the committee may have an explicit bias towards African Americans, especially when relying on GRE scores as a primary criterion for admission.

While my life has led me along a path where I have limited experiences with diverse populations, the EdD program in which I am a student has led to my interest in this problem and the development of these views and assumptions. The readings and class discussions along with

interaction with a racially diverse class has caused me to question the effectiveness of practices we are using in the admission process and to consider how these practices may be inhibiting our African American applicants. This doctoral education experience has also molded my viewpoints to allow for me to look at this problem objectively and to understand the positive impact research in this area could have on the physical therapy profession and the healthcare realm as a whole.

Kimberly Willis

Background. I grew up in a suburb of Jackson, Mississippi, and the school district in which I lived was predominantly Caucasian, approximately 80 percent Caucasian and approximately 20 percent minority, mostly African American. My first memory of having interactions with someone other than a Caucasian child was when I was in the sixth grade. I was in a classroom of all Caucasian students except for one African American student, Mary. I did not know anyone in the classroom, and the only student who became a friend to me was Mary. When I reflect on that time in my life, I remember feelings of loneliness, but as long as I had Mary, my loneliness was a little less. I did not notice the color of her skin, only that I had a friend. Another memory I have from the sixth grade relates to the teacher. This sixth grade teacher always passed out hugs to her students. She was a strict teacher who made sure that the class did what they were told, but I always felt love from this teacher. One specific thing that I remember when she hugged Mary was that she referred to Mary as her “little black girl.” I do not know if being called this was upsetting to Mary or how it made her feel, but I never asked. When moving into junior high, Mary and I eventually grew apart, and I moved onto other friends, who were primarily Caucasian.

I feel that the remainder of my time growing up, I was oblivious to any difficulties that my African American friends may have had with the rest of the world and their experiences in it. After transitioning to college and then to the physical therapy program at UMMC, my small circle of friends did not include any African American females, and I do not remember having any close acquaintances who were African American. After I graduated from college and began working in the physical therapy clinic, I began to see how some patients could be treated differently than others based on their skin tone. I began to see injustices in interactions with some staff and their patients, but these were often veiled in such a manner as to make one doubt one's own self and interpretation of events. I became a champion for these patients and worked hard to help them make the improvements they needed to be able to go home. Several years later, I became the manager of a team of therapists who consisted of all Caucasian women except for one African American woman. I remember times when I pushed her to further her career by taking on leadership roles with various committees within the organization. I now realize that some of this is related to my personality of taking pride in helping others to advance themselves within their career. With this colleague, I began to have conversations about race relations and because of our relationship, we were able to have discussions about her perspective on issues happening in the world and within the organization specifically related to racism. I felt that these conversations and my personality have helped mold me into the person I am today.

Once I transitioned to the Department of Physical Therapy as a faculty member, I was added to the admissions committee, and it was at that point, I began to see the limited number of African American applicants as well as the limited number of those who were selected for admissions. Attending classes at the University of Mississippi, I have been introduced to terms such as "safe spaces" and "microaggressions," terms which I had previously limited knowledge

and understanding. At that point, I began to understand the need to delve more into the limited diversity of students within our program, specific to the African American population. My proposed research is related to the experiences that African American physical therapy students had at UMMC's School of Health Related Professions Department of Physical Therapy. I want to know about their thoughts and feelings while participating in our curriculum. As with my personality, I want to understand motivations for success with these students in the hopes of discerning ways to increase the opportunities for future African American students to attend our program. By doing this, I hope to make recommendations that will ultimately increase the number of African American physical therapists within our state.

Assumptions. Thus far, I have seen six cohorts of physical therapy students come through our program and each cohort is different in the diversity of the students from one out of 50 being African American to up to seven out of 50 being African American. Observational assessments vary within the cohorts, and I have some assumptions of what I will find when I perform my interviews with the graduates of our program. One assumption is that when friendship groups form within each cohort, the African American students will group together and will have less engagement with Caucasian students. In cohorts that have only one African American student, experiences of that lone student will be different than cohorts that have more than one African American student within it. I have mixed assumptions related to their actual experiences and whether or not African American students experienced difficulties due to their race. I have never had a student tell me of problems they have had related to race, so I assume that I will not find any issues; however, as with my friend, Mary, I have not asked. Because of this and having read articles related to equity, ethics, and social justice within the curriculum of this program, I think that this assumption is wrong and that my assumption should be that issues

related to race would become apparent after I complete those individual interviews. Due to the limited diversity of our faculty, I assume that the African American students will express being less comfortable discussing issues related to race and any microaggressions with faculty or with their advisor. Another assumption I have is that the former students will feel comfortable talking to me about their experiences, even though I am older than they are, and I am Caucasian. This assumption is largely due to my feeling that people are comfortable talking to me and I understand that this is a part of my personality. Also, because I will be asking for their input after they have graduated, I know that they are my colleagues, not my students. My last assumption is that those former students I ask to be a part of my research will be willing to participate. I believe that they will be interested in making our program a more diverse one. My expectation is that they will want to help me create ways to increase the number of African American students in the program by analyzing their experiences with the program and making appropriate recommendations for improvement.

Contextualization of the Problem Within a Framework

Scholarly Literature and Professional Practice

A 2010 report by the Agency for Healthcare Research and Quality (AHRQ) identified significant healthcare disparities in this country (2010). Findings indicate that African Americans received worse care than Caucasians in approximately 40% of the measures identified. African Americans had worse access to healthcare in about 33% of the measures identified. Low income citizens receive worse care than people with a higher income in about 80% of the measures identified and access to healthcare was worse in all measured areas. Asians and Hispanics experience similar disparities (Agency for Healthcare Research and Quality, 2010). A follow up study by AHRQ (2016) showed some improvements in quality of healthcare

but many measures remain unchanged. Most of the access measures identified did not show significant improvements. Quality of healthcare is improving for minorities but at a much slower pace than the increase in minority populations, and it varies significantly by region. Disparities still persist especially for the poor and uninsured. Only 20% of the disparity measures were identified as improved for African Americans, and low income people continue to receive worse healthcare than higher income households (Agency for Healthcare Research & Quality, 2016).

The literature confirms that the United States is fast becoming a more diverse culture. It is projected that by 2050 racial or ethnic minority groups will comprise approximately 50% of the population (Agency for Healthcare Research & Quality, 2016). Currently, African Americans comprise approximately 13% of the population, up from 10% in the 1950s. However, in 2014, only 4% of physicians were African American (Agency for Healthcare Research & Quality, 2016) and, in 2010 only 4% of physical therapists were African American (U.S. Census Bureau, 2010).

The manner and quality of healthcare outcomes is dependent upon the way healthcare is delivered. It is imperative that healthcare professionals provide the best quality of services to patients who depend on the healthcare profession for healing. Gurin, Dey, Hurtado, & Gurin, (2011) demonstrated that diversity in healthcare providers contributes to positive outcomes in care that is provided to the patient. The statement also applies to the field of physical therapy. However, the percentage of African American physical therapists falls significantly below the percentage of African Americans living in the state as well as the nation. The lack of minority representation may affect how minority patients recover from an injury or illness. In addition, the quality of education these students receive may be compromised by the lack of diversity in

the classroom. Benefits of diversity in the classroom include improved critical thinking skills and societal engagement for all students, which are both necessary skills to be an effective healthcare provider (Gurin et al., 2011).

Cultural competence among healthcare providers is crucial to meet the needs of this growing diverse patient population. Recognizing and understanding cultural differences in language, values, and customs helps healthcare professionals provide better care and improved communication as well as establishing a sense of trust (National Conference of State Legislators, 2014). Cultural competence helps medical personnel avoid stereotyping and aids in tailoring medical care that is specific to an individual culture. Because cultural diversity is increasing at a greater rate than the diversity of the medical workforce, it is logical to assume that healthcare professionals will need to treat those that are culturally or racially different than themselves. This makes it imperative that students are educated to be competent in treating patients that are different from themselves. Most educators recognize that cultural competence is best learned by experiencing the culture of others, both in the classroom and in the workplace (National Conference of State Legislators, 2014).

One way to combat and minimize healthcare disparities lies in a diverse healthcare workforce (Metz, 2013). All students regardless of minority or majority status benefit from a diverse student cohort and faculty and are better prepared to work with a diverse patient population (Metz, 2013). Diversity among the workforce appears to have an impact on access as well as outcomes. As stated in the introduction, minorities are more likely to serve their own culture or race following graduation than their Caucasian counterpart thus increasing access to healthcare for minorities and in particular, African Americans. Minorities are also more likely to treat and serve indigent patients, thus increasing access to healthcare for more Americans.

Patient satisfaction of their healthcare services is greater when they are treated by someone of their own race (Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce, 2004).

As stated, the problem of achieving a diverse professional workforce in medicine is noted in all areas of healthcare. The problem of recruiting and matriculating African Americans exists in medical, pharmacy, dentistry, and physical therapy programs. A concerted effort is being made to discover ways to narrow the disparity and many efforts focus on the recruitment and admission process. The bulk of the current research about increasing African Americans in healthcare is concentrated in medicine, although pharmacy and dentistry do have models focused on increasing diversity among students and faculty. Physical therapy has very little research dedicated to determining the cause of the lack of diversity nor does the field have recommended models to address the problem. In order to examine past and current efforts, the available research into increasing diversity in healthcare was explored.

Ohio State University College of Medicine reported making significant strides in decreasing disparities and increasing diversity within their medical school admissions. The school has adopted a holistic approach to their admissions process that includes several key changes and recommendations for other programs. As a result of these changes, Ohio State Medical College increased their underrepresented minority (URM) percentage from 13% to 26% in a seven year time span utilizing the following approaches (Capers, McDougle, & Clinchot, 2018).

First, Ohio garnered total administrative backing and involvement to a vision and mission statement that embraced the goal of diversity within their medical school admissions process. To further solidify the buy-in from faculty, students, and administration, the vision and mission

statements were posted about the campus and kept in the forefront of the admission process. By doing so, the critical question during the admission process becomes “How well does this candidate fit our mission statement?” (Capers et al., 2018, p. 11).

Second, the size of the admissions committee was increased from 2 to 60 in order to decrease the risk of individual bias. The admissions voting process was changed to anonymous voting to reduce the propensity to vote with the crowd and each individual on the committee provides an individual, uninfluenced vote. Additionally, the admissions committee was changed to reflect the diversity the university was seeking to obtain. Women and underrepresented minorities were strategically added to the admissions team.

The Association of American Medical Colleges encourages a holistic approach to admissions within their workshop entitled *Holistic Review in Admissions*, and Ohio adopted this strategy which places equal weight on personal attributes, personal experiences, and academic metrics (Capers et al., 2018). Historically, more weight was placed on academics which included standardized tests such as the MCAT or GRE and grade point average (GPA). By modifying the weighting of the metrics and placing equal emphasis on these personal attributes and academic scores, the diversity of the class increased as well as the MCAT scores. Furthermore, during the actual interviews, the interviewers were blinded to the applicant’s academic metrics which led to reduced bias towards the applicant. Prior research revealed that the interviewers tended to score those with high academic marks higher on the interview. With no prior knowledge of the scores, the interviewers were found to score the interview with less bias. In addition, to further reduce bias in the admission process, the university stopped using photographs when discussing the applicants. This action reduced implicit bias among the interviewers that might unintentionally score someone of another culture, the less attractive, or

obese applicants unfairly. Finally, each admission committee member was required to take an implicit association test. By doing so, each committee member was made aware of potential bias and therefore, made a conscious effort to reduce bias and “this exercise in self-awareness may have resulted in a more inclusive climate” (Capers et al., 2018, p. 14).

Dental educators are attempting to increase the diversity of their profession as well. The Pipeline, Profession, and Practice: Community-Based Dental Education program has developed strategies to help increase applicants as well as admissions (Price, Brunson, Mitchell, Alexander, & Jackson, 2007). Many of the suggestions made to enhance diversity in dentistry mirror those of the Ohio State Medical College. The Pipeline program also suggests developing a strong mission and vision statement addressing diversity that is embraced and promoted by the entire administration. In addition, the program promotes a diverse admissions committee that consists of underrepresented minorities and also takes a broader approach to admissions criteria, placing emphasis on more than just the quantitative data. The consideration of life experiences, special talents, and the potential to contribute to the dental profession and society is considered during their admissions process (Price, Brunson, Mitchell, Alexander, & Jackson, 2007).

Unique to the Pipeline program is networking with other schools to share knowledge, resources, and budget to accomplish the goal of increasing URM enrollment. A summer enrichment program is offered and encouraged for all interested students. The summer program is designed to increase the potential students’ basic science knowledge, prepare for the dental admission exam, learn about the admission process, and strengthen basic learning skills. The Pipeline program places an emphasis on strong marketing efforts and distributes a brochure to pre-professional college advisors and to students at career fairs (Price et al., 2007). The University also distributes a recruitment manual on how to run this type of program. Along with

the brochures, this program suggests pre-professional advisor meetings between students and advisors at the dental schools to better prepare students for the application and admission process. There is also a post-baccalaureate program designed to give students whose applications are weak an opportunity to improve their application. The yearlong course is spent taking science courses in order to strengthen their academic scores. These programs are expensive and may prove to be cost prohibitive to most students. However, since financial resources are shared among several universities, scholarships and grants are available. This Pipeline program is showing promise in increasing the number of applicants and enrollment of URM in the dental program. The enrollment of URM is still low, but those numbers are climbing. URM first year enrollment at participating schools increased by 63% (Capers et al., 2018, p. 14).

The financial burden of any healthcare doctoral education is substantial and can be especially deterrent to URM and socioeconomically disadvantaged students, thus leading to disparities in the profession. Drexel University College of Medicine's Institute for Women's Health and Leadership is attempting to increase URM women in medical school by addressing the financial barriers that confront minority groups (Geller, Bonacquisti, Barber, & Yeakel, 2017). A scholarship program called Woman One Award and Scholarship Fund has funded four years of medical school for 29 minority women. In addition to financial support, the program also provides mentors to help professional growth and development of the students. However, the cost of these scholarships is substantial and may be cost prohibitive for many schools.

Physicians Prince and Williams (2017) have provided suggestions on how to increase the number of African American male physicians. A key suggestion is the recruitment of role models and mentors for young African American males. The authors cited Rao & Flores (2007)

research and stated “financial constraints, insufficient exposure to medicine as a career, little encouragement at home and in schools, lack of role models, and negative peer pressure may contribute to racial disparities in the physician workforce for African Americans” (Prince & Williams, 2017, p. 1281). The authors suggested exposing elementary and middle school age African Americans to healthcare fields by physicians or healthcare professionals visiting local schools thus making the respective profession more visible and accessible. This exposure may foster interest in the profession and guide the students towards scientific fields of study. Shadowing and observation activities should be readily available. The authors, like many of the other researchers in this area, express concern regarding the financial barriers faced by URM and suggest philanthropic efforts to provide scholarships and grants to these students (Prince & Williams, 2017).

The physician assistant program at Chatam University introduced a very radical holistic admissions process directed at reducing disparities and increasing enrollment of URM. The program utilized what they referred to as a holistic approach and included personal characteristics and experiences of the applicants along with GPA. The admissions process eliminated the interview process and essay and focused on a type of credit system. The credit system criteria included academic background and achievement; personal experiences such as hardships, military service, and volunteerism; personal characteristics such as ethnicity and socioeconomic status; and personal attributes such as leadership, motivation, altruism, and goal-orientation. These attributes are given points per a rubric and the student is ranked according to the points assigned. The program did have to increase the admissions committee numbers to allow for the increase in review of characteristics and ranking. As a result, the program reports

an increase in URM admissions by 361.5% (Felix et al., 2012). The matriculation rate of URM post-holistic increased by 1,277.8% (Felix et al., 2012).

A study was conducted in a large Midwestern medical school using Conditional Admission. Conditional admission “acknowledged that individuals who faced educational and socio-economic disadvantages along their educational pathway would need targeted resources and carefully planned enrichment programs to prepare for and progress through medical school” (Girotti, Park, & Tekian, 2015, p. 85). In essence, applicants who fell short of the admission criteria were offered an admission placement following successful completion of either a 6 week pre-matriculation program or a one-year long post-baccalaureate admissions program. Program selection was based on the admissions committee members’ assessments of the individual student’s readiness for the rigors of medical school. Following a 10-yearlong study, the results of the conditional admissions program were positive. Eighty one percent of the students in the conditional admission program were from underrepresented ethnic or racial backgrounds. Following adjustments in the program, the graduation rate of conditional admission students was equal to traditionally admitted students. Not unlike the other medical schools, this Midwestern university advocated an institutional mission and vision for diversity, as well as a holistic approach to admissions. In addition, the program provided mentoring and ongoing support systems for the conditional admission student. The cost of these conditional admission programs spans from \$900 to \$3,801 per student. The authors explained the cost is minimal compared to the benefits of reaching underserved populations (Girotti et al., 2015).

A study conducted at the University of New Mexico School of Medicine is especially interesting as this school, like UMMC, only admits in-state students to their medical programs. Minimal criteria for consideration are a minimum MCAT score, minimum GPA, and successful

completion of the prerequisite courses. Following this screening process, applicants participated in two individual interviews. The criteria for final admission to the school were based on academic performance and noncognitive scores gleaned from the interviews. Noncognitive scores were based on “background/diversity, interest and suitability for a career in medicine, problem-solving and communication skills, and letters of recommendation” (Ballejos, Rhyne, & Parkes, 2015, p. 157). The data from three years of admissions was calculated to determine where the weighting of the scores would produce a statistically significant increase in URM admissions. Initially, the criteria were equally divided between cognitive and noncognitive criteria. At this distribution of criteria, there was not a statistically significant increase in URM admission. However, when the distribution was 35% cognitive and 65% noncognitive, there was a statistically significant increase in URM admissions. The minimum standards for admission were not lowered in order to assure matriculation and maintain previously established standards of excellence. New Mexico has a higher Hispanic URM population than Mississippi while Mississippi has a higher African American population. At the 35%/65% split in weighting, 5.1% (13 students) more Hispanic students were admitted to medical school. The researchers reported that the overall mean scores for academic and noncognitive scores did not change as a result of the final weighting. The authors further construed that this study showed that initiatives aimed at increasing diversity could work to increase the number of URM admitted to medical school (Ballejos et al., 2015).

Finally, a simulation study conducted using available application data from the American Medical College Application Service from a California medical school attempted to construct a formula to adjust MCAT and GPA scores in consideration of socioeconomically disadvantaged (SED) students and the URM. Noncognitive elements used in traditional admission processes

were not considered due to lack of standardization. A socioeconomic disadvantage scale was developed based on multiple criteria that included family income level, family assistance program recipient, need based financial aid, work that contributed to the family income, and childhood spent in an underserved area. Utilizing the adjustment of the SED with MCAT and GPA scores, the URM admissions to the class increased from 10.7% to 15.3%. This increase resulted in a URM representation of 22.7% which mirrored the population. Furthermore, the researchers claimed that by adjusting for the SED, the data also showed that this group has a 79-88% likelihood of graduating from medical school. Because this is a simulation, no real time data exists to determine actual matriculation and resident placement (Fenton et al., 2016).

In reviewing the multitude of approaches to decrease disparities and increase the presence of minorities in medical education, attempts are being made to correct the disparities present. However, in spite of these attempts, disparities still exist. There does appear to be an overall agreement in the use of a more holistic admission process with more weight and attention given to noncognitive attributes. Many of the suggestions centered on financial assistance to URM students which is most likely cost-prohibitive to many medical institutions, especially those that are state-funded. Few of the studies were able to provide data on actual matriculation rates that would better indicate success for the described programs. Furthermore, most studies reviewed targeted medical school, and while physical therapy school could be paralleled, no actual studies were found that described programs aimed at increasing diversity in a physical therapy program.

To reinforce the variety of approaches to improve diversity within each healthcare field of education, the Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004) recommended four areas of concentration to decrease disparities within medical education programs. First,

healthcare professions education institutions should develop an institutional mission statement that clearly advocated for diversity among the students, staff, and administration. This mission statement should be the driving force for changes with each institution. Second, administration should develop institutional policies that reflect emphasis on diversity within the institution including goals for completion. Third, the admission committee within each medical program should include admission criteria that reflect the mission of the institution which should include diversity. Applicants should be considered based not only on grades and test scores but on qualitative attributes that reflect the mission. Lastly, admission committees should include underrepresented minorities and provide training on diversity efforts.

Local Context

Mississippi is ranked 50th in overall health ratings according to the American Health Ranking (United Health Foundation, 2017). Mississippi is ranked at the bottom at 49th in obesity, 49th in physical inactivity, 46th in smoking, 50th in children in poverty, and 50th in cardiovascular deaths. In addition, Mississippi is ranked 5th in disparity in health status (United Health Foundation, 2017). Based on these figures and data, it is clear that Mississippi has a problem and improving the health status and decreasing health disparities needs to be paramount for all Mississippi legislators, administrators, educators, and citizens. A positive step in the right direction to correct the health status in Mississippi is decreasing disparities in access to healthcare by increasing providers in low socioeconomic areas with high minority populations. As educators, we can facilitate this change by increasing the diversity within the healthcare professions thus graduating minority students that reflect the race and cultural makeup of the state.

The Department of Physical Therapy within the School of Health Related Professions at UMMC revised the admissions policy several years ago to reflect the mission of increasing diversity within the cohorts admitted to physical therapy. The current Department of Physical Therapy mission statement includes a call for diversity.

The mission of the Department of Physical Therapy program is to prepare an autonomous physical therapist who will be effective in an interprofessional healthcare environment to improve lives by demonstrating knowledge, skills, values, and behaviors consistent with a doctoring profession and incorporating evidence-based healthcare delivery in culturally and socioeconomically diverse communities. (“Overview: Doctor of physical therapy,” 2018, para. 4)

Along with the mission statement is a specific focus on diversity.

The University of Mississippi Medical Center asserts its belief that diversity allows students to encounter perspectives other than their own, which result in more vigorous and imaginative student reflections. Diversity aids students in learning how to relate better to persons of different backgrounds, which, subsequently, helps students to become better citizens and better healthcare providers. (University of Mississippi Medical Center, n.d-b., para. 1)

As a department, the faculty recognizes the value and need for a diverse student population to better reflect and serve the needs of Mississippi. Because the African American population comprises 38% of the Mississippi census (U.S. Census Bureau, 2016), graduates of this program should reflect this diversity. Unfortunately this is not the case.

The focus of the department’s efforts to increase diversity has been on the admission process. Unlike many programs, we continue to perform individual interviews. The admissions

committee believes that by conducting interviews we can focus on those noncognitive attributes our profession values such as compassion, integrity, communication skills, and altruism. We do continue to place emphasis on the GRE and GPA. However, life experiences, life's challenges, employment history, community service, leadership activities, and educational experiences are all considered which mirrors the holistic approach many healthcare educational programs are advocating.

Financial concerns of the URM are cited in much of the literature as one of the leading barriers to attending a medical school. UMMC has one of the lowest tuition rates within the United States leading to increased accessibility for URM thus reducing this barrier (Kemppainen, 2017). In addition, UMMC only admits in-state students in an effort to maximize the potential for the graduating healthcare professional to remain in Mississippi and work in the underserved areas of the state. Despite these efforts to increase diversity within our program, the lack of African Americans that are admitted and graduated remains much less than the percentage reflected in the population of the state.

The American Physical Therapy Association has a vision statement for the year 2020. In this vision for physical therapy, a case is made for increased diversity. "They (physical therapists) will provide culturally sensitive care distinguished by trust, respect, and an appreciation for individual differences" (American Physical Therapy Association, 2015, para. 5). Despite this recognition of the importance of diversity, very little research exists that explores diversity within the physical therapy profession. Nuciforo in 2012 recognized that disparities exist between the number of minority physical therapist and the population served (Nuciforo et al., 2014). Yeowell (2013), in an article entitled "Isn't it all Whites? Ethnic Diversity and the Physiotherapy Profession," explored physical therapists' perceptions of diversity within the

profession and concluded that there is a lack of ethnic diversity within the profession that may impact the ability for the profession as a whole to meet the needs of the patients served. Wilcox, Weber, and Andrews (2005) reported that the physical therapy profession does not accurately represent the racial diversity seen in the workplace. Johanson (2007) explored the factors that influence gender and racial groups in selecting a physical therapy program. Johanson (2007) concluded that factors such as socioeconomic status, demographics, and academic factors were more important to minorities than racial factors when selecting the physical therapy school to attend. As recent as June, 2018, the American Physical Therapy Association House of Delegates has charged the association and relevant stakeholders “with identifying and beginning the process of implementing best practice strategies in advancing diversity and inclusion within the profession” (American Physical Therapy Association, 2017, para. 5). While the profession appears to be in agreement that diversity within the physical therapy workforce is needed and there does exist a lack of minority physical therapists, very little research is found that addresses why there is a lack of diversity and what can be done to correct this disparity within the profession of physical therapy.

Carnegie Project on the Educational Doctorate

The Carnegie Project on the Education Doctorate (CPED) principles of education are tightly woven around the concepts of equity, ethics, and social justice (Carnegie Project on the Education Doctorate, 2018). These principles focus on the fair distribution of wealth, economic and academic opportunities, and privilege within the society in which a person lives. This includes education and is also reflected in healthcare. As educators, we strive to provide equal access to education for all of our citizens. As healthcare providers we strive to provide equal access to healthcare and quality of services to all of our citizens. Educating a diverse student

population is one of the first steps to providing access to healthcare services and the best possible care for the patients served. This dissertation in practice topic attempts to address the diversity of students in the field of physical therapy and includes why diversity is necessary and how to address the current disparity.

Ethics is a branch of philosophy that considers the moral duty to determine the difference between what is right and what is wrong. Specifically, ethical behavior puts the welfare and common good of others above self-interest (Fremgen, 2016). Medical ethics is applied ethics that requires a healthcare professional to put the well-being of the patient above the self-interest of the healthcare professional. According to Gluchmanova (2015), educational institutions are compelled to provide a multicultural, diverse experience into all aspects of school life by “promoting diversity as a positive learning experience, incorporating multicultural perspectives across all learning domains, incorporating multicultural, anti-racism, and human rights perspectives in school policies and practices, enhancing teachers’ and students’ intercultural understanding and cross-cultural communication skills” (p. 511). Combining the medical and educational definitions of ethics, healthcare providers such as physical therapists are called to put the patient first in all decision-making and provide the best possible medical care to all patients by educating the best students to provide those services.

The ethical theory of rights-based ethics places an emphasis on individual rights as a human being. This ethical stance maintains that by the sheer fact of being human, individuals are entitled to certain rights (Fremgen, 2016). Examples of such rights are freedom of speech, freedom of religion, and more recently, the right to healthcare and the right to an education.

Following in similar manner is justice-based ethical theory. This theory projects that no person is advantaged or disadvantaged over another. Therefore every person should have equal

access to healthcare and to an education (Fremgen, 2016). Both of these theories support the CPED principles of equity, ethics, and social justice. Therefore, as citizens of the US and subject to the human condition, students have the right to equal access to an education and the student body should reflect the makeup of the population in which it exists. In turn, the percentage of physical therapy minority students within a cohort should reflect the percentage of minorities it serves. Historically, the field of physical therapy has been somewhat inequitable.

Barriers to a degree in healthcare as cited by the literature include but are not limited to financial constraints, lack of money to attend college, lack of parental support, lack of mentorship, lack of knowledge of the healthcare field, and poor self-efficacy (Metz, 2013). Acquiring social justice requires that everyone, including minorities, have access to healthcare. With an increase in the minority populations of healthcare workers, specifically African American, access to healthcare that is missing within our community among the minority population will also increase. Metz (2013) revealed that minority physicians and other healthcare workers tend to return to underserved areas and treat people of their same culture. Because African American patients are more responsive to physicians and healthcare workers that are of their own race and culture, increasing access to healthcare to many minorities in underserved areas is a problem worthy of consideration.

Conceptual Framework

It is desirable to increase the diversity of healthcare professionals. From a higher education view, there is a necessity to assess the problem through the lens of a conceptual framework. The original framework by Weidman, Twale, and Stein (2001) is one that looks at graduate students and how they transition into professionals. This original framework was updated in 2016 by Twale, Weidman, and Bethea (2016) to specifically address graduate

students of color. The Twale et al. (2016) framework is the one in which the problem of practice will be explored.

According to Weidman et al. (2001) socialization of students in graduate school is “the processes through which individuals gain the knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialized knowledge and skills” (p.iii). Weidman et al. (2001) designed a framework for the socialization of graduate students’ based on the 1975 role acquisition work of Thornton and Nardi (1975). According to the framework of Thornton and Nardi (1975), there are four stages within the socialization process: anticipatory, formal, informal, and personal. These stages must successfully be navigated in order to achieve a certain role. The Thornton and Nardi (1975) framework is very linear and each stage must be completed in order to successfully step into a specific role. The first stage, anticipatory, is considered to be an acquisition of knowledge about the specific role. However, this is often biased toward only the positive aspects of a role due to the fact that the general knowledge presented tends to leave out any negative features. Thus, the person lacks a complete understanding of the role. The formal stage is the second stage and is usually structured around an organization with whom the person is now associated and is related to the formal expectations of the institution, such as duties of the particular role of the individual. To explain this stage, Thornton and Nardi (1975) provide an example of the Hippocratic Oath. This oath is one that physicians use as a model of behavior in regards to patient care. In the physical therapy profession, graduate students take a similar oath, the physical therapy oath that is geared toward specific behaviors and beliefs for the care of patients. Once a person has had experiences in the formal stage, possibilities to have informal experiences occur. It is during the informal stage that experiences by the person and interactions with others allow the person to interpret

how they may or may not respond to a particular event. At this point, the person is working on navigating the stresses placed upon them by being in the new role via psychological adjustments. The person begins to determine how to navigate the various expectations and to determine how to take on the role. The final stage is the personal stage in which the person's individual beliefs and personality come into play to assist with the person's expectations and assumptions of the new role while having reconciled the expectations of society into the role performance.

The framework by Weidman et al. (2001) expanded upon Thornton and Nardi's idea of role acquisition and created a framework for the process of graduate students' socialization. The Weidman et al. (2001) framework consists of five fundamentals that are specific in transitioning the student to the professional. The fundamentals are described as follows:

- Prospective students: background, predispositions
- Professional communities: practitioners, associations
- University: institutional culture - academic program and peer climate;
socialization processes - interaction, integration, and learning
- Personal communities: family, friends, employers
- Novice professional practitioners: commitment, identity

The students enter as prospective students with expectations to advance to being novice professional practitioners. Weidman et al. (2001) moved from a more linear model toward one that was flexible and evolving and allowed for differences as well as similarities among the different students. Students do not have to move from one element to the next. Rather, they are able to experience the process of socialization through interactions from the fundamentals in a varying sequence and even simultaneously across the five elements. This framework has the culture of the institution and processes of socialization at its core with input from outside sources

factoring into the movement of students toward professionalization. These outside sources include professional communities and personal communities. At the university level, the culture of the institution, the interaction between the students and their peers, and the socialization processes aid in the moving through the stages of socialization. Knowledge, skills, and values are the prerequisites needed for successful completion of graduate school (Weidman et al., 2001).

Similar to Thornton and Nardi, Weidman et al. (2001) recognized the stages of the socialization process which include anticipatory, formal, informal, and personal. A difference in the two frameworks is that with the Weidman et al. (2001) framework, students are able to experience these stages at various times during the socialization process, rather than being associated with a specific element which would be expected if the model were more linear. Weidman et al. (2001) believed “that socialization processes characteristic of all four stages may be present at any point in the entire experience of graduate students and novice practitioners” (p. 39).

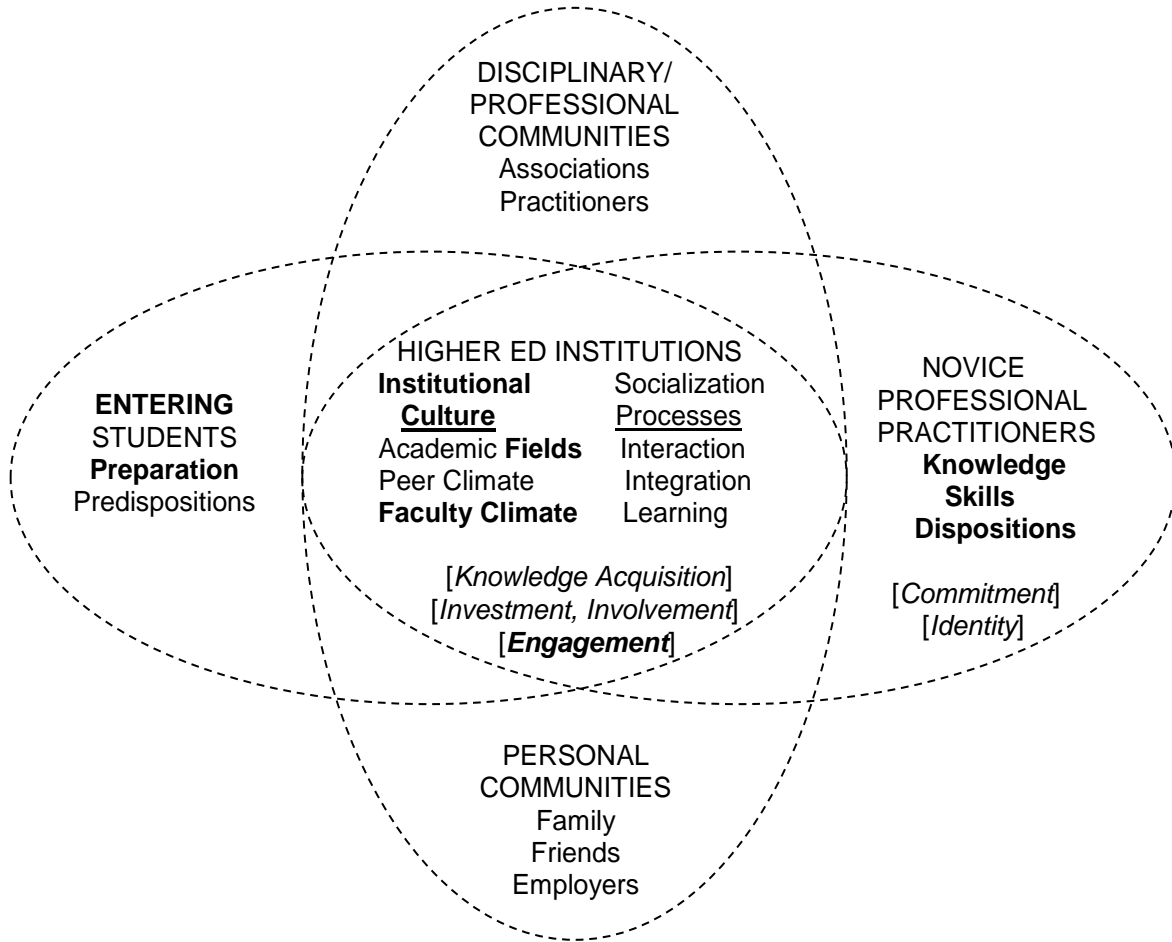
Twale et al. (2016) modified the Weidman et al. (2001) framework to reflect certain changes that better define graduate students of color (Figure 1). The modifications were related to the student, the institution, and the professional and are represented in italics within the fundamentals (Twale et al., 2016, p. 87):

- *Entering Students: preparation, predispositions*
- *Disciplinary/Professional Communities: associations, practitioners*
- *Higher Ed Institutions: institutional culture - academic fields, peer climate, and faculty climate; socialization processes - interaction, integration, and learning*

- Personal Communities: family, friends, employers
- Novice Professional Practitioners: *knowledge, skills, dispositions*

An important addition to the model is *Academic resources* and these include *inputs, environment, and outcomes*. “Inputs” are the entering students and are more in line with the idea that students have a good idea of what to expect from their field of choice, i.e. physical therapy. The “preparation” of the students plays a major factor in faculty selection of students to a particular program, i.e. physical therapy admissions process. The “environment” is the framework’s center section and is the environment in which the graduate students function. This includes the professional communities (the American Physical Therapy Association, the Mississippi Physical Therapy Association, the physical therapists in the community), the institution (UMMC, School of Health Related Professions, Department of Physical Therapy), and the personal communities (family, friends, and employers). An addition to the institutional culture is the influence of the *faculty climate* and a change of terms from *academic fields* to *academic programs*. Key components of socialization within the higher education institutions include “knowledge acquisition, investment, and involvement” (Twale et al., 2016, p. 87). These represent the learning that occurs by the student through interactions and involvement with faculty and with their classmates. The idea of “engagement” was added to the key components of socialization. This occurs as the student engages more with people and ideas within higher education. To move to the novice professional, outcomes of *knowledge, skills, and dispositions* were added to this aspect of the framework. These changes are considered to be more in line with the nonlinear approach to student socialization. The idea is that the students at the beginning of their graduate education are in the *entering* section of the framework and then

Figure 1. Conceptualizing Graduate Student Socialization: Re-visiting the Weidman-Twale-Stein Model (adapted from Weidman, 2006; Weidman, et al., 2001) *



ACADEMIC RESOURCES: INPUTS (I)

ENVIRONMENT (E)

OUTCOMES (O)

Interactive Stages: Anticipatory

Formal, Informal

Personal

* Bolded elements in the framework differ from Weidman, et al., 2001.

Figure 1. Source: Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of Color: Revisiting the Weidman-Twale-Stein Framework. *Western Journal of Black Studies*, 40 (2), 87. Used with authors' permission.

progress through the process until they enter their respective professions as practitioners (Twale et al., 2016, pp. 86-87). For this dissertation, the process begins with the potential African American physical therapy student progressing through the socialization model to become African American physical therapists.

Weidman & Stein (2003) utilized the Weidman et al. (2001) framework to assess sociology doctoral students in their socialization toward academic norms of research and their perceptions of the institution's culture, since the institution was specific in their quest to make a difference in the graduate students' future careers. This study utilized a questionnaire which was sent to 83 PhD students in two different departments. Fifty students returned the questionnaire and a higher percentage of the doctoral sociology students (65%) returned their survey as compared to the educational foundation doctoral students (56%). The questionnaire assessed the respective department's characteristics that were deemed important to the socialization of these student groups. Findings support the framework of Weidman, Twale, and Stein, especially related to the socialization of students being significantly impacted by the culture of a department within an institution.

According to this study, students' perceptions of being encouraged by faculty and being a member of a specific department made a significant impact on their participation in research. Additionally, perceptions of being supported by faculty significantly contributed to fostering those student-faculty relationships and student-peer relationships that enhanced feelings of engagement. One interesting point to discuss from this study is the negative correlation between those relationships between faculty and international students. The authors believed that this could be in part due to the international students being more reserved in their interactions with the faculty within the institution's department as compared to their peers who are from the

United States. This should be a consideration when contemplating the problem of practice and the lack of African American faculty within the physical therapy program at UMMC.

Gasman, Hirschfeld, & Vultaggio (2008) conducted a qualitative study with a survey that assessed the experiences of African American graduate students at an Ivy League school. A pilot study was completed prior to the actual study to ensure validity and reliability of the survey. The survey consisted of 37 questions, with a mix of open-ended and closed-ended questions that asked about demographics, social life, and experiences within the university. Having asked about the demographics, the authors were able to glean information regarding the students' background information. Most of the students were from middle class homes and just under 50% of them had at least one parent who graduated from college. Findings were consistent with the framework of Weidman et al. (2001) related to peers and faculty influences of these graduate students, though some additional factors at the time of the study were discovered including influences of mentors, spirituality, and stress related to finances. An interesting finding of the study was that many of those surveyed reported a lack of programs at the institutions designed for African American students, so they developed their own support systems. The authors believed that the study was the first to demonstrate the specific examples of socialization of African American graduate students. Both positive and negative findings were recognized with positive findings being related to mentoring of African American graduate students by their advisors. Negative findings were associated with the navigation and process of matriculation through the specific program of study. Some suggestions from the study included fostering improved faculty-student and advisor-advisee relationships through education and a rewards program. Increasing inclusion in the curriculum was suggested to allow for perspectives of African American students to be explored. Other suggestions included having seminars to

discuss specific successes of the students and their faculty and accessing their personal communities, specific to their spirituality to aid in the socialization of the student. Lastly, the authors discovered that students' relationships with their peers contributed to successful socialization, but because their sample size was small, further research in this area was suggested.

Gardner (2010) surveyed 40 doctoral students from two universities within the chemistry and history departments. She was specifically interested in the students' experiences of the socialization processes that aided in determining attrition rates. Students who did not "fit the mold" were discussed, and these groups included students of color, women, older students, and those with children. To keep a focus on the topic of this dissertation, students of color will be the only group discussed. The demographics of the students of color included one African American and three Asian Americans. The low number of students of color, especially those who were African American, was a limitation of the study specific to this dissertation; however, as previously revealed by Gasman et al. (2008) much of the literature had not evaluated African Americans and their socialization processes. The findings by Gardner (2010) for students of color included a dissatisfaction of the overall experience of graduate school. Recommendations for an awareness of policies by university leaders specific to the recruitment of any underrepresented group was made to aid in the provision of mentors and role models for these student groups.

The role of the faculty advisor to graduate students and the influences that are achieved by their interactions is essential in the socialization of graduate students. Burt, Williams, & Smith (2018) explained how the advisor is able to assist the student to achieve a better acclimation to the university climate and delved into how gendered racism on college campuses

is present for Black males who were a part of an engineering school at one particular university. The term “Black male” referred to race, and any male who considered himself “Black,” regardless of being from places such as Nigeria, Ethiopia, or even the United States, could be considered for this study. Twenty-one students participated in this qualitative study. Interviews were conducted by one of three people who also considered themselves Black. Findings of this study included various ideas by the students that their advisors and other faculty were less likely to actively recruit Black students as compared to recruitment efforts to attract Asian students. Implications of this study included review of policies and procedures that may impede the recruitment and matriculation of minority students. Recommendations were made for fostering relationships between advisors and Black male students to aid in their successful completion of graduate programs. Lastly, a suggestion was made for institutions to provide support services that allow Black male students to interact with other students in the same field of study.

Twale et al. (2016) revisited the concept of the framework by Weidman et al. (2001) to specifically address issues experienced by African American graduate students. The authors made modifications to the original framework to incorporate current findings. The Twale et al. (2016) framework aids in the advancement of the problem of practice and the need to attempt to determine ways in which diversity of the student population may be increased. Diversity among faculty members is a problem as described by Twale et al. (2016). The authors clarified that “diversity among senior male and female minority faculty hovers around 15%-16% of all faculty, compared to 33% of all students identified as students of color” (Twale et al., 2016, p. 81). As discussed earlier in this manuscript, the African American diversity of the faculty and students in the Department of Physical Therapy at UMMC is lacking. From a professional standpoint, there is a need to increase the students of color population within this physical therapy program to

align more with our society as a whole. The goal of this dissertation is to explore the lack of diversity in the physical therapy program to determine how to attract African American applicants to the program, to discern predictors of success for African American students to aid in selection during admissions, and, lastly, to determine themes that will aid in successful completion and promotion of the program by African American graduates.

Additionally, Twale et al. (2016) found that “peer-to-peer relationships between students of color and white students seemed strained or nonexistent and interactions with white faculty felt more formal than informal” (p. 83). Shared experiences of the African American graduates of the program may give insight into whether or not they would suggest to undergraduate students to consider the physical therapy field as well as whether or not they should apply for this institution’s specific program. Insights provided will aid in improving the problem of practice and increasing the number of African American physical therapists who are graduates of this program.

Supporting diversity is imperative according to Twale et al. (2016). This may be accomplished by improving the development of students in addition to improving the development of a university’s climate. Some of the suggestions include making sure to include issues related to diversity in a program’s curriculum that address cultural competency for all students as well as to encourage diverse group activities that facilitate team building for all group members. Assessment of African American graduates of the physical therapy program as well as those who considered physical therapy as a career choice, but selected a different field may give insight into whether or not this could aid in improving the diversity of the program.

Use of this framework in the problem of practice, especially through the lens of successful matriculation of African American students through the physical therapy program at

UMMC, helps augment the need to determine ways in which to increase the number of African American applicants, to increase the number of those applicants who are admitted, and to increase the likelihood of successful matriculation to physical therapy practitioner. This framework allows us to view the socialization of this student population through multiple angles: prior to admission into the program and during the program. The framework advances the need to study the problem of practice in order to determine what issues should be addressed as well as ways in which to immediately make improvements in diversity. Three individual projects will explore the problem of practice with expectations to demonstrate improvements in the number of African American students matriculating from the physical therapy program at UMMC and entering the workforce as successful physical therapy practitioners.

Research Plan

The purpose of this Dissertation in Practice (DiP) is to enhance the racial diversity of the physical therapy program at UMMC. We plan to explore reasons African American diversity is lacking in the physical therapy program at UMMC and to determine ways to increase the African American diversity in the program. This companion case study of the physical therapy program at UMMC will use qualitative and quantitative methods to attempt to answer the following questions:

- How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC?
- What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?

In the next three manuscripts, each researcher will address a different aspect of the problem and present the results. Sherry Colson will conduct focus groups of African American students from

different doctoral healthcare programs on the UMMC campus to attempt to understand reasons students choose a certain healthcare profession and elements that might be limiting students from choosing physical therapy as a career. Kimberly Willis will conduct interviews with former African American graduates of the physical therapy program at UMMC to try to understand how their experiences in the physical therapy program impact their opinion of the program and profession. Melanie Lauderdale will analyze quantitative admission data (i.e. GPA, GRE, etc.) to determine if there are correlations between certain admission criteria and a successful first year as defined by first year GPA to recommend changes to the admission criteria and selection process that may be inadvertently limiting African American enrollment. The final manuscript will use the findings from all three individual studies to give recommendations for implementation of a plan to address the identified problem of practice—the lack of African American student diversity in the physical therapy program at UMMC.

BIBLIOGRAPHY

- Ablaza, K. (2017, April). Cost of attending college in Mississippi surges again. Retrieved from <https://mississippitoday.org/2017/04/20/cost-of-attending-college-in-mississippi-surges-again/>
- Agency for Healthcare Research & Quality. (2016). Overview of quality and access in the U.S. health care system. Retrieved August 9, 2018, from <https://www.ahrq.gov/research/findings/nhqrdr/nhqrdr16/overview.html#Variation>
- Agency for Healthcare Research and Quality. (2010). Disparities in healthcare quality among racial and ethnic minority groups. Retrieved June 28, 2018, from <https://archive.ahrq.gov/research/findings/nhqrdr/nhqrdr10/minority.html>
- American Physical Therapy Association. (2015). Vision 2020. Retrieved from <http://www.apta.org/Vision2020/>
- American Physical Therapy Association. (2017). The pulse: News for PT and PTA students. Retrieved from <http://www.apta.org/Blogs/Pulse/2017/11/Diversity/>
- Ballejos, M. P., Rhyne, R. L., & Parkes, J. (2015). Increasing the relative weight of noncognitive admission criteria improves underrepresented minority admission rates to medical school. *Teaching and Learning in Medicine: An International Journal*, 27(2), 155–162.
- Burt, B. A., Williams, K. L., & Smith, W. A. (2018). Into the storm: Ecological and sociological impediments to black males' persistence in engineering graduate programs: *American Educational Research Journal*. <https://doi.org/10.3102/0002831218763587>
- Capers, Q., McDougle, L., & Clinchot, D. M. (2018). Strategies for achieving diversity through medical school admissions. *Journal of Health Care for the Poor and Underserved*, 29(1), 9–18. <https://doi.org/10.1353/hpu.2018.0002>

- Carnegie Project on the Education Doctorate. (2018). The Framework. Retrieved August 9, 2018, from <https://www.cpedinitiative.org/page/framework>
- Center for Disease Control. (2013). CDC health disparities and inequalities report. *Morbidity and Mortality Weekly Report*, 62(3), 1–187.
- Commission on Accreditation in Physical Therapist Education. (2017). *Aggregate program data: 2016-2017 physical therapist education programs fact sheets*. Retrieved from http://www.capteonline.org/uploadedFiles/CAPTEorg/About_CAPTE/Resources/Aggregate_Program_Data/AggregateProgramData_PTPrograms.pdf
- Felix, H., Laird, J., Ennulat, C., Donkers, K., Garrubba, C., Hawkins, S., & Hertweck, M. (2012). Holistic admissions process: An initiative to support diversity in medical education. *The Journal of Physician Assistant Education*, 23(3), 21.
- Fenderson, A., & Fenderson, J. (2015). First generation. Retrieved from <https://www.youtube.com/watch?v=pfDx4duheHk>
- Fenton, J. J., Fiscella, K., Jerant, A. F., Sousa, F., Henderson, M., Fancher, T., & Franks, P. (2016). Reducing medical school admissions disparities in an era of legal restrictions: Adjusting for applicant socioeconomic disadvantage. *Journal of Health Care for the Poor and Underserved*, 27(1), 22–34.
- Fremgen, B. F. (2016). *Medical law and ethics* (5th ed.). Boston: Pearson Education Inc.
- Gardner, S. K. (2010). Faculty perspectives on doctoral student socialization in five disciplines. *International Journal of Doctoral Studies*, 5, 039–053. <https://doi.org/10.28945/1310>
- Gasman, M., Hirschfeld, A., & Vultaggio, J. (2008). “Difficult yet rewarding”: The experiences of African American graduate students in education at an ivy league institution. *Journal of Diversity in Higher Education*, 1(2), 126–138.

- Geller, P. A., Bonacquisti, A., Barber, J., & Yeakel, L. H. (2017). Increasing racially and ethnically underrepresented women in medical school through an innovative program. *International Journal of Medical Education*, 8, 187–189.
<https://doi.org/10.5116/ijme.5918.b789>
- Girotti, J. A., Park, Y. S., & Tekian, A. (2015). Ensuring a fair and equitable selection of students to serve society's health care needs. *Medical Education*, 49(1), 84–92.
<https://doi.org/10.1111/medu.12506>
- Gluchmanova, M. (2015). The importance of ethics in the teaching profession. *Procedia - Social and Behavioral Sciences*, 176, 509–513. <https://doi.org/10.1016/j.sbspro.2015.01.504>
- Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2011). Diversity and higher education : Theory and impact on educational outcomes. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 249–277). New York: Routledge.
- Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. (2004). *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. (B. D. Smedley, A. Stith Butler, & L. R. Bristow, Eds.). Washington (DC): National Academies Press (US). Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK216009/>
- Johanson, M. (2007). Factors influencing students' selection of physical therapist programs: Differences between men and women and racial/ethnic groups. *Journal of Physical Therapy Education*, 21(1), 22–29.
- Kemppainen, S. (2017). 30 most affordable doctor of physical therapy (DPT) degrees. Retrieved August 9, 2018, from <https://www.bestmedicaldegrees.com/cheapest-physical-therapy-doctorate-degrees/>

- Metz, A. M. (2013). Racial and ethnic underrepresentation in medicine: Lessons from the past and a vision of the future. *Teaching and Learning in Medicine: An International Journal*, 25(S1), S33–S38.
- Miller, C., & Stassun, K. (2014). A test that fails. *Nature*, 510(7504), 303–304.
<https://doi.org/10.1038/nj7504-303a>
- Mompremier, L. (2009). Socioeconomic status and higher education adjustment. *The SES Indicator*, 2(1). Retrieved from
<http://www.apa.org/pi/ses/resources/indicator/2009/04/adjustment.aspx>
- National Conference of State Legislators. (2014). *Racial and ethnic health disparities: Workforce diversity*.
- Nelson, A. (2002). Unequal treatment: Confronting racial and ethnic disparities in health care. *Journal of the National Medical Association*, 94(8), 666–668.
- Nuciforo, M. (2015). Minority applicants to physical therapist education programs 2010-2012. *Physical Therapy*, 95(1), 39–50.
- Nuciforo, M., Litvinsky, Y., & Rheault, W. (2014). Variables predictive of admission to US physical therapist education programs. *Journal of Physical Therapy Education*, 28(3), 112–119.
- Overview: Doctor of physical therapy. (2018). Retrieved from
<https://www.umc.edu/shrp/Programs/Doctor%20of%20Physical%20Therapy/Doctor%20of%20Physical%20Therapy.html>
- Physical therapy: William Carey University. (n.d.). Retrieved from
<https://www.wmcarey.edu/schools/physical-therapy>

- Price, S. S., Brunson, W. D., Mitchell, D. A., Alexander, C. J., & Jackson, D. L. (2007). Increasing the enrollment of underrepresented minority dental students: Experiences from the dental pipeline program. *Journal of Dental Education*, *71*(3), 339–347.
- Prince, M., & Williams, K. A. (2017). Suggestions to increase the number of African-American male physicians. *American Journal of Cardiology*, *119*(8), 1281–1283.
<https://doi.org/10.1016/j.amjcard.2016.12.022>
- Project Implicit. (2011). Take a Test. Retrieved from
<https://implicit.harvard.edu/implicit/takeatest.html>
- Rao, V., & Flores, G. (2007). Why aren't there more African-American physicians? A qualitative study and exploratory inquiry of African-American students' perspectives on careers in medicine. *Journal of the National Medical Association*, *99*(9), 986–993.
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, *69*(5), 797–811.
<https://doi.org/10.1037/0022-3514.69.5.797>
- Thomas, B. (2014). College of health and health care disparities: The effect of social and environmental factors on individual and population health. *International Journal of Environmental Research and Public Health*, *11*(7), 7492–7507.
- Thornton, R., & Nardi, P. (1975). The dynamics of role acquisition. *American Journal of Sociology*, *80*(4), 870–885.
- Turner, C. S. V., Gonzalez, J. C., & Wood, J. L. (2011). Faculty of color in academe: What 20 years of literature tells us. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 41–73). New York: Routledge.

- Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of color: Revisiting the Weidman-Twale-Stein framework. *The Western Journal of Black Studies*, 40(2), 80–94.
- United Health Foundation. (2017). Explore health measures in Mississippi: 2017 annual report. Retrieved from <https://www.americashealthrankings.org/explore/annual/measure/Overall/state/MS>
- University of Mississippi Medical Center. (2017). University of Mississippi Medical Center 2017-2018 tuition rates: School of Health Related Professions. Retrieved from https://www.umc.edu/uploadedFiles/UMCedu/Content/Education/Academic_Affairs/For_Students/Student_Accounting/2017%202018%20TUTION%20SHRP.pdf
- University of Mississippi Medical Center. (2018). *2018-2019 Bulletin* (pp. 1–327). Retrieved from www.umc.edu/bulletin
- University of Mississippi Medical Center. (n.d.-a). Physical therapy FAQ. Retrieved from http://www.umc.edu/Education/Schools/Health_Related_Professions/Physical_Therapy/Physical_Therapy_FAQ.aspx
- University of Mississippi Medical Center. (n.d.-b). SHRP Diversity and Inclusion. Retrieved from <https://www.umc.edu/shrp/Prospective%20Students/Applying%20for%20School/SHRP%20Diversity%20and%20Inclusion.html>
- U.S. Census Bureau. (2010). *2006-2010 American community survey*.
- U.S. Census Bureau. (2016). *Annual estimates of the resident population by sex, age, race, and Hispanic origin for the United States and states: April 1, 2010 to July 1, 2015*.

- Weidman, J. C., & Stein, E. L. (2003). Socialization of doctoral students to academic norms. *Research in Higher Education, 44*(6), 641–656.
- Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). *Socialization of graduate and professional students in higher education. A perilous passage?* (3rd ed., Vol. 28). San Francisco, CA: Jossey-Bass.
- Wilcox, K. C., Weber, M., & Andrew, D. L. (2005). Factors influencing minority students' choice of physical therapist education programs. *Journal of Physical Therapy Education, 19*(3), 8–14.
- Williams, W. M. (1997, October 10). Reliance on test scores is a conspiracy of lethargy. *The Chronicle of Higher Education*. Retrieved from <https://www-chronicle-com.umiss.idm.oclc.org/article/Reliance-on-Test-Scores-Is-a/98332>
- Yeowell, G. (2013). 'Isn't it all whites?' Ethnic diversity and the physiotherapy profession. *Physiotherapy, 99*(4), 341–346. <https://doi.org/10.1016/j.physio.2013.01.004>

LIST OF APPENDICES

APPENDIX A

Focus Group Recruitment Letter

To: Student of University of Mississippi Medical Center
From: Sherry Colson, PT, DPT
Doctoral Candidate
Department of Higher Education
University of Mississippi

Dear Student of UMMC,

My name is Sherry Colson and I am a doctoral candidate at the University of Mississippi in the Department of Higher Education. I am also an Associate Professor of Physical Therapy at UMMC.

We want to enhance the enrollment of African American students in physical therapy at UMMC. To better understand students' perceptions of the physical therapy program at UMMC, we want to know more about how African American students make decisions about their field of study in healthcare. I am recruiting African American students enrolled at UMMC in medicine, dentistry, pharmacy, or physical therapy to participate in the focus group; I think you can provide important insights.

As part of my dissertation research, I am inviting you to participate in a focus group to discuss and share your thoughts about being an African American doctoral student at UMMC. The focus group will take no longer than ninety minutes, and the session will be audio-recorded and transcribed. The date and time of the focus group will be determined by participant availability. If you agree to participate, I will forward to you a confirmation of the time, date, and place of the focus group as well as a list of questions the group will address. The questions are intended to stimulate your thinking on the topic. Throughout the life of the research project, I will not use your name or any identifying information obtained during the recorded interview in any of my reporting notes.

Upon your arrival at the focus group, you will be asked to sign an informed consent form and complete a demographic questionnaire that will not include your name. As a small token of appreciation, you will be given a \$5 Amazon gift card as a thank you for your participation.

Thank you for consideration of my request. Please respond to this email indicating your willingness to participate.

Sincerely,

Sherry Colson

Sherry Colson, PT DPT

APPENDIX B

Focus Group Consent Form

Information about a Focus Group

Title of Study: African American Students in Physical Therapy: Enhancing Diversity

Investigator

Sherry Colson, PT DPT
Doctoral Candidate
Department of Higher Education
School of Education
The University of Mississippi
(601) 940-1090
stcolson@olemiss.edu

Advisor

Amy E. Wells-Dolan, Ph.D.
Associate Professor
Department of Higher Education
School of Education
The University of Mississippi
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Description/Purpose of the Study

The researchers in this study are interested in enhancing African American student diversity in Physical Therapy at the University of Mississippi Medical Center (UMMC). We want to know more about the perspectives, experiences, and circumstances that motivate African American students for specific career fields within healthcare and medicine.

In order to explore this topic fully, we ask that you participate in no longer than a 90 minute focus group in which you will have the opportunity to share your thoughts, opinions, and experiences with us. The questions and topics will focus on your insights and opinions regarding what motivates African American students to select certain career paths such as medicine, dentistry, pharmacy, or physical therapy.

Risks and Benefits

During the interview process, you will be asked to reflect on the perspectives and experiences of an African American students in graduate medical education. This discussion might jog your memory about experiences that may have been difficult for you, and therefore make you uncomfortable thinking about them. Although personal reflection can lead to discomfort, it may also lead you to better understand the significance of your journey and experiences as a minority student on a medical school campus thus serving as a catalyst for your professional and personal growth. Your insights may help to reduce barriers to African American students' admission in physical therapy as well as enhance the overall graduate education experiences of African Americans in physical therapy, specifically, but also medicine, dentistry, and pharmacy, generally.

Cost and Payments

The focus group interview will last no longer than 90 minutes, depending upon the liveliness of

the conversation. Other than your time, there are no other costs for helping us with this study. You will be given a \$5 Amazon gift card as a small thank you for participating in this study.

Confidentiality

Throughout the life of the research project, I will not use your name during the recorded interview or in any of my reporting notes. Students may be asked to provide basic demographic information, which may include but is not limited to gender, age, and major. To prevent anyone from being able to identify you, the research study will use a pseudonym for your name. Therefore, I assure you that I will take every precaution to protect your information so that you will not be identified from any of the collected information. The recording of your interview will be destroyed when the research project is completed.

Right to Withdraw

You are under no obligation to take part in this study. If you would like to stop your participation at any point during the study, you will not be penalized in any way. Simply inform Sherry Colson with your decision in person, by email (stcolson@olemiss.edu), or telephone (601-940-1090). Your standing with The University of Mississippi or The University of Mississippi Medical Center will in no way be affected by your choice to withdraw from the study, and you will not lose any of the benefits to which you are entitled. Your decision to participate or to withdraw will remain confidential.

IRB Approval

This study has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Statement of Consent

I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study. Furthermore, I also affirm that the experimenter explained the study to me and told me about the study’s risks as well as my right to refuse to participate and to withdraw.

Furthermore, I also affirm that the researcher explained the study to me and told me about the study’s risks as well as my right to refuse to participate and to withdraw.

Signature of Participant Date

Printed name of Participant

Release of Rights to Written or Recorded Information

My signature below indicates that I release all rights, including copyright rights for the use of any recorded or written information that I provided during this study. With this release, I grant the University of Mississippi and the aforementioned researchers the permission to use, reproduce, copy, and distribute my words in whole or in part into derivative works without limitation. I indemnify and hold the University and the researchers harmless from any claims of infringement of copyright by any third party regarding my words. I agree that I will receive no further consideration and no royalty payments for the use of my words.

My signature below means that I agree to all of the above terms.

Signature

Date

APPENDIX C

Focus Group Protocol

Title of Study: African American Students in Physical Therapy: Enhancing Diversity

Date:

Time:

Place:

Interviewer: Sherry Colson

Interviewee:

Standard Procedures:

African American students who are currently enrolled in medicine, dentistry, pharmacy, and physical therapy academic programs on the campus of UMMC will be invited to participate. The interview will last no longer than ninety minutes and it will be completed at a convenient time either on campus or at a nearby restaurant. Each discipline-specific focus group will be limited to a maximum of 8 individuals so the number of focus groups will be determined by the number of respondents that agree to participate in the group. There should be a minimum of 4 focus groups. The focus group participants will be provided with an informed consent form that will need to be signed prior to participating in the group discussion. The moderator will answer any questions prior to beginning the discussion. The focus group interview will be audio-recorded and transcribed by the interviewer after the interview has ended. At the end of the process, each participant will be provide with a \$5 Amazon gift card to thank them for their time and willingness to participate in the project.

1. What are some of the experiences and/or circumstances that influence African Americans students to pursue a particular field of study in medicine?

2. At what points during the educational process or in one's life do African Americans make decisions on their personal career paths?
3. Discuss some of the barriers that African American students must overcome prior to entering a doctoral study in medicine, dentistry, pharmacy, or physical therapy at UMMC?
4. Discuss some of the challenges that African American students face during doctoral study at UMMC?
5. As African American students sort out which area of medicine or healthcare to pursue, what are some of the life goals that may influence the selection of a particular field of study vs another?
6. As African American students sort out which area of medicine or healthcare to pursue, what are some of the concerns specific to being an African American that may influence the selection of a particular field of study vs another?
7. As African American students begin to complete their academic course of study and move into a clinical career, what influences the decisions on areas of specialty and where to practice?
8. What other concerns might African American students have at UMMC that are important to be heard?

APPENDIX D

Interview Recruitment Letter

To: Graduate of the Physical Therapy Program at University of Mississippi Medical Center
School of Health Related Professions

From: Kimberly Willis, PT, DPT
Doctoral Candidate
Department of Higher Education
University of Mississippi

Dear Graduate of UMMC SHRP Department of PT,

My name is Kimberly Willis and I am a doctoral candidate in the Department of Higher Education at the University of Mississippi working on my dissertation project. I am also an Associate Professor at the University of Mississippi Medical Center School of Health Related Professions Department of Physical Therapy.

We want to enhance the enrollment of African American students in physical therapy at UMMC. To better understand the barriers to enrollment and students' perceptions of physical therapy at UMMC, we want to know about more what African American graduates think about the program and how they experienced it.

I am reaching out to you because you are an African American graduate of the physical therapy program. I would love to get your thoughts about your experiences as a graduate student at UMMC. Would you allow me to complete an individual interview with you that would last at least 45-60 minutes? This interview will be conducted in a mode that is convenient to you, including face-to-face or via telephone or Skype. As a small token of appreciation, you will be given a \$5 Amazon gift card as a thank you for your participation. The interview will be audio-recorded and transcribed verbatim. Please know that throughout the life of the research project, I will not use your name or any identifying information obtained during the recorded interview in any of my reporting notes.

Please respond to this email indicating your willingness to participate. If you agree to participate, I will schedule our interview at a time that is convenient to you. In addition, I will send you a consent form that you will need to sign. Furthermore, I will provide you a copy of the interview questions prior to the interview so that you may be prepared for the questions I will ask.

Thank you so much & I look forward to hearing from you soon!

Kimberly Willis

APPENDIX E

Interview Consent Form

Information about an Individual Interview

Title of Study/Interview: African American Students in Physical Therapy: Enhancing Diversity

Investigator

Kimberly Willis
Doctoral Candidate
Department of Higher Education
School of Education
The University of Mississippi
(601) 984.6335
Kwillis1@go.olemiss.edu

Advisor

Amy E. Wells-Dolan, Ph.D.
Associate Professor
Department of Higher Education
School of Education
The University of Mississippi
(662) 915-5710
awells@olemiss.edu

Description/Purpose of the Study

The researchers in this study are interested in enhancing African American student diversity in Physical Therapy at the University of Mississippi Medical Center (UMMC). We want to know more about the relationships and experiences of African American graduates of the physical therapy program at UMMC.

I am asking you to participate in an individual interview conducted Face-to-Face or via Skype/FaceTime that will last no longer than 45-60 minutes. The interview will be audio-recorded and transcribed by the researcher.

Risks and Benefits

During the interview process, you will be asked to reflect upon your experiences of being a graduate student in physical therapy at the UMMC. The discussion may help you remember experiences that may have been difficult for you; therefore, you may have feelings of discomfort if you recall negative experiences. Although these recollections may be difficult, your shared reflections may provide insights that will lead to a better understanding of how to improve the physical therapy program at UMMC for African American students in the future.

Cost and Payments

The individual interview will last 45-60 minutes. Other than your time, there are no other costs for helping with this study. You will be given a \$5 Amazon gift card as a small thank you for participating in this study.

Confidentiality

Throughout the life of the research project, I will not use your name or any identifying information obtained during the recorded interview in any of my reporting notes. You may be asked to provide some basic demographic information, which may include but is not limited to gender, age, and work experience. To prevent anyone from being able to identify you, the

research study will use a pseudonym for your name. The recording of your interview will be destroyed when the research project is completed.

Right to Withdraw

You are under no obligation to take part in this interview. If you would like to stop your participation at any point during the activity, you will not be penalized in any way. Simply inform Kimberly Willis with your decision in person, by email (kwillis1@go.olemiss.edu), or telephone (601.984.6335). Your standing with The University of Mississippi or The University of Mississippi Medical Center will in no way be affected by your choice to withdraw from the interview, and you will not lose any of the benefits to which you are entitled. Your decision to participate or to withdraw will remain confidential.

IRB Approval

This interview has been reviewed by The University of Mississippi’s Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Statement of Consent

I have read the above information. I have been given an unsigned copy of this form. I have had an opportunity to ask questions, and I have received answers. I consent to participate in the study. Furthermore, I also affirm that the experimenter explained the study to me and told me about the study’s risks as well as my right to refuse to participate and to withdraw.

Furthermore, I also affirm that the researcher explained the study to me and told me about the study’s risks as well as my right to refuse to participate and to withdraw.

Signature of Participant

Date

Printed name of Participant

Release of Rights to Written or Recorded Information

My signature below indicates that I release all rights, including copyright rights for the use of any recorded or written information that I provided during this study. With this release, I grant the University of Mississippi and the aforementioned researchers the permission to use, reproduce, copy, and distribute my words in whole or in part into derivative works without limitation. I indemnify and hold the University and the researchers harmless from any claims of infringement of copyright by any third party regarding my words. I agree that I will receive no further consideration and no royalty payments for the use of my words.

My signature below means that I agree to all of the above terms.

Signature

Date

APPENDIX F

Interview Protocol

Title of Study: African American Students in Physical Therapy: Enhancing Diversity

Date:

Time:

Place:

Interviewer: Kimberly Willis

Interviewee:

Standard Procedures:

You will be provided with an informed consent form that will need to be signed prior to participating in the interview process. The interview will last for at least 45-60 minutes and it will be completed in a quiet room or via Skype/FaceTime. During the interview, you will be asked to share your personal thoughts about and experiences of being a student in the physical therapy program UMMC. Your interview will be audio-recorded and transcribed by the interviewer after the interview has ended. At the end of the process, you will be provide with a \$5 Amazon gift card to thank you for your time and willingness to participate in the project.

1. Thinking about your acceptance to the physical therapy program at the University of Mississippi Medical Center, what feelings did you experience when notified of your acceptance? How did those feelings evolve during your three years in the program?
2. What resources, such as family, friends, finances, etc., did you have available to you as you progressed through the physical therapy program?
3. What are some of your most memorable experiences of the physical therapy program at the University of Mississippi Medical Center School of Health Related Professions?

4. What were the biggest challenges you have faced throughout the program?
5. What have you learned about yourself, your profession, or the program from the experiences and challenges you faced during school?
6. How would you describe the diversity of the PT program at UMMC SHRP?
7. What types of relationships did you have with the physical therapy faculty? What challenges did you face in building relationships with faculty?
8. Please describe the relationships you had with other African American students as well as the relationships you had with students from other ethnicities.
9. What experiences did you have that increased your ability to successfully progress through the curriculum?
10. What has the physical therapy program done to change or reinforce your personal and/or professional growth and development as a physical therapist?
11. What recommendations would you make to increase diversity of students in the physical therapy program at UMMC SHRP?
12. What advice would you give to African American students who are considering applying to the physical therapy program or are currently enrolled in the program?

CHAPTER II: CHOOSING A HEALTHCARE FIELD

By Sherry T. Colson

Introduction

Healthcare in the United States is challenged with disparities across all areas of patient care. As a minority group, African Americans lack representation in most fields of medicine. This problem is long standing, and, so far, despite efforts to increase African American representation in medicine, dentistry, pharmacy, and physical therapy, the lack of African Americans enrolled in these doctoral programs continues (Fenton, 2016; Girotti, Park & Tekian, 2015; Metz, 2017; Price, Brunson, Mitchell, Alexander & Jackson, 2006; Yeowell, 2013). In the first chapter, we demonstrated that the presence of African American healthcare providers improves the care given to African American patients and assists to decrease the disparities that exist within our healthcare system. The challenge becomes how to attract, educate, and transition these students into the workforce.

As a practicing physical therapist for 38 years, it is important to me to provide quality care to all patients and improve the quality of life to all that come to physical therapy for rehabilitation. As a faculty member and associate professor in the Department of Physical Therapy at the University of Mississippi Medical Center, it is important to me to recruit, enroll, and graduate the best therapists to treat patients. Potential students should include the racial and cultural make-up that represents the population of Mississippi. This problem of practice is about providing the best physical therapy possible for the people of Mississippi by increasing African American enrollment in the UMMC physical therapy program.

Inequality of healthcare goes against the CPED first principle of equity, ethics, and social justice (Carnegie Project on the Education Doctorate, 2018). Many argue that access to healthcare is a right for every citizen of this country. In addition, every citizen should have equal access and treatment with no one race or culture lacking. In order to achieve the fair and equal access to healthcare, Mississippi needs to train the most qualified students that mirror the population they serve.

The research questions I will address are as follows:

- How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC?
- What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?

In order to answer the questions, I chose to explore what motivates and influences a student to choose a particular healthcare field. Furthermore, the question, “What motivates and influences a student to select a particular career field?” examines the preparation and predisposition of students entering a healthcare field and is reflected in the component of *entering students* in the Twale, Weidman & Bethea (2016) framework that examines the socialization of graduate students. Doctoral students in healthcare can be included within this model. Focus groups provide an excellent avenue to explore this line of questioning in-depth. An inductive approach to research was utilized that allowed the insights and feelings of the participants to emerge and be compared and analyzed by the examiner. This approach allowed main themes to become apparent and thus, addressed succinctly (Thomas, 2003).

Data Overview

A detailed plan of the study that included the research plan, consent, questions, method of recruitment, protection of participant identity, and recruitment letter was formulated and sent to the Internal Review Board (IRB). IRB approval from the University of Mississippi was reviewed and the IRB determined that approval was not necessary.

The participants of the focus groups were recruited from students in physical therapy, medicine, dentistry, and pharmacy programs on the UMMC campus because these schools represent a doctoral-level education requiring three to four years of postgraduate education. The recruitment letter specified the focus groups would seek out African American students and included the purpose of the focus group. The letter was sent via email to all the students enrolled in the four schools identified. Participation was completely voluntary and had no relationship to evaluation of classroom or program performance. The recruitment proved to be more difficult than initially anticipated.

The original plan was to identify student participants by sending an email to the entire student body through the Associated Student Body (ASB) President and the President of the student interest group, Black Representation in Medicine (BRIM). However, permission from a faculty member was needed within each individual school before the solicitation could be sent. This process proved to be both time consuming and convoluted. The permission from each school was finally granted, and a recruitment letter was sent by the ASB President. Interested students who responded to the email, self-identified as African American, and were enrolled in physical therapy, medicine, dental, or pharmacy were selected for inclusion in the study. Additional recruitment evolved when students who agreed to participate asked their classmates to also participate. The initial plan was to have focus group members separated by schools for

scheduling purposes. A Doodle Poll was sent to all respondents to determine the best date and time for the focus group. Response time was slow and a maximum of three follow-up emails was sent to each participant to allow for inclusion in the study. Focus groups were limited to a maximum of eight participants. Three focus groups were formed that included one group of eight physical therapy students, one group of four medical students, and a combined group of pharmacy and dentistry students totaling six dental students and one pharmacy student. An exception was made for the physical therapy focus group when an additional student showed up for the session without prior notification. Student number nine was allowed to participate to promote full inclusion.

A pilot study was conducted with the first year Doctor of Occupational Therapy students prior to the planned focus groups. The purpose of this pilot study was to determine the clarity and effectiveness of the study questions and add rigor and trustworthiness to the study. Only first year occupational therapy students were recruited because this is the first year the program has transitioned to the doctoral level; previous degrees awarded were at the master's level. I found the use of the pilot group very helpful. Based on the feedback from the pilot study, I reworded one of the questions to enhance clarity. The responses from these students helped me to prepare for the other focus groups, and the interview process became more comfortable.

Trustworthiness is defined by Glesne (2016) as an assurance of quality and rigor within the research. The degree of trustworthiness can be measured by prolonged engagement, rich description, identification of researcher bias, peer review, and audit trail (Glesne, 2016). Three focus groups were conducted to satisfy engagement and persistent observations. Engaging multiple African American students within a variety of programs helped to validate the findings as accurate among African American students at UMMC. Although this exploration only

utilized focus groups, the variety and number of groups helped with triangulation by using multiple research participants and provided persistent observations among all disciplines identified for the study. In addition, I took notes throughout the process reflecting upon my reactions to the students' responses in an attempt to reduce any bias and maintain objectivity. Finally, all documents, notes, emails, were saved for review and reflection.

Reliability of the research means the results can be duplicated. By engaging multiple students from multiple medical disciplines, the common themes should be reliable. I believe the reliability of the findings is accurate for our institution. Because UMMC is the only academic medical center within the state, I believe the same reliability can extend to the state of Mississippi as well. However, the ability to translate these findings to other out of state institutions to assure external validity is uncertain. Although my participants share a common geographical region and an educational setting, students from other regions may not have that common background, childhood experiences, and academic environment. However, the findings may be used as background for other researchers.

Method

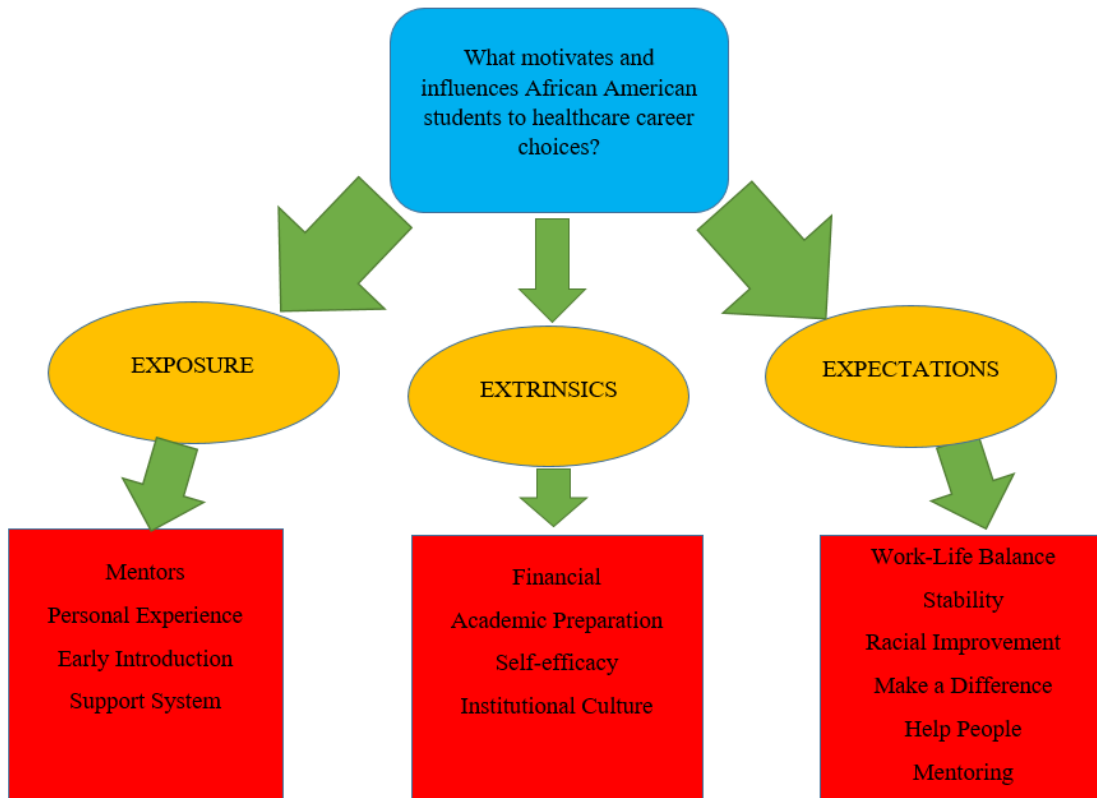
The site where the focus groups were to take place was important. In order to maximize participation, the location needed to be convenient as well as private. A conference room within the School of Health Related Professions was selected because of its size, privacy, parking accessibility, and convenient location on campus. As stated, the time was determined by number of responses to Doodle Poll. All focus group times were around a meal time so I provided a light meal to the participants.

Upon arrival, each student was greeted and invited to sit and partake of the food. Once all participants had arrived, I explained the purpose of the study and the overall question of the

focus group. The preapproved consent form was explained, and all participants signed the consent prior to the beginning of the focus group discussion. Next, each participant was given a short six-question survey for demographic information that identified gender, date of birth, race, school of study, year of study, and whether they grew up in an urban, suburban, or rural area. At this point, the recorder was engaged, and the pre-approved focus questions were asked. An additional observer was present to take notes and make observations of the group in order to capture moods, group responses, and nonverbal expressions.

Each focus group consisted of approximately one hour of discussion. Following the group session each participant was presented either in person or by email with a five-dollar Amazon gift card as a small token of appreciation for their time and insights. Each recorded focus group session was then transcribed by an independent company and edited by me for accuracy. Once the transcripts were reviewed, codes were identified within each question. These codes were then assessed for common features and were categorized into subthemes. These subthemes were then analyzed, and the broader themes emerged. Three themes were identified from this analysis that address the question “What motivates and influences African American students’ choice of healthcare field of study?” These themes were exposure, extrinsics, and expectations (Figure 2). Exposure reflects how and when students are introduced to healthcare careers. Extrinsics refer to external influences the students encounter that can provide both a positive and negative impact on motivation to enter a healthcare field. Expectations encompasses the student’s future dreams and wishes that can influence career decision making. In order to capture the intrinsic feelings and thoughts of the students, direct quotes were used to illustrate the themes and subthemes. Pseudonyms were used when quoting to protect the identity of the students within this manuscript.

Figure 2. The Story of the Three Es



Demographics

All the students that participated in this study were attending the UMMC, which only accepts Mississippi residents (Table 1). Therefore, all the participants claimed Mississippi as their home and grew up in the state. The average age was 25.1 years. Nineteen of the 20 participants identified themselves as African American and one student identified as bi-racial. Six participants were male and fourteen were female. Four students were in the school of medicine. Nine students were in the school of physical therapy. Six students were in the dental school and one student was in pharmacy school. Five students were in their first year of study. Eight students were in their second year of study. Six students were in their third year, and one

student was in his/her fourth year. Twelve students grew up in rural areas, five in an urban area, and three stated they grew up in a suburban area.

Table 1. Demographics of Focus Groups

Factor		
Age	Mean	25.1 year of age
Gender	N	20
	Male	30%
	Female	70%
Race	African American	N=19
	Bi-racial	N=1
Field of Study	Medicine	20%
	Dentistry	30%
	Pharmacy	5%
	Physical Therapy	45%
Year of Study	First Year	25%
	Second Year	40%
	Third Year	30%
	Fourth Year	5%
Population during formative years	Rural	60%
	Urban	25%
	Suburban	15%

Presentation of Findings

The Story of the Three Es

All twenty students were influenced by exposure to the profession at an early age. They all experienced extrinsic factors that motivated and influenced them to pursue a healthcare field. However, some of these exposures and extrinsic influences were both positive and negative. All students were motivated by life goals and desires. These goals were labeled expectations. Within each focus group meeting, it was evident that the students knew each other well. The

students joked and laughed and appeared comfortable sharing their opinions and insights. All participants shared their feelings, but some more than others. There was a certain passion in the room for not only their field of study but for their drive to accomplish the goals set before them.

Robert expressed his appetite to succeed:

I think in order to sacrifice this amount of time, you gotta [*sic*] really want to do it. I took a few years off to work, or whatever. I know for me, it was like, "I really wanna [*sic*] go back." After being debt free and working and actually making some real money, do I really wanna [*sic*] go back to being a broke college student? But, you know, I think it just comes back to, "Hey, if you want it, you go get it." I think everybody here has the same mentality. We want it, regardless of the amount of time, regardless of the amount of money I have to spend, that's what I'm going to do to satisfy my goal.

These twenty students were bright and optimistic about their future. They were all looking forward to graduation and making their way in the world. The enthusiasm for their profession was evident to me and their desire to make a change inspired me. There were common motivators among the different disciplines but also unique differences between the groups, especially in what they desired for the future. The most common motivation to enter their field of study was exposure to that field at an early age.

Exposure

Exposure is experiences each student encountered that introduced them to a healthcare field. Subthemes included within exposure include mentors, prior illness or treatment, early introduction, and support systems. Mentors are individuals who took time to share their career with the students. This included shadowing the individual while at work. Prior illness or treatment reflects personal experiences or experiences with family or friends with a healthcare

professional. Introduction explores when a student first encounters that particular healthcare field and began exploring that career. Finally, a support system is the opinions and influences of the people that are important to the students which can be both positive and negative.

Mentors. Each student had individuals who influenced their decision to enter healthcare. Several dental students shared that their personal dentist or orthodontist had a large impact on their decision to enter the dental field. The students formed a strong bond with their dentist that influenced their decision. Dianna shared this experience with her personal orthodontist that set her on the path for a career in dentistry. “I think with being a dentist, you almost get instant gratification. People feel good about themselves almost every time they leave you. So for me, I was like ‘Yeah I wanna [*sic*] do that.’”

Several students commented they saw very few African American physicians, doctors, pharmacists, or therapists while growing up. William had a positive experience with meeting his first African American physician and that relationship inspired him to pursue medicine:

I think my first thought of medicine was when I saw a physician when I moved to Hattiesburg, and he was an African American male and probably he was the first African American physician that I had ever seen or at least at that age that I would have remembered seeing. His ability to diagnose me with exactly what . . . I guess it's not really disease, but what I had, with so much precision and accuracy. That inspired me to pursue medicine and to be a pediatrician, like he was.

Prior illness or injury. Several students shared experiences with a family member who was ill or needed treatment. The students either saw how their family members improved or, in contrast, did not receive the care they needed. The 2010 report by the Agency for Healthcare Research and Quality (2010) indicated that African Americans received poorer care than

Caucasians. Kristen shared this sentiment and told us of a time when her grandmother was ill. “There's a situation where my grandmother died, and I just felt like she wasn't cared for the way that she should have been cared for, so that kind of inspired me to go into medicine.”

In addition, a 2004 study conducted by the Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. reported that patient satisfaction for their medical care was greater if they are treated by someone of their own race (Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing in the Diversity of the U.S., 2004). Kristen agreed. “I think that African Americans feel a lot more comfortable going to the doctor when there's one like us. I kind of wanted to make a difference here.”

Other students, especially those in physical therapy, shared personal experience in receiving physical therapy themselves or watching family members receive physical therapy that motivated them to pursue a physical therapy career. Sarah had this experience in observing the care her family member received. “One of my cousins, she actually tore her ACL playing basketball, and I went with her to physical therapy sometimes. And it's like her bond she had with her therapist, and it kind of drew me toward [physical therapy].”

In almost all these stories, a personal relationship formed that influenced their decision to enter a healthcare field. Andrew summed up the value of exposure to medicine as a key motivator for future study:

From pretty much everyone I have known or even talked to or heard their story, the key thing has always been exposure to [healthcare] in some shape, form, or fashion whether it was doing a summer program or, would like some people here say, they saw someone in their family who was sick and say, “You know what? That wasn't an inappropriate

way to care for someone. I could probably treat this person a little bit better than the next person.” It kind of gives you more of the ambition to go into that route. I think that's the biggest thing for me. I've never heard any more stories. Always that they were exposed to it.

Early introduction. The decision to enter a medical career came early for most of these students. Four of the students decided their career path in middle school. Seven decided while in high school and three reported deciding in college. Two students are considered non-traditional and changed careers after spending some time in the workforce in other occupations. This decision came about largely by experiences within their particular field through individual relationships or family encouragement. However, others were influenced by career fairs and school clubs. Ben shared an experience about meeting an African American dentist at a health fair:

Me, I was a freshman in high school. I had went [sic] to this health fair at a park and they had different careers there. By then, I had kind of started deciding, I think I want to be a dentist. So I went over to the dental table, and there was actually an African-American dentist. He's retired now, but he practiced in [name of town]. I talked to him, got his contact information, and he invited me to come to his office to shadow. The summer after my freshman year, I started going over to the dental office and shadowing and that's how I really got interested in dentistry. It was around early high school for me that I decided.

Support system. A support system proved to be an extremely important part of the decision-making process. Rao and Flores (2007) found that lack of support from family and teachers did indeed discourage African Americans from entering the medical profession. A

support system was both inspiring for some, and the lack of support was discouraging for others. However, exposure to these individuals had an influence on the student's decision to enter the healthcare field. Several students had parents or grandparents who encouraged them to pursue their dreams. Sarah told us her mother was a strong influence and encouraged her to pursue medicine:

My mom kind of pushed me into the medical type thing. She's not even a medical or healthcare type of person. She works in a bank, and my dad, he works in like a factory. So, they came from stuff like that. And they wanna [*sic*] see me do something better, so they tried to push me into medical field type things.

In contrast several students experienced negative comments and situations that had a negative impact on their decision-making regarding higher education. Pressure to get a job, make money, and not be a burden on the family was prevalent. Shayla encountered these negative influences and comments about pursuing higher education while she was growing up in Mississippi:

When I had like a . . . Well, all our friends, I mean like, by 18 their parents want them out of the house. So, at that point they're just like, "I gotta [*sic*] find a job, 'cause [*sic*] I gotta find me somewhere to stay, and I gotta pay for that." So, they're not worried about college or going to school. They're just like, "I gotta get out the house at eighteen. Like, she's putting me out." So, I feel that a support system is a huge thing.

Shayla, like several of the focus group students, felt fortunate to have the support of her family. "My mom was like, 'You're going to stay with me until you finish school. Like, you're not leaving; I'm going to help you pay for anything you need.' Everybody doesn't have that, so I feel that plays a big factor."

The lack of support and encouragement came from not only family and friends but from teachers and faculty as well. The students expressed feelings of inadequacy as a result of some comments and experiences from college faculty and felt discouraged from pursuing a career in a medical field. William reported an experience with a teacher in high school that left him disheartened about his chances of going to medical school:

When I say lack of support, for me, I think my journey through medicine was maybe 60 to 70% self-motivation and the last 30% was having people to tell me that that's something I could achieve. There was a certain scenario in high school when I was interested in a certain college and asked them about their biological science program because I know I want to do that because I want to go to medical school, and they asked me what my ACT score was, and I told them. They said, well, we wouldn't advise you to pursue medicine. You would probably still use it towards something else because people with those kind of scores usually don't get into medical school.

Sarah shared a similar experience with her college professors discussing the limited opportunities for advancement into the field:

Yeah, I know for me, one of my teachers used to tell us all the time, she said, "Half of y'all in here wanna [*sic*] go to PT school or OT school; only a fourth of y'all [*sic*]going to get in." And the students would be like, "Why would you tell us that, knowing that this is what we want to do, this is what our field is?" And it's like they try to discourage you before you can get there. It's one thing that I really didn't like.

The focus group students also felt a lack of support from the community. There was pressure to steer away from any higher education to avoid debt and start making money. Julie

felt like her friends and family did not support her dreams to become a physical therapist. Her support system failed to see any value in pursuing a career in physical therapy:

I mean, there's people in the community that is [*sic*] completely discouraging too. I took two years off and worked in between, and I had people all the time telling me, like, "Why are you wasting your time going to PT school? Like, why are you getting in debt when you can just go find, like, you can go work somewhere and get a paycheck now. Like, well, you're broke now because you wanna [*sic*] go to school, and you're going to be in a bunch of debt, and you're still going to be paying off people, and it's really not a benefit." I have people telling me that all the time. So, the people around you can be discouraging; we have professors that are discouraging. There's a lot of barriers, besides financial barriers. Just the mentality of people around you, or the people that you've grown up with.

This negative exposure can significantly impact the decision to enter a medical career as well as matriculating throughout their academic career. Positive influences are critical to the success of any healthcare profession student but especially African Americans who may come from a socioeconomically disadvantaged area or are first generation students. Faith, a non-traditional student, felt fortunate to have the support of her family. She described her journey from working world to student as difficult but defining:

You know, I'm really not a traditional student. I had been involved in the work force already, had bills and what not. I wanted to go back to school but couldn't because I had financial obligations. So, I just decided I have to quit my job, and step out in faith, and jumped in. So, and like I said, it goes back to watching my mom. So, if I really wanted to do it, then I had to sacrifice a lot to be here. And I do have the family support, and

they are awesome 'cause [*sic*] I'm [age], and my people have stepped up, stepped in.

They're sacrificing, so I can do this.

Hannah also felt she had good family support and this motivated her to attend graduate school and to stay in school. Her father was especially understanding and encouraged her to stay at home to save money. He told her ““Oh, I don't want you to have to worry about paying back loans. So, if I can pay for it, I'm going to pay for it. Just take out the minimum.’ So, I feel like that's been really helpful.”

Exposure to a healthcare profession and interaction with a healthcare professional were very strong influences on the focus group students. Many shared personal experiences with the healthcare system that spurred a desire to make a change in that system. Most were introduced to their chosen career before high school graduation and had selected their career path prior to college. The majority of the students had good family support but were exposed to negative comments from friends and community that could have influenced their decision in a negative capacity.

Both positive influences, support, and exposure motivated the students to enter their chosen field of medicine. Family support was especially crucial to their success. The decision on what area of healthcare to pursue came early, usually before high school graduation. However, there were additional influences that affected the decision to enter a career in healthcare and these extrinsic forces were both positive and negative.

Extrinsics

Influences that are produced outside of the students control are considered extrinsic and have a significant impact on a student's motivation to pursue a healthcare career. These extrinsic facets include financial constraints, academic preparation, institutional culture, and self-efficacy.

Members of the focus groups found both positive and negative influences that proved to motivate the student to enter and continue a career in medicine. The students also shared personal experiences and experiences of friends that prevented them from pursuing higher education or discouraged them to the point of not matriculating.

Financial constraints. Lack of financial resources are a concern for many students deciding to pursue higher education. The amount of debt incurred further burdens the students as they ponder a career in healthcare. Sam was especially concerned since he came from a large family and was the first child to go to college:

I didn't have any financial support at all, and I still don't . . . I have seven, well, including me, seven of us, little brothers and sisters. I'm the oldest. So, I'm pretty much just trying to be responsible and be a role model for them.

Lack of monetary resources follow a student throughout undergraduate school and into professional school. Not only do students lack the money to attend but also lack the knowledge of how to obtain financial assistance such as loans or scholarships. As first generation students, students' parents lacked the background in navigating this system and the students found it very difficult to traverse. Julie felt attending higher education was especially difficult for African Americans:

So, [college] is not realistic for [African Americans]. They don't think that they can get there, or that, even if they have the brains, and they, you know, they're smart enough to get there, they won't be able to afford it. It's not realistic for them. And, to focus on that, I guess. To grow up, and I guess, have a dream of going to college when you don't feel like that's really going to happen. It just kind of slows them down, like, "I need to get a job."

The ability to navigate the financial assistance programs can also prove to be daunting. Robert voiced frustration with the system, the admissions process, and borrowing money. “I mean, how are you going to pay for it? Schools don't teach you about loans. They don't teach you how to get there, you know, and once you get there, that you have to pay it back.”

Tasha felt like many of her friends and classmates in college had the academic ability to go into a healthcare profession but lacked the financial resources and ability to understand the system. “I know plenty of my classmates that were smart enough to be sitting right here with me, but they can't pay for college.”

According to the majority of the focus group students, lack of financial assistance is a barrier to entering a professional career for African Americans, a finding confirmed by Flores and Rao (2007). Flores and Rao (2007) identified the cost of medical school training as a tremendous barrier to access. Not only are African American students concerned about how they will pay for graduate school, they are challenged by the cost of the application process. Much of the preparation, including admission tests and fees, limit pursuit of a medical career. Prior to applying to medical school, medical students must take an entrance exam, the Medical College Admission Test (MCAT). While attending medical school, students must take the United States Medical Licensing Examination, commonly known as the STEP, in order to matriculate. Both the MCAT and the STEP tests cost money. Andrew expressed the significance of these obstacles in these words:

I feel like there's a lot of financial barriers first off. If you think about just the actual MCAT, you have to take preparation courses, and if you want to do well, you have to do [a] preparation course. You have to buy preparation material and that's very expensive. I think for a lot of people that's the big barrier is like, and then to take the STEP it's \$300

to \$350. You can get a fee assistance, but even with the fee assistance thing, it's still going to be like \$150 on top of all the other things you'd have to try and purchase. I think that's one of the biggest things for a lot of people was like, well one of them is the actual cost barrier. Then I would say the other one I think is . . . I'm going to say it's like an academic barrier, but more so I'm trying to think how to explain it. I guess a lot of people who I know who want to go to medical school, they didn't even take the MCAT because their confidence wasn't there.

Academic preparation. Many of the participants voiced similar concerns regarding lack of academic preparation for pursuing a doctoral degree. Several reported not feeling prepared to enter a graduate program and cited multiple reasons. Some participants felt their high school did not receive the same resources as other schools and did not offer the science courses needed to prepare them for pre-medical course work. Others expressed concern that the culture or learning environment for their academic preparation was not conducive to higher education. Tasha felt acutely aware of the disparity of resources within her community and observed this as a barrier for African Americans to pursuing a career in healthcare:

I know for me, like, where I'm from, the community is like naturally segregated. So, we stay on one side of the tracks, the Whites stay on the other side of the river. So, like, my classmates we didn't have like, you know, the environment. Even the books or the supplements or equipment we needed to succeed, to get out of [name of town] per se. But, a lot of my other counterparts that I played soccer with, they had, you know, anything that they needed. So, a lot of my friends either wound up pregnant, or dropped out of school, or they just went to trade school, or got a job at a local bakery, or

Walmart, where they could get somewhat of, you know, a decent paycheck, which is not real decent. But its decent from the area I'm coming from . . . I didn't feel prepared.

Mary agreed with Tasha's depiction expressing concerns about the systemic issues around African American student's overall disadvantage and lack of preparation:

I just want to talk a little bit more about academic barriers because I think [a focus group participant] scratched the surface. You guys want us to be honest. I just want talk about that a little bit more 'cause [*sic*] I know we struggle . . . for a lot of reasons . . . we don't really have the issue with African Americans not applying to medical school. We have an issue with them getting in or them even getting offered interviews, and a lot of the reasons is [*sic*] because we don't do well on our standardized exams, and that's across anywhere. It starts with the ACT. I think he just brought that ACT up, and I think it's a lot to do with the language that's used in the questions. Depending on what household you grew up in, you may not understand the words that are being used in the questions that they ask you, and if you don't understand those words, then you don't understand what the question's asking you. So then you get the answer wrong. That happens over and over and then your score is just bad, and it's just hard for us to get our scores up, so I think that's a big thing. Then depending on if your parents didn't make a lot of money growing up, you probably grew up in an area where the school systems aren't that great, and they don't offer a lot. Even where I grew up, my educational foundation was not great, and it wasn't because, necessarily, because my parents didn't make a lot of money, we just didn't live in an area that offered or that had a lot of opportunities.

Dianna added to this thought. "Definitely back to academics because we lose a lot of students after STEP. And a lot of times when we pass STEP, we don't pass it high enough to

match anywhere so then you lose them right after fourth year.” Tasha went on to explain that even after graduating from a medical school, many African Americans are unable to continue on to a residency program because their scores were not high enough.

Metz (2013) identified and discussed the underperformance of minorities on standardized tests and discussed the possible racial bias that admission exams and matriculation assessments may possess. This racial bias may explain the lower scores mentioned by Metz and the focus group students. In turn, the lower scores can limit African American access to healthcare educational programs. This bias leading to inequity may be a limitation for African Americans within the admission process in healthcare educational programs.

Self-efficacy. Self-efficacy plays an important role in the process of obtaining an education. Self-efficacy in education includes the belief one can succeed in school (Ackerman, 2018). The belief one can reach their personal goals set is crucial in graduate education, especially in a healthcare career. The lack of self-efficacy or confidence can undermine a medical student’s success. Several of the participants voiced a lack of confidence and feelings of insecurity about their abilities to be successful in school. In addition, the participants noted that many African American students at UMMC feel they must work harder in school to achieve the same success as the Caucasian students. Lakeysha described the pressure she has felt as an African-American female when she said “I guess my first struggle was feeling like you have to do extra or you have to be perfect . . . I just realized, okay, you’re just gonna [*sic*] have to work extra hard to prove yourself and prove that you belong here.” Kristen echoed this sentiment and shared her experiences with her peers and teachers:

I feel like it all gets summed up in a statement my mom literally just said to me yesterday. I felt like all of us have probably heard it growing up. Like you have to work

twice as hard to be considered half as good, and it's just this constant level of scrutiny that we're under and it's like, oh you failed one organic test, and they immediately write you off, and it's like, well I wonder if it was a Caucasian student that failed their first test, would the response have been the same. Like is it that same level of scrutiny? It's almost like you have to be just these exceptional people in order to be granted admission into these schools. It seems sometimes it's a lot harder for us.

The perception that African Americans must work “twice as hard” as their Caucasian counterparts was a common perception throughout all focus groups. All focus group students voiced this same sentiment either verbally or by nodding of the head. Not only did their teachers and professors make them feel like they have to work harder for grades, but their classmates did too. Consistently with student participants in focus groups from each of four medical fields including medicine, dentistry, pharmacy, and physical therapy, the students expressed concerns that their classmates, who were not African American, made them feel inferior. Tasha voiced her experience with her peers doubting her ability. “A lot of my classmates, they don't think I know anything. I don't know why. But, like, they would ask me a question, and then I'd tell them my answer, and then they would go ask someone else the same question.” Tasha stated she felt like her classmates did not trust her and this lack of trust in her abilities and intelligence made her want to only associate with other African American students:

“Why did you ask me for my opinion, you don't trust my opinion?” That causes that divide, to where you only wanna [*sic*] work with people that look like you, that won't rebuttal [*sic*] everything you said because it happens on numerous occasions in one day; in one sitting. So, that gets to a point where I don't even want to participate, 'cause [*sic*] what I just said wasn't clearly educational enough.

Institutional culture. Kristen elaborated on this feeling of inflicted inferiority from her Caucasian peers and asserted she felt it may be cultural in nature. Kristen recalled a comment from a peer regarding her new hairstyle that was different from the Caucasian classmates. “I think for me again like it is just the culture factor again. It's kind of constantly feeling like knowing you are the other in the room and constantly hearing comments that emphasize your otherness.” Kristen went on to elaborate on her classmates making her feel different:

I feel like sometimes people make snide comments or they try to make jokes, which I can't tell if this is suggesting good fun or where's this coming from? I remember first year one of my classmates, we had a lecture on . . . I can't even remember. It was something dealing with Africa and a disease and he was like, oh, they're taking us back to the motherland now, Kristen? I really didn't know how to respond because I don't want to get angry and be seen as the angry person in the room, but at the same time it's like, how do I let you know how inappropriate this just was. I think that's one thing is just how people talk to you, like this kind of little daily microaggressions that we face every day. That just reminds us every single day I am a Black person in medical school. I think that's a huge challenge that we face every single day, how to navigate this.

These extrinsic influences can affect African American students' drive and motivation to stay in school and eventually graduate. As stated earlier, matriculation is more difficult for African American students and the presence of such microaggressions can impact a student's performance. Kristen explained how she felt about the challenge of persisting and the imbalance in privilege experienced among peers:

I think that's why you see like African Americans not succeed as often. It's like we're not just dealing with these academic challenges where I'm just trying to succeed in class.

There are social challenges every single day that we're trying to navigate and deal with in a healthy way.... I think it's just knowing that there's more than just our academics that affects us every day is probably a reason why we're not succeeding or not being retained at the same level as our counterparts because, sure they have challenges to face, but I don't know if they're to that level.

African American students participating in the focus group interviews explained that they were made to feel different from their White classmates. Although most of the students felt that the other students were not trying to be mean or disrespectful, these students perceived their peers' actions and interactions as microaggressions. For these African American students, their social experiences compounded with the academic difficulties, made each day tougher.

Having such a small number of one race among a larger number of another race may contribute to the feelings voiced by African American students of being different. Gurin et al. (2011) reported that a solo student in the classroom or a very small percentage of a minority within a cohort can be detrimental to the minority. Gurin et al. (2011) postulated that this small minority number can lead to further stereotyping and create undue and unwanted attention to their race. Julie reflected on an experience she had that made her feel different and she just wanted to be like everyone else in this environment. ". . . Or people overcompensating. So, they try too hard to just make me comfortable. And I'm like, 'I'm just a student like everybody else. Like, I just want to be treated like everybody else.'" Julie went on to express feeling different because she was the only student who attended a historically black college or university (HBCU). She felt like her peers did not think she was as intelligent as her Caucasian counterparts.

But I feel like they ignored a lot of the things that I would say. Like, "You don't really matter." And I feel like, when I did do well, it was like a surprise. Like, "I didn't think she was that smart. I didn't think she would do that well." So, I don't know; I guess that's it. It got better along the way; took a while, probably like, my whole first year, but that first year was kind of rough.

When Julie shared this experience in the focus group, each student nodded their heads and murmured agreements as though they too, had experienced similar encounters. Andrew summed up the perceived microaggressions and stereotyping as "We have to singularly learn how to listen to what we hear and yet not react to them."

Students' perception of the presence of quotas during the admission process is another extrinsic factor that discourages African American students from applying or reapplying if they were not accepted into programs the first time. Though quotas are not utilized in any capacity during the admissions process, the concept of a "quota" is present among the students. Tasha expressed the shared sentiment, "They are not going to accept that many black people." Tasha shared with the group her disappointment of not being accepted into physical therapy school the first time and her initial thought was the school had filled their quota of African Americans. "I was like, somebody probably did get accepted that didn't look like me, that didn't have the qualifications that I have but got accepted because they reached their [African American] quota."

Another dimension related to institutional culture for African American students, was frustration over the lack of African American faculty and administration. The focus group students from each profession expressed a desire to increase the presence of African American students within their respective fields. However, the student's voiced some frustration when their efforts to help increase African Americans within their class was met with some resistance

by UMMC administration. Kristen is active in BRIM and her group developed ideas to facilitate increased enrollment of African Americans within UMMC medical school. Kristen expressed frustration in what she perceived as lack of support caused by the inability of a predominantly Caucasian administration to understand and share their same passion. “I think a lot of that [lack of support] goes to not having a lot of African American administration and faculty here across the board... not having the right people sitting at the table making these decisions.” Kristen did recognize the support and positive impact of both African American and Caucasian mentors have had on her career path. However, Kristen wants to see a more diverse faculty and administration across campus and thinks this will help to improve African American presence in healthcare.

Admission committees that do not reflect diversity and lack African American presence is perceived as a roadblock to admissions. Turner, Gonzales, and Wood (2011) found that a diverse faculty can assist in recruiting minority students and that the presence of African American faculty can help retain African American students. Andrew sees the problem of a predominantly Caucasian faculty extend to admissions as well and this may be another limiting factor in admission of African American into medical school. Andrew applied the administration and faculty’s resistance to their recommendations to admission of African Americans as well:

It’s evident they have a problem because you have someone who sits in the position who literally determines who gets into the school with that mindset. Now I’m like, okay, now I see why there’s so few of us in the school because of this, if this is the attitude you have, you had the same attitude when it comes to voting students accepted. It’s hard.

Capers et al. (2018) recommends that minorities be included on the admissions committees if you want to increase diversity. For example, Ohio State Medical College recently changed their

admission committee to reflect the diversity the College was seeking and added more African Americans to the admissions committee (Capers et al., 2018).

Ben, who represents a different school on campus, voiced a similar sentiment regarding the need for a more diverse faculty. “We don't have many African American faculty members. We have one full-time African American faculty member.... We may have three or four part-time faculty, but they're only there a couple days of the week.” The student viewed African American faculty and administration as part of their support system. “When they [African American faculty] are there, you're happy, especially when you have the opportunity to work with them in clinic. Seeing yourself and saying ‘This will be me in a couple years.’”

Extrinsic influences can profoundly affect how African American students select a career path. The cost of the education, the lack of proper academic preparation, and self-efficacy can affect their choices in a healthcare career. In addition, the institutional culture in which a student lives can either facilitate or hinder the attrition and matriculation of a student. The presence of African American faculty and administration is viewed by the focus group students as very important in the success of African American students in healthcare on the UMMC campus.

Expectations

Expectations are the life plans and long term goals that influence an African American to choose a career in healthcare. Expectations include the dreams and wishes a student has for a future life. These expectations may not be unique to medicine, but were aspects of the career that swayed a student towards that profession. The subthemes that emerged included seeking a work-life balance, obtaining stability, the desire to improve the race, becoming a mentor, and a genuine desire to help people and make a difference in the world and community. There were identified similarities and differences between careers that are noted in these subthemes.

Work-life balance. The desire for a balance between work responsibilities and time with family and friends was common in physical therapy, dentistry, and pharmacy but was not mentioned in medicine. This finding is not surprising due to the nature of the work schedule for most doctors of medicine. Patti, who was a pharmacy student, told us “I didn't want to be on call. I kind of want to set my own hours, and that to me, if it's an emergency case 'Okay, I'll take it.' I just didn't want to be on call.” Ben described growing up with a mother who was a nurse who was frequently on call and would bring work home with her. “The work-life balance is one of the more important things of choosing a career because you want to be able to get off and be off. My dad would be ‘I guess you don't want to do it like your Mom, she brought her work home with her.’”

Lachelle described her experiences growing up with a parent in healthcare, which led to a need for control over her work hours. “I had a mom, she was a nurse manager, and we would usually have to sleep on the floor at the hospital because she would have to work, and I just realized that I did not want that for my kids.” Julie also explained her desire for a career that accommodated her desire to raise a family. Julie revealed:

Eventually I'm going to want a family, and things like that. I want to be able to go home and take care of my family. I don't want to be at work all day, every day. So, the benefit of the hours, I feel like that would have been good, and you know, not being stressed all your life, over work. PT, it doesn't seem like it would be a stressful job; too stressful anyway, once you get past school. So, that was kind of an influence as far as long term.

Stability. The desire for stability was another motivating influence for African Americans to enter the healthcare field. The students expressed the desire for financial and job

security in the future and felt medicine and healthcare was a good career path. According to the Bureau of Labor Statistics (2018), healthcare occupations can expect a continued growth of 18% and salary ranges from \$83,000 to \$208,000 annually (Bureau of Labor Statistics, 2018). These statistics confirmed that a career in healthcare can provide financial security. Mary shared her goals for security and stability. “I want my family to be as secure as they can possibly be. Financially, emotionally, mentally, everything. I want to repay them for everything I know they sacrifice for me . . .” Mary explained that her father had to drop out of college to go to work in order to provide for his family. Mary recognized the sacrifices her family has made for her and her siblings and expressed her deep appreciation for their continued support and sacrifice. “My dad's 60 and he's still pulling night shift paying for us to go to med school and have everything that we need, and I don't want him to keep working like that.” Mary shared one of her long term goals which related to giving back to others as well as her family. “I don't want him to keep working like that . . . Of course, I want to help people but it's like I'm just waiting for the day when I'm like, you can stop working, you can relax now.”

Many of the students expressed financial struggles growing up, and they have a drive not to have this same experience. Julie shared her experiences growing up financially disadvantaged. “I don't want my kids, when I have kids, to see me struggle like I see my mom struggle growing up.” Julie was very passionate in her desire to achieve stability in her life. “Stability is everything to me. I know that I’m going to be able to find a job. I just want to be able to provide a safe home for my family in the future.”

African American students in the focus groups equated owning your own business and being your own boss with stability. The desire to control the future was strong. When asked about her motivation to enter dentistry, Diana expressed her desire to be financially secure:

Financial freedom eventually. Like I said, I come from a family of educators. Teachers are way, way, way underpaid, and I just couldn't see myself waiting to the end of the month and then once the end of the month comes, next month I'm trying to figure out what I'm going to do. I did not want to go through that and so that was a part of it along with wanting to build a family eventually.

Haley was in the same focus group with Diana and exclaimed “Double down on financial freedom!”

Improve racial disparity. The Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004) reported that minorities in the U.S. such as African Americans are more likely to return to underserved communities to practice and give back to their communities. The report also indicated that minorities are more likely to serve and treat their own race following graduation (Institute of Medicine Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004)). Several of the African American focus group students articulated this desire. For example, Mary had an experience growing up that demonstrated the lack of practitioners in rural Mississippi and this disparity impacted her desire to go into rural medicine:

I originally wanted to be a lawyer. Then when I was in the hospital when my granddaddy got real, real sick with renal failure and dementia, so I spent most of my high school career like driving him all across Mississippi to get to these specialists that were like an hour or two hours, three hours away. Originally I always wanted to do rural medicine, like primary care because I hated him having to drive that far just to get basic health care

that he needed. That's what drove me to medicine. Just how much people cared for him and cared for us in our most sensitive and intimate moments.

Kristen was motivated to enter medicine in order to provide healthcare to other African Americans who may not receive the kind of care they need. Kristen shared that her family rarely went to a doctor because they could not afford it and they did not trust doctors:

We just didn't have anyone who looked like us, so we didn't, I don't know, we just didn't go. But that needs to change. There's a lot of diseases where African Americans are number one for them, and a lot of it has to do with the fact that we just don't go to the doctor. We don't know the importance of it. Again, a lot of us aren't as educated, so we don't understand it. We don't understand the language; we don't understand how important it is to take your medications every day and go to your follow-up appointments.

Mary added that she wants to change the way African Americans are treated when they do seek healthcare. She feels African Americans are undertreated. "It's been shown that African Americans pain is undertreated. They get written off a lot more, whenever they come to the doctor. They were belittled and so what's going on with them is not managed correctly." She went on to share an experience with a friend who she feels was provided less treatment because she was Black. Kristen reported her friend was eventually diagnosed with a herniated disc but went untreated for a long period of time. "They [Emergency Room] wrote off [friend's] pain as like me making a big deal out of nothing. That needs to change, that's just unacceptable. That's poor healthcare."

Becoming mentors. Another life goal or expectation the African American students voiced was the desire to be a role model for the younger generation. According to Rao and

Flores (2007), role models and mentors play a crucial role in attracting African Americans to a medical field. With so few African American physicians, dentists, pharmacists or physical therapists in current practice, potential students are deterred from exploring these healthcare careers. This desire to mentor was strong in several of the students and motivated them to attend medical school and graduate. Andrew voiced his desire to mentor other African Americans who want to go into medicine. He explained his motivation accordingly, “I feel that me getting my MD and getting into the medical field is going to put me where I can bring other African Americans in. Let me mentor you and get you to where I am now.”

William also shared his desire to have an impact on African American children. “I can be present so young African American children can see, oh, he's a doctor, and he looks like me. This is something that I can do in the future.” William also stated he wanted to work in underserved areas and “go into a specialty where I can help to help diversify that field.”

One of the few scholarship opportunities for African Americans in Mississippi is the Rural Scholar Program. LaChelle received one of these scholarships. Although she states she was motivated by the scholarship money, she too expressed the desire to give back to her community. “I came from a rural area. Just knowing my family that lacked dental care and medical care just because it was so far away, . . . I just want to really give back basically to that area from where I came.”

While several students did state that the desire to return to an underserved area influenced their decision to enter a healthcare field, others reported the opposite. These students viewed a career in healthcare as a way to move out of Mississippi. The desire to move away appeared to be motivated by social opportunities. Sam explained. “There’s nothing here for me. I mean, like, when I go home I don’t really do much. I just sit in my house, you know. As far as

activities, there's nothing to do here; there is no variety." Julie had similar thoughts and revealed her desire to explore opportunities outside of Mississippi. "I've traveled a little bit, just for fun, and I'm just like, 'Oh my God, I feel like I'm missing out on life staying in Mississippi.' So, I think about leaving all the time."

Hannah had mixed feelings about staying in Mississippi. She appeared to feel obligated to return to her community and influence others by providing healthcare. "You wanna [*sic*] be that person, like, 'Alright, I'll stay to help the community out, and have an influence.'" On the other hand, Hannah had a desire to travel and see the world while using her skills. Hannah stated "Do I really want to live my life here, when there's so much more I can see? I can go to other countries and do PT; do I really just want to settle here, when I can be so much more?"

Desire to help others. Most individuals enter the healthcare profession because of a desire to help people. Ratanawongsa, Howell & Wright (2006) identified the desire to help others as the highest motivating factor for students entering a career in medicine. After all, medicine is a helping profession. African American students in healthcare education are no different. The opportunity to help others and impact a person's quality of life was a strong motivator to begin a career in medicine. "I knew I wanted to help people" was stated multiple times by participants in all focus groups. Faith noted her experience as a girl scout introduced her to helping others and volunteering in the community. Her decision to enter medicine reflected this desire to serve others. "For me, it was based on me helping people. I just chose the medical field cause [*sic*] I felt like that was the way to go, in helping people." Robert also expressed the desire to help others in a very personal way, and this motivated him to change career paths and enter physical therapy as a second career. Robert explained his decision to change careers:

My father had cancer . . . I grew up loving sports and wanted to be real active. Initially, I went the [another medical field] route, and, honestly, I just felt like I was just passing out pills sometimes. It is what it had become, . . . you're not really getting real hands on with the patient as much as you could. So, I felt like physical therapy was really a way to kind of help out with the person's well-being.

Make a difference. All the students interviewed were concerned about the lack of diversity within their chosen career path. They were motivated to increase the diversity and number of African Americans within healthcare. Several students have already served as role models and mentors to younger students and encouraged them to consider a career in a medical field. The focus group students were at times passionate about their desire to help bring other African American students on board. Andrew felt strongly about being a mentor and wanted to make a difference in the lives of others:

In order to help younger African Americans who dreams [*sic*] to become a doctor, I have to make it first. Just because life experiences have shown me already, I'm more likely to be helped by somebody who can relate to me and can understand where I'm coming from. They have a greater sense of purpose when they are helping me out. I feel that me getting through with getting my MD and getting into the medical field is going to put me where I can bring other African Americans in and say, you know what, let me tell you what I did and let me help you out. Let me mentor you and get you to where I am now.

When asked, "Why did you chose to do what you do?" Hannah responded:

I'll say lack of representation when you go to the doctor or go to PT or whatever. I just feel like it's a lack of representation. So, you wanna [*sic*] see people that look like you

when you go to any type of medical facility, or things like that. So, knowing that there is a lack of representation, it makes you want to be a part of changing that.

Andrew is already giving back to his community by tutoring in a high school. “. . . where somebody like me who's really passionate about helping younger kids, like go to high school. I tutored kids in high schools and I tried to start a pre-med program in high schools in [name of city] where I went to school.” Others want to have an impact on their family and friends. Daphne said she wanted to start a generational trend and have an influence on other African Americans like her nieces. Patti wanted to obtain her degree for her eight-year-old son. Diana wanted to influence her niece. She asserted, “Just opening up that door to let them know that you can do this. I’m not special. You can do this. If I can do it, you can too.”

The students within the focus groups had definite expectations and plans for their future careers. Medical students often expected to be mentors and role models for the next generation of African American physicians. Students in dentistry and physical therapy voiced a desire for a work-life balance and stability. While all voiced a desire to be financially comfortable, no one reported making lots of money as a motivator for a career in healthcare. The students in physical therapy and dentistry felt their career could lead them to exciting places outside of Mississippi. All four doctoral level program students reported wanting to help others, make a difference, and improve racial disparity.

Summary

The problem of practice for this study involved the lack of African American students in physical therapy. This disparity not only exists in physical therapy but also in medicine, dentistry, and pharmacy. As evidenced in the literature review, many medical centers and academic institutions have proposed methods to help correct the disparity, but, unfortunately, the

lack of minority representation within medicine continues. The literature does lack studies that focus on recommendations to improve minority representation specific to physical therapy. The goal of this study is to identify reasons for the lack of African Americans in healthcare and postulate strategies to improve this inequality for the Department of Physical Therapy at UMMC.

My area of investigation was directed at answering the question “What motivates and influences a student to select a particular healthcare career field?” Through focus groups that included African American students from physical therapy, medicine, dentistry, and pharmacy on the campus of UMMC, I was able to gain insights regarding what these influences and motivators were for these students. Three themes emerged from our discussions that included exposure to the profession, extrinsic factors that had a positive or negative influence, and personal life goals or expectations of each student. Together these areas provided information that can be used to formulate a plan to help increase African American enrollment and matriculation in the Department of Physical Therapy at UMMC. The areas that will be addressed in Manuscript Three involve recruitment efforts, a culturally competent learning environment, mentoring programs, and marketing efforts on behalf of the physical therapy profession.

BIBLIOGRAPHY

- Ackerman, C. (2018). What is self-efficacy theory in Psychology? Definition & Examples. Positive Psychology Program. Retrieved June 17, 2019 from <https://positivepsychologyprogram.com/self-efficacy/>
- Agency for Healthcare Research and Quality. (2010). Disparities in healthcare quality among racial and ethnic minority groups. Retrieved June 28, 2018, from <https://archive.ahrq.gov/research/findings/nhqrdr/nhqrdr10/minority.html>
- Bureau of Labor Statistics. (2018). Healthcare Occupation: Occupational Outlook Handbook. Retrieved March 9, 2018 from <https://www.bls.gov/ooh/healthcare/home.htm>
- Capers, Q., McDougle, L., & Clinchot, D. M. (2018). Strategies for achieving diversity through medical school admissions. *Journal of Health Care for the Poor and Underserved*, 29(1), 9–18. <https://doi.org/10.1353/hpu.2018.0002>
- Carnegie Project on the Education Doctorate. (2018). The Framework. Retrieved August 9, 2018, from <https://www.cpedinitiative.org/page/framework>
- Fenton, J. J., Fiscella, K., Jerant, A. F., Sousa, F., Henderson, M., Fancher, T., & Franks, P. (2016). Reducing medical school admissions disparities in an era of legal restrictions: Adjusting for applicant socioeconomic disadvantage. *Journal of Health Care for the Poor and Underserved*, 27(1), 22–34.
- Girotti, J. A., Park, Y. S., & Tekian, A. (2015). Ensuring a fair and equitable selection of students to serve society's health care needs. *Medical Education*, 49(1), 84–92. <https://doi.org/10.1111/medu.12506>
- Glesne, G. (2016). *Becoming qualitative researchers: An introduction, 5th edition*. United

States. Pearson Education, Inc.

Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2011). Diversity and higher education: Theory and impact on educational outcomes. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 249–277). New York: Routledge.

Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. (2004). *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. (B. D. Smedley, A. Stith Butler, & L. R. Bristow, Eds.). Washington (DC): National Academies Press (US). Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK216009/>

Metz, A. M. (2013). Racial and ethnic underrepresentation in medicine: Lessons from the past and a vision of the future. *Teaching and Learning in Medicine: An International Journal*, 25(S1), S33–S38.

Price, S. S., Brunson, W. D., Mitchell, D. A., Alexander, C. J., & Jackson, D. L. (2007). Increasing the enrollment of underrepresented minority dental students: Experiences from the dental pipeline program. *Journal of Dental Education*, 71(3), 339–347.

Rao, V. & Flores, G. (2007). Why aren't there more African-American physicians? A qualitative study and exploratory inquiry of African-American students' perspectives on careers in medicine. *Journal of the National Medical Association*, 99(9), 986–993.

Ratanawongsa N., Howell, E., & Wright, S. (2006). What motivates physicians throughout their careers in medicine? *Comprehensive Therapy*, 32(4), 210-217

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, 27(2), 237-246.

Turner, C. S. V., Gonzalez, J. C., & Wood, J. L. (2011). Faculty of color in academe: What 20 years of literature tells us. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 41–73). New York: Routledge.

Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of color: Revisiting the Weidman-Twale-Stein framework. *The Western Journal of Black Studies*, 40(2), 80–94.

Yeowell, G. (2013). ‘Isn’t it all whites?’ Ethnic diversity and the physiotherapy profession. *Physiotherapy*, 99(4), 341–346. <https://doi.org/10.1016/j.physio.2013.01.004>

CHAPTER III: THE ADMISSIONS PROCESS

By Melanie H. Lauderdale

The problem of practice addressed in this project is to determine a way to enhance African American racial diversity in the physical therapy program at the University of Mississippi Medical Center (UMMC). The physical therapy program is a division of the School of Health Related Professions (SHRP) at UMMC and part of the mission of SHRP is to embrace diversity (University of Mississippi Medical Center, n.d.). In addition, the racial makeup of the physical therapy profession does not reflect the racial makeup of the state of Mississippi or the nation, and the physical therapy programs in the state are essentially the gatekeepers for the profession. Because physical therapists must graduate from an accredited program in order to become licensed as a physical therapist, a lack of diversity in the academic physical therapy programs is going further contributes to a lack of diversity in the profession.

As a faculty member in the program, I have observed that there is a lack of African American students in the physical therapy program with some cohorts of students having only one African American student. I have often wondered if the program is in some way limiting access for African Americans to our program. The Carnegie Project on the Education Doctorate (CPED) involves six guiding principles for program design, the first of which is framed around questions of ethics, equity, and social justice (Carnegie Project on the Education Doctorate, 2018). As a student in a CPED doctoral program, I believe it is my mission to address these principles in my project. All students should have an equal opportunity to be admitted to the

physical therapy program at UMMC and all people should have equal access to education and healthcare. By addressing diversity of African American students in the physical therapy program, there is also the potential to improve access to healthcare for other African Americans in the state of Mississippi. If African American students are admitted and graduate from the physical therapy program, they have the potential to serve the healthcare needs of African Americans in Mississippi.

This dissertation is being conducted as a companion dissertation with Sherry Colson and Kimberly Willis. The dissertation is organized in three separate parts. In order to frame the discussion of the larger problem of practice the Twale, Weidman, & Bethea (2016) framework was explored. This framework addresses socialization of graduate students of color and discusses five components that are essential in the student moving from a student to a professional. This portion of the dissertation addresses the component of the framework involving “entering students, preparation, and predispositions.” In order for students of color to progress through the socialization process described in the framework, they must first be admitted to the program. There are many contributing factors that may impact students’ admission including college grade point average (GPA) and Graduate Record Exam (GRE) scores as well as some personal attributes that are captured in the application file and an interview. In this section of the dissertation, I aim to address how to improve the number of African American prospective students being admitted into the physical therapy at UMMC.

Study Questions

The goal of this companion dissertation is to answer the two following questions:

- How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC?

- What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?

In this section of the project, I will use quantitative admissions data to answer the following questions:

- Is there a correlation between overall GPA and GPA in the first summer semester of the PT program?
- Is there a correlation between overall college GPA and GPA in the first fall semester of the PT program?
- Is there a correlation between overall college GPA and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between prerequisite college GPA and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between prerequisite college GPA and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between prerequisite college GPA and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between GRE verbal score and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between GRE verbal score and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between GRE verbal score and GPA in the first spring semester of the physical therapy program?

- Is there a correlation between GRE quantitative score and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between GRE quantitative score and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between GRE quantitative score and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between GRE total score and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between GRE total score and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between GRE total score and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between GRE writing score and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between GRE writing score and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between GRE writing score and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between individual interview scores and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between individual interview scores and GPA in the first fall semester of the physical therapy program?

- Is there a correlation between individual interview scores and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between group interview scores and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between group interview scores and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between group interview scores and GPA in the first spring semester of the physical therapy program?
- Is there a correlation between file scores and GPA in the first summer semester of the physical therapy program?
- Is there a correlation between file scores and GPA in the first fall semester of the physical therapy program?
- Is there a correlation between file scores and GPA in the first spring semester of the physical therapy program?

In summary, I will determine correlations between admission criteria that the physical therapy program currently collects and first-year program GPA as a measure of success in the program. I will also determine regression equations using admission data to predict successful program GPAs. With this data, I hope to recommend changes to the admission process that may be inadvertently limiting the admission of potentially successfully African American students.

Methods

Collection of Data

The physical therapy admissions committee consists of approximately 15 members and includes the entire physical therapy faculty as well as one external member. In the selection process, each member of the committee is allowed to vote on applicants to be selected for the incoming cohort. Currently, there are six quantitative measures that are used in the admissions process. These measures are combined into a final score that is used to assist committee members in the voting process. Each committee member decides how to use the quantitative measures and overall score in his or her individual voting decisions. These quantitative measures include the following:

- Average file review score (AVG_FILE)
- Average Interview score (AVG_INT)
- Graduate Record Exam quantitative score (GRE_Q)
- Graduate Record Exam verbal score (GRE_V)
- Overall college GPA (GPA_O)
- Required (pre-requisite) college GPA (GPA_R)

Every year during the application process, each applicant submits transcripts, a curriculum vitae, an essay, an application, and proof of observation in physical therapy clinics. During the admission cycle, two separate admissions committee members review each applicant's FILE which includes a review of everything submitted by the applicant. The applicant is given a FILE score by each reviewer based on a rubric, and the score can range from 0-20. Each applicant is also invited for an interview. During the interview process, the applicant participates in two separate interviews. A group interview (G_INT) takes place with one committee member and

two or three applicants. The committee member scores each applicant on the interview based on a rubric with scores ranging from 0-20. An individual interview is also completed, and that interview consists of a single applicant and two committee members. During the interview, the applicant receives a score from each committee member based on a rubric with a score ranging from 0- 20. The two individual interview scores are then averaged (AVG_I_INT). At the completion of the file review and interviews, all of the scores are entered in a database by the admission co-chairpersons.

The GRE_Q, GRE_V, and Graduate Record Exam Writing scores (GRE_W) for each applicant are provided by the Educational Testing Services directly to the Office of Student Records and Registrar during the application process. Grade point averages are calculated by the Office of Student Records and Registrar at UMMC based on transcripts sent from the applicant's undergraduate institution(s). The GPA_O includes all undergraduate course work that an applicant has completed. The GPA_R includes the eight courses required for admission to the physical therapy program including two physics, two chemistries, two biologies, a statistics, and an advanced science. Prior to the admission process, the GRE_Q, GRE_V, GPA_O, and GPA_R are provided to the physical therapy admission committee co-chairpersons and are uploaded into a database.

I am one of the admission co-chairpersons, so in order to obtain the data for this project, I requested that the other admission co-chairperson extract the following data from the admission database for applicants from 2013-2017: the two FILE scores, the three INT scores, GPA_O, GPA_R, GRE_Q, and GRE_V. The admission co-chairperson provided me with a spreadsheet of the data. She did not de-identify the data at this point because of the need to be able to match the data to the graduate GPAs which will be discussed next. The year range from 2013-2017

was selected because the GRE scoring system changed around 2012, and 2013 was the first year the physical therapy program used the new scoring system. Therefore, previous years' GRE scores could not be compared. The applicants admitted in 2017 were the most recent cohort to complete the first year of the program at the time this project was conducted.

The physical therapy program is nine semesters in a cohort model that begins in the summer semester. From observations I have made since becoming a member of the faculty, students that do not complete the program because of academic reasons are more commonly dismissed at some point during the first year of the program compared to the second or third year of the program. Therefore, I decided to use the program GPA for the first three semesters (summer, fall, and spring) as a measure of success. The summer, fall, and spring GPAs were requested from the Director of Admissions and Learning Advancement in SHRP for all of the students admitted from 2013-2017 and were provided to me via a spreadsheet. Next, I carefully combined the admissions data with the program GPAs into one single spreadsheet using the student identification number as an identifier. Lastly, the program director provided a list of self-selected ethnicities of each student based on student identification number which was then coded to a numerical format and included in the spreadsheet. There were six ethnicities that were selected among all of the subjects including White, Black or African American, Asian, two or more races, Hispanic/Latino, and Other. After completion of the final spreadsheet, Kimberly Willis, one of the authors of this companion dissertation, reviewed the data to ensure accuracy during the combining process. Missing data was then removed from the spreadsheet. Missing data included data from students who withdrew from the program during the first summer semester and, therefore, did not have a program GPA. Occasionally, students who are unsuccessful during one of the first three semesters of the program will repeat the first year,

beginning their second try in the summer. For students who repeated any part of the first year, their GPAs during their second attempt at the first year were removed to remain consistent among all of the subjects.

Prior to data collection, this project was submitted to the University of Mississippi Institutional Review Board (IRB). It was determined by the IRB that the project did not need IRB oversight because the purpose was not to contribute to the generalized body of knowledge. All of the data for this project is being stored on a password protected computer.

Data Analysis

The data from the completed spreadsheet was uploaded into SPSS statistical software for analysis. Descriptive statistics of all data combined were determined, and descriptive statistics of three different groups were determined: White/Caucasian, African American, and Other. Due to the small amount of students who selected Asian, Hispanic/Latino, two or more races, or Other, these four races were combined into one group that I identified as "Other." Next a Pearson correlation coefficient was determined for each of the variables with each of the program GPAs. Each of the variables (GRE_V, GRE_Q, GPA_O, GPA_R, AVG_FILE, G_INT, AVG_I_INT) were correlated with each of the three first-year GPAs (summer, fall, and spring), and the Pearson correlation coefficient was recorded. The total GRE score (GRE_T) was calculated by adding the GRE_V and GRE_Q together and was also correlated with the three GPAs. The GRE_W was also correlated to the three first-year GPAs. The admissions process does not currently quantitatively consider the GRE_T or GRE_W score, but for the purpose of this project, I wanted to determine if GRE_T or GRE_W are scores that may be beneficial to consider in the process. All of these correlations were completed for the entire group as a whole and then completed separately for the three different races.

Next, a multiple regression analysis was conducted to attempt to predict summer, fall, and spring GPAs with the given admissions variables of GPA_O, GPR_R, GRE_V, GRE_Q, and GRE_W. GRE_T was not included because it is a combination of GRE_V and GRE_Q. Linear regression was performed beginning with all variables, and non-significant variables were individually removed from the regression equation to ultimately determine a significant regression equation with the significant variables.

Data Limitations

Although first-year GPAs are one measure of success in the physical therapy program, it is not the only measure of success. The student with the highest first-year GPA is not necessarily going to be a better physical therapist. There are many other non-quantitative characteristics that make a student a successful physical therapist, including empathy, compassion, and professionalism. These characteristics are not measured through GPA, and, therefore, this data is limited by using academic success as a measure. It is very possible for a student to have lower semester GPAs in the first year and still successfully complete the program, pass the board exam, and continue to become a very successful physical therapist. While this data can assist in determining measures that will help predict academic success, it does not predict the qualitative characteristics that are also important in the field of physical therapy.

Challenges

While this data was readily accessible, it did present with some challenges for a few reasons. The amount of data was limited because of the GRE scores. I was able to collect data over five years, but data was available for eight years. Due to the change in the GRE scoring system in 2012, all of the data before 2013 was unusable in this project because the GRE scores were not calculated using the same scoring system, and, therefore, could not be compared. Also,

the FILE and INT data used in the statistical analysis only spanned from 2014-2017 instead of 2013-2017. This was due to the fact that the FILE and INT scoring system changed in 2014, so again, the scores from 2013 could not be used for comparison. Therefore, the number of students used in the AVG_FILE and INT correlations were limited to four years of data. Another challenge that presented itself when analyzing the data was that the number of African American students, as well as students of other races, was very limited. While the data gave an idea of the correlations between variables for African American students and students of other races, the ability to make firm conclusions from the data was somewhat limited in due to the small number analyzed.

Results

Descriptive Data

The data covers five years for approximately 250 students with qualification. Each cohort of students had approximately 50 students. By the spring semesters, the number of students had decreased slightly due to students either withdrawing from the program or students being unsuccessful in a previous semester. However, the INT and FILE data had one year eliminated due to a change in the scoring system. Therefore, the INT and FILE data allowed for around 200 students to be analyzed. Table 2 demonstrates the descriptive data for the entire population including number of students, minimum and maximum scores, and mean and standard deviation for the studied population.

In order to determine ways to increase enrollment of African American students in particular, it was necessary to determine data for all students as a group as well as to separate the data based on race. In Table 3, Table 4, and Table 5, the same descriptive characteristics demonstrated in Table 2 are reported, but the tables are divided by race. In looking at this data, it

is apparent that minority enrollment in general is limited. While there were 214 White/Caucasian students analyzed, there were only 23 African American students and 13 students of Other races admitted over a five year period. Because of the small sample size of African American students and students of Other races compared to the larger sample of White/Caucasian student, statistical analysis of differences between groups was not possible. In comparing average scores among the races, White/Caucasian students scored higher than African American students on all scores and Other students scored higher than African American students on all scores except GPA_R and the AVG_I_INT. Again, this comparison is very limited because there is not a statistical analysis to determine if there is true difference among the groups, and further inquiry is definitely warranted.

Table 2. Descriptive Data for Entire Studied Population

Variable	N	Minimum	Maximum	Mean	SD
Entire Population GPA and GRE					
SUMMER_GPA	248	0.90	4.00	3.69	0.5151
FALL_GPA	242	2.53	4.00	3.62	0.3370
SPRING_GPA	240	2.58	4.00	3.55	0.3581
GPA_O	250	3.03	4.00	3.67	0.2178
GPA_R	250	3.00	4.00	3.65	0.2546
GRE_V	250	139	164	150.46	4.551
GRE_Q	250	136	168	150.49	4.331
GRE_T	250	280	320	300.95	7.241
GRE_W	250	2	5	3.67	0.536
Entire Population INT and FILE					
SUMMER_GPA	198	0.90	4.00	3.70	0.4963
FALL_GPA	193	2.53	4.00	3.59	0.3403
SPRING_GPA	192	2.59	4.00	3.54	0.3655
G_INT	200	10	20	16.27	1.972
AVG_I_INT	200	10.0	20.0	17.44	1.606
AVG_FILE	200	6.5	20.0	15.63	2.219

Note. N=number; SD=standard deviation; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Table 3. Descriptive Data for African American Students

Variable	N	Minimum	Maximum	Mean	SD
African American GPA and GRE					
SUMMER_GPA	22	.90	4.00	3.29	0.8470
FALL_GPA	19	2.59	4.00	3.48	0.3241
SPRING_GPA	19	2.71	4.00	3.40	0.3743
GPA_O	23	3.05	3.88	3.53	0.2176
GPA_R	23	3.10	4.00	3.61	0.2459
GRE_V	23	139	155	148.13	4.434
GRE_Q	23	136	155	146.70	4.332
GRE_T	23	280	307	294.83	7.240
GRE_W	23	3	5	3.48	0.574
African American INT and FILE					
SUMMER_GPA	20	.90	4.00	3.29	0.8610
FALL_GPA	17	2.59	4.00	3.49	0.3428
SPRING_GPA	17	3.00	4.00	3.45	0.3485
G_INT	21	10	19	15.57	2.087
AVG_I_INT	21	16.00	20.00	17.19	1.167
AVG_FILE	21	6.50	19.50	14.81	2.745

Note. N=number; SD=standard deviation; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Table 4. Descriptive Data for Other Students

Variable	N	Minimum	Maximum	Mean	SD
Other GPA and GRE					
SUMMER_GPA	13	3.30	4.00	3.95	0.1941
FALL_GPA	13	2.76	4.00	3.60	0.3704
SPRING_GPA	13	3.00	4.00	3.57	0.3605
GPA_O	13	3.13	4.00	3.65	0.2558
GPA_R	13	3.10	4.00	3.61	0.2242
GRE_V	13	143	163	151.23	6.610
GRE_Q	13	144	168	151.77	6.431
GRE_T	13	288	316	303.00	9.738
GRE_W	13	3	5	3.96	0.558
Other INT and FILE					
SUMMER_GPA	11	3.30	4.00	3.94	0.2111
FALL_GPA	11	2.76	4.00	3.55	0.3777
SPRING_GPA	11	3.00	4.00	3.51	0.3561
G_INT	11	14	20	16.73	2.005
AVG_I_INT	11	13.50	19.00	16.55	1.491
AVG_FILE	11	10.50	19.00	15.12	2.767

Note. N=number; SD=standard deviation; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Table 5. Descriptive Data for White/Caucasian Students

Variable	N	Minimum	Maximum	Mean	SD
White/Caucasian GPA and GRE					
SUMMER_GPA	213	0.90	4.00	3.72	0.4627
FALL_GPA	210	2.53	4.00	3.63	0.3347
SPRING_GPA	208	2.59	4.00	3.56	0.3551
GPA_O	214	3.03	4.00	3.69	0.2105
GPA_R	214	3.00	4.00	3.66	0.2574
GRE_V	214	139	164	150.66	4.366
GRE_Q	214	143	162	150.82	3.987
GRE_T	214	285	320	301.49	6.779
GRE_W	214	2	5	3.67	0.525
White/Caucasian INT and FILE					
SUMMER_GPA	167	.90	4.00	3.74	0.4230
FALL_GPA	165	2.53	4.00	3.61	0.3376
SPRING_GPA	164	2.59	4.00	3.55	0.3685
G_INT	168	10	20	16.33	1.947
AVG_I_INT	168	10.00	20.00	17.53	1.647
AVG_FILE	168	9.50	20.00	15.76	2.096

Note. N=number; SD=standard deviation; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Correlations

In order to assist in answering the study questions, data collected and used in the admission process was correlated to the first-year program GPAs to try to determine if the data being used in the admissions process has a relationship to the success of students in the physical therapy program. A Pearson correlation (r) was calculated for each admissions variable with each semester GPA. Similarly to the descriptive data, correlation was calculated for all students (Table 6) and was then calculated based on race (Table 7, Table 8, and Table 9). An informal rule regarding the strength of the relationship is described by Devore & Peck (1993). A relationship is considered strong if $r \geq .8$ or $r \leq -.8$, moderate if $.5 < r < .8$ or $-.8 < r < -.5$, and weak if $-.5 \leq r \leq .5$ (Devore & Pack, 1993). An r of zero indicates no correlation is present at all while an r of positive or negative one indicates a perfect correlation. The positive r indicates that the relationship is positive while the negative r indicates a negative relationship. For the purpose of data analysis, I will consider an r less than .3 or greater than -.3 to be little if any correlation and will not consider it in the same discussion as data with a weak correlation. Significance levels of the correlation are also reported which demonstrate if the correlation models would be true for the population as a whole based on the sample studied.

Overall, there were no strong correlations for any group of students, and there were few moderate correlations. The data did demonstrate some weak correlations, but the correlations were not consistent across the semesters for White/Caucasian or African American students. For all students and for White/Caucasian students, correlation values were similar due to the high number of White/Caucasian students compared to African American students and students of Other races. Most of the correlations were positive and should be considered positive in the following discussions unless otherwise noted.

GPA. When all students were combined, the only correlations that were shown at all were GPA_O with fall and spring GPAs, and GPA_R with fall GPA. For White/Caucasian students, GPA_O was weakly correlated and significant with the fall and spring GPA, but not with summer GPA, and GPA_R was weakly correlated and significant with the fall GPA. Similarly, African American students and students of Other races demonstrated a weak correlation between GPA_O and the fall semester GPA and between GPA_R and the spring semester GPA, but the correlations were not significant which indicates that one cannot assume the correlations would apply to the population. All three groups showed a correlation between GPA_O and fall semester GPA and all three groups showed at least one semester correlation with GPA_R. Interestingly, students from Other races demonstrated a moderate correlation between GPA_R and the summer GPA as well as a weak correlation between fall and spring GPAs, while none of the other groups demonstrated a correlation with either GPA_O or GPA_R and the summer semester GPA. Also, students from Other races were the only group who had a consistent correlation of GPA_R, albeit primarily weak, for all three semesters.

GRE. The only group of students who demonstrated any correlation with GRE scores was African American students, and the correlations were primarily present with the summer GPA. GRE_Q was moderately correlated and significant and GRE_V and GRE_W were weakly correlated with summer GPA for African American students. GRE_T was also moderately correlated with summer GPA but this was to be expected because it is the sum of GRE_V and GRE_Q. While there was some correlation with GRE with the summer GPA for African American students, the only correlation for the fall or spring GPA was a weak GRE_W correlation with the spring GPA.

Interview and file scores. White/Caucasian students did not demonstrate any correlations for interview or file scores, but African American students and students of Other races did. African American students had a weak correlation with the G_INT with the summer GPA and a moderate to weak correlation for the AVG_I_INT for the fall and spring, respectively. There was also a moderate correlation with the AVG_FILE and the spring GPA for African Americans. For students of Other races, there was a weak correlation with G_INT to summer and fall GPAs, but one was positive and one was negative.

Table 6. Pearson Correlation for All Students

	Summer GPA	Fall GPA	Spring GPA
GPA_O	.190*	.365*	.336*
GPA_R	.136*	.308*	.298*
GRE_V	.167*	.115	.139*
GRE_Q	.259*	.119	.157*
GRE_W	.071	.044	.101
GRE_T	.261*	.145*	.183*
G_INT	.142*	.004	.101
AVG_I_INT	-.074	.066	.072
AVG_FILE	0.31	.187*	.186*

Note: *=correlation is significant at the .05 level; weak correlations are italicized; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA=program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores

Table 7. Pearson Correlation (r) for African American Students

	Summer GPA	Fall GPA	Spring GPA
GPA_O	.043	<i>.376</i>	.113
GPA_R	.047	.242	.325
GRE_V	.375	-.129	-.205
GRE_Q	.511*	.155	.219
GRE_W	.302	.048	.422
GRE_T	.530*	.031*	.032
G_INT	.328	.010	.295
AVG_I_INT	-.169	.567*	.367
AVG_FILE	-.048	-.030	.364

*Note:**=correlation is significant at the .05 level; moderate correlations are in bold; weak correlations are italicized; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores

Table 8. Pearson Correlation (r) for Other Students

	Summer GPA	Fall GPA	Spring GPA
GPA_O	.026	.358	.204
GPA_R	.691*	.344	.346
GRE_V	-.262	-.115	.016
GRE_Q	-.011	.118	.239
GRE_W	-.021	-.176	-.126
GRE_T	-.185	.000	.169
G_INT	<i>.451</i>	<i>-.452</i>	-.091
AVG_I_INT	.010	-.022	.102
AVG_FILE	.136	.150	-.077

Note: *=correlation is significant at the .05 level; moderate correlations are in bold; weak correlations are italicized; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Table 9. Pearson Correlation (r) for White/Caucasian Students

	Summer GPA	Fall GPA	Spring GPA
GPA_O	.183*	.347*	.347*
GPA_R	.143*	.306*	.289*
GRE_V	.121	.145*	.166*
GRE_Q	.161*	.088	.115
GRE_W	-.014	.050	.073
GRE_T	.172*	.146*	.175*
G_INT	.059	.028	.089
AVG_I_INT	-.072	.028	.045
AVG_FILE	.015	.203*	.174*

Note: *=correlation is significant at the .05 level; weak correlations are italicized; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE; GRE_T=sum of GRE quantitative score and GRE verbal score; GRE_W=writing score on GRE; G_INT=score on group interview; AVG_I_INT=average of individual interview scores; AVG_FILE=average of file scores.

Multiple Regression Equations

Multiple regression was performed in an attempt to determine a prediction equation for success as measured by first-year GPAs. The regression equations were calculated for the entire population, and the data was then separated by races to attempt to determine prediction equations for each of the races. Table 10 reports the results of the multiple regression equations. FILE and INT scores were not used in the multiple regression due to the missing year of FILE and INT data. GRE_T was excluded from the multiple regression because it can be perfectly predicted by the GRE_V and GRE_Q. Unfortunately, the multiple regression models for African Americans

and students of Other races did not demonstrate significant predictors for the Fall or Spring GPAs. The most likely reason for this is the small sample size of African Americans and Other students.

Table 10. Multiple Regression Equations

Regression Equation	R of Model
Entire Population	
Summer GPA=(0.404)GPA_O+(0.029)GRE_Q-2.190	.311
Fall GPA= (0.574)GPA_O+(0.010)GRE_V-0.008	.389
Spring GPA=(0.562)GPA_O+(0.012)GRE_V-0.374	.369
African American	
Summer GPA=0.098(GRE_Q)-11.036	.511
No significant predictors for Fall GPA or Spring GPA	
Other	
Summer GPA=0.598(GPA_R)+1.786	.691
No significant predictors for Fall GPA or Spring GPA	
White/Caucasian	
Summer GPA=(0.414)GPA_O+(0.019)GRE_Q-0.721	.248
Fall GPA=(0.568)GPA_O+(0.013)GRE_V-0.422	.386
Spring GPA=(0.604)GPA_O+(0.015)GRE_V-0.978	.395

Note. R=coefficient of determination; SUMMER_GPA= program summer semester GPA; FALL_GPA= program fall semester GPA; SPRING_GPA= program spring semester GPA; GPA_O=college overall GPA; GPA_R= required (pre-requisite) college GPA; GRE_V= verbal score on GRE; GRE_Q=quantitative score on GRE.

Discussion

As discussed in the first chapter of this manuscript, achieving diversity in the workforce is a problem many healthcare professions face, and the lack of diversity contributes to health disparities among patients (Thomas, 2014). In order to improve the diversity of the healthcare workforce, programs that train healthcare providers must take steps to increase diversity of the students who will later become healthcare providers (Metz, 2013). By analyzing the admission process and procedures of the physical therapy program at UMMC, I have established some conclusions about the process. While recommendations will be made in the final chapter by combining data from the three different aspects of this companion dissertation, I will discuss some of the conclusions that originated from the data presented in this chapter.

Overall, the relationships between all admissions variables and first year program GPAs were not very predictive for any group of students. The six variables that are currently used in determining a score for each applicant do not consistently have strong or consistent predictive qualities. Interestingly, while looking for things that may limit African American applicants from being admitted to the physical therapy program, I found that all students are affected by the lack of relationships between the variables and program success. Data from this project demonstrated that overall, admitted African American students had lower GPAs and GRE scores than their Caucasian counterpart. Given these findings, African American admission rates may be limited by using variables in the admission process that are not predictive of success but are traditionally lower for African American applicants. Therefore, left without meaningful findings, the data that is gathered during the admission process as well as the way it is used needs to be reconsidered. On the other hand, there were a few moderate relationships and a few

consistent relationships that may be beneficial for consideration when reviewing the entire admissions process.

Generally, the admissions data was not strongly related to program GPA for any of the admissions variables. Nevertheless, it was consistently related to GPA in some way, albeit it weakly, for all groups of students. Therefore, when considering the current variables used in the admissions process, GPA may be the best choice given the current data that is collected.

GRE scores only demonstrated relationships to program GPA for African American students. As discussed in the first manuscript, there are documented test disparities in the GRE scores that place African Americans at a disadvantage, and according to Miller & Stassun (2014), African Americans score 200 points lower than their Caucasian counterparts. Because this reference was published before the change in GRE scoring, the 200 point reference is not applicable to the GRE data in the study, but the idea that the African Americans score lower than Caucasians would still be applicable with the new scoring system.

Interestingly, all three aspects of the GRE were correlated in some way with first semester success for African Americans, and the GRE quantitative score had a moderate relationship with GPA in the summer semester. Although, after the first semester, the relationship was no longer apparent. This finding is consistent with Williams (1997), who argued that GRE scores only weakly predict first-year graduate school grades and have no predictive value after the first year. In fact, in this case, it appears that GRE scores may predict the first semester GPA but do not have much predictive value after that. Again, due to the small numbers of African American students in this study, using GRE as a predictor of success, even in the first semester where there is moderate relationship, must be done with caution, especially because that link is not apparent in the other two semesters.

One thing to consider in regards to the relationship with GRE and summer GPA is that most of the attrition occurs after the summer semester. Overall, there was a difference of eight students from the beginning of summer semester to the end of fall semester, while there was only a difference of two students from the end of the fall to the end of the spring. When considering African Americans only, all of the attrition happened in the summer semester. There were 22 African Americans at the beginning of the summer semester and 19 at the beginning of the fall and spring. While not all attrition is due to academic difficulty, the majority of it is secondary to inability to meet the academic standards. Because of this, GRE scores may still be an important to consider in some capacity in the admissions process, but the way in which they are used in the admissions process needs to be reconsidered given this data.

While the interview and file scores did not have any relationship to program GPA for White/Caucasian students or students of Other races, there were some associations for African Americans. Although interviews may not provide much data for White/Caucasian students or students of Other races, it will be important to consider when making recommendations the impact that interviews, especially individual interviews, may have on African American applicants.

Lastly, in an attempt to determine an equation using admissions variables that would predict success in the physical therapy program, multiple regression equations were calculated. The multiple regression equations all demonstrated weak, if any predictive value. Therefore, the use of these equations would not add any value to the admissions process and should not be considered for use when reviewing the admissions process.

Limitations

While the data gathered in this study may be helpful in structuring the admissions process, there are some limitations to the data. As I have mentioned multiple times, the small sample size of African American student and students of Other races compared to White/Caucasian students limited the data analysis. Another limitation was using three different GPAs as measures of success. The fact that each semester has different classes and different distributions of hours per class may have decreased the consistency among the correlations with semester GPAs and admitting data. Another thing to consider is that most of the correlations that were found were weak correlations, so it is difficult to confidently say that a variable predicts a GPA with a weak correlation. Finally, GPA was used as a measure of success. While it is important to maintain a minimum GPA in the program, a high GPA is definitely not the only measure of success in the program.

Summary

In summary, correlations were determined between admissions data and first-year GPAs to attempt to determine if admissions criteria is limiting African American enrollment in the physical therapy program at UMMC. The Twale et al. (2016) framework that was discussed in the first manuscript considers entering students and their preparation as part of socialization process for graduate students. Overall, the admission criteria was not specifically limiting African American students, but the data demonstrated that the currently used admission criteria is not predicting success for any group of students, including African Americans. Given these findings, African American admission rates may be limited by using variables in the admission process that are not predictive of success but are traditionally lower for African American applicants. By analyzing the admissions data for all students, as well as students of color in the

physical therapy program, I have been able to consider recommendations to make regarding the admissions process and procedures. Because of the limitations of the quantitative data, I plan to incorporate the data from this chapter with the data found in the qualitative portions of the project that was conducted by my companions to make strong recommendations for the admissions process and procedures. In the final chapter of this manuscript, the data from the three components will be synthesized to make overall recommendations to the physical therapy program, including suggestions for admissions.

BIBLIOGRAPHY

- Carnegie Project on the Education Doctorate. (2018). The Framework. Retrieved August 9, 2018, from <https://www.cpedinitiative.org/page/framework>
- Devore, J., & Peck, R. (1993). *Statistics: The exploration and analysis of data*. (2nd ed.). Belmont, CA: Wadsworth, Inc.
- Metz, A. M. (2013). Racial and ethnic underrepresentation in medicine: Lessons from the past and a vision of the future. *Teaching and Learning in Medicine: An International Journal*, 25(S1), S33–S38.
- Miller, C., & Stassun, K. (2014). A test that fails. *Nature*, 510(7504), 303–304.
<https://doi.org/10.1038/nj7504-303a>
- Thomas, B. (2014). College of health and health care disparities: The effect of social and environmental factors on individual and population health. *International Journal of Environmental Research and Public Health*, 11(7), 7492–7507.
- Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of color: Revisiting the Weidman-Twale-Stein framework. *The Western Journal of Black Studies*, 40(2), 80–94.
- University of Mississippi Medical Center. (n.d.). SHRP Diversity and Inclusion. Retrieved from <https://www.umc.edu/shrp/Prospective%20Students/Applying%20for%20School/SHRP%20Diversity%20and%20Inclusion.html>
- Williams, W. M. (1997, October 10). Reliance on test scores is a conspiracy of lethargy. *The Chronicle of Higher Education*. Retrieved from <https://www-chronicle-com.umiss.idm.oclc.org/article/Reliance-on-Test-Scores-Is-a/98332>

CHAPTER IV: EXPERIENCES OF GRADUATES

By Kimberly Willis

The problem of practice for this dissertation is related to increasing the racial diversity of the physical therapy program at UMMC, specifically African American students. The School of Health Related Professions emphasizes the importance of diversity in its mission statement (University of Mississippi Medical Center, 2018, p. 185). By focusing on this problem of practice, we may be able to make an impact on health disparities for minorities and indigent patients in Mississippi. The physical therapy profession is one that is “controlled” by the institutions who are accredited to provide physical therapy curriculum. The population of African American physical therapists does not represent the population of the United States or of Mississippi (U.S. Census Bureau, 2010, 2016). In the earlier discussion of Chapter 1, the lack of African American diversity in this field may be viewed from multiple angles, including lack of diversity of African American faculty, cost of education, lower socioeconomic status, and/or first generation students (Center for Disease Control, 2013; Commission on Accreditation in Physical Therapist Education, 2017; Fenderson & Fenderson, 2015; Mompremier, 2009; Turner, Gonzalez, & Wood, 2011; Wilcox, Weber, & Andrew, 2005).

We plan to explore reasons African American diversity is lacking in the physical therapy program at UMMC and to determine ways to increase the African American diversity in the program. This companion case study of the physical therapy program at UMMC will use qualitative and quantitative methods to attempt to answer the following questions:

- How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC?
- What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?

The socialization of African American graduates of the physical therapy program at UMMC SHRP will be explored through the framework of Twale, Weidman, & Bethea (2016). This model is specific to African American students in a graduate program. Socialization of graduate students is “the processes through which individuals gain the knowledge, skills, and values necessary for successful entry into a professional career requiring an advanced level of specialized knowledge and skills” (Weidman, Twale, & Stein, 2001). Exploration of the socialization process, specific to our African American graduates, will aid in increasing the diversity of our program.

Each of three researchers will address a different aspect of the problem and present the results from their independent inquiry. Sherry Colson will organize focus groups aimed at discovering what motivates and influences African Americans to select a health care career path. Melanie Lauderdale will examine admission processes and criteria in order to discover potential predictors of success. Lastly, I will conduct interviews with former African American graduates of the physical therapy program at UMMC in an effort to understand how their experiences in the physical therapy program impact their opinion of the program and profession.

Data Overview

African American graduates of the physical therapy program at UMMC participated in interviews to explore the graduates’ thoughts and impressions of their experiences while in the physical therapy program. On Wednesday, November 7, 2019, a list of African American

graduates of the PT program was requested from the chair of the physical therapy department at UMMC SHRP. The chair was able to procure the names of African American graduates who graduated between the years of 2010 and 2018 who had self-selected African American as their ethnicity on their admission application. Any student who selected more than one ethnicity, even if it included African American, was excluded from this study. A total of 47 names was provided and these names were then cross-referenced with departmental records for physical addresses and email addresses. Thirty-nine graduates had email addresses listed and eight graduates did not. On November 26, 2018, thirty-nine emails were sent out via campus email system and eight letters were mailed via the United States Post Office with specifics of the study and requests for an interview. One email and one letter were returned as non-deliverable. Seven graduates responded to the request and a second email was sent to them with the consent form and interview protocol attached. Interviews were then scheduled and initiated. On December 11, 2018, a follow-up letter was sent to those graduates who had not responded to the initial email. An additional five graduates responded and received the consent form and interview protocol. Interviews of these graduates were scheduled and initiated. A final follow-up email was sent on December 27, 2018, with one graduate noted to respond to this request; however, this graduate did not submit consent forms nor respond to a follow-up email.

Data Collection

A total of twelve graduates agreed to participate in the interviews. Seven of the individual interviews were completed via in-person meetings and five were completed via Skype or FaceTime. All participants signed both consent forms, except for one participant who, after completion of the interview, was found to have failed to sign one of the consent forms. Multiple attempts were made to contact this participant, but all attempts were unsuccessful. Therefore,

this interview was not analyzed or used for this study. The interviews were set up on a day and time that was convenient to the graduate being interviewed. All attempts were made to conduct the interviews in a quiet location, which was chosen by the interviewee. Two recording devices, one primary and one back-up, were utilized and recording began upon receiving the signed consent forms and initiating the interview process. According to Glesne (2016), the field journal is a tool to be utilized as a primary means to record information related to qualitative studies. I utilized a journal for self-reflection of my thoughts and feelings prior to the interview, for field notes taken during the interviews to assist with review of transcripts, for reflection regarding thoughts after the interview was completed, and for notes related to the process of the study. The journal was also used to document a timeline for what occurred during the interview window as well as the process of data interpretation.

Research Design

Submission of the study to the Institutional Research Board (IRB) at the University of Mississippi was completed on October 19, 2018. On November 9, 2018, The IRB deemed the project did not require IRB approval and was considered to be a quality improvement project for the UMMC School of Health Related Professions Physical Therapy Department. All paperwork related to the submission, interviews, and analysis is being kept in a secured, locked location in my office.

Limitations

As discussed earlier in this dissertation, I wondered if any of the graduates would have difficulty talking to me about issues related to race because I am a Caucasian faculty member. I had beliefs that due to my personality, they would be comfortable talking to me about any

concerns they may have felt and forthcoming with their comments. During use of the field journal, I realized that I was correct as demonstrated by some of the concerns that were brought up in the interviews that will be further discussed in this manuscript. An additional limitation was the limited number of classes represented by the graduates with three of the eight available graduating classes not represented in the interviews.

Challenges

One of the challenges that I had initially was the limited number of graduates who responded to my request for an interview. I was concerned that I would not have enough data to be able to do a thorough analysis or to determine any consistent themes. After I sent the second request for participation in the study, I had additional graduates interested in participating. I remained somewhat concerned about the small number of participants with only eleven interviews to analyze; however, it became apparent that many themes would emerge throughout the interviews. Many of the graduates expressed genuine interest, and they asked questions related to why my colleagues and I were interested in this topic. I feel fortunate that they have a vested interest in improving the diversity of our physical therapy program.

An additional challenge I did not realize that I would face until I was initiating the interviews was my assumptions regarding how I thought the interviews would go dependent on whether or not I “knew” the graduate. Because I wrote about my thoughts and feelings before and after the interviews, I found that many of my assumptions were wrong. For example, if I knew of previous concerns that a graduate had had while in school, as I prepared for the interview, I found myself thinking that the person would likely discuss those concerns at length. I found that I was wrong every time, and the graduate either did not discuss any particular concerns or the graduate brought out different points that I had not been aware of prior to the

interview. For those graduates that I did not know prior to the interview, I found myself a little nervous as to how the interview would go and how the interviewee would respond to me. Again, those insecurities did not come to fruition with each interview going well. For any issues discussed with these interviewees, upon analysis of my feelings afterwards, I felt honored that the person had trusted me enough to share their thoughts and feelings. Overall, I thoroughly enjoyed learning more about those graduates that I already recognized and getting to know those I did not know prior to the interviews, too. Building those relationships will only help further our cause to increase the diversity of our program.

Participant Profiles

A total of 12 graduates, completed the process of being interviewed. One of the participants did not sign both consent forms. Therefore, the transcription of that individual interview was unable to be utilized in this study; eleven interviews were available for analysis. Six men and five women took part in this study (Table 11). All were working as physical therapists in various settings around the United States. Five different graduating classes out of the possible nine classes were represented in the interviews. These interviews were transcribed and reviewed for accuracy, and the individual transcriptions were then coded. The coding process began with review of the transcript with written codes added. Individual transcripts were then sorted by each question and codes were color-coded to one of three themes, which was representative of the three *academic resources* of the theoretical framework by Twale et al. (2016). Transcripts were reviewed for profound quotes to be used to support the thematic findings.

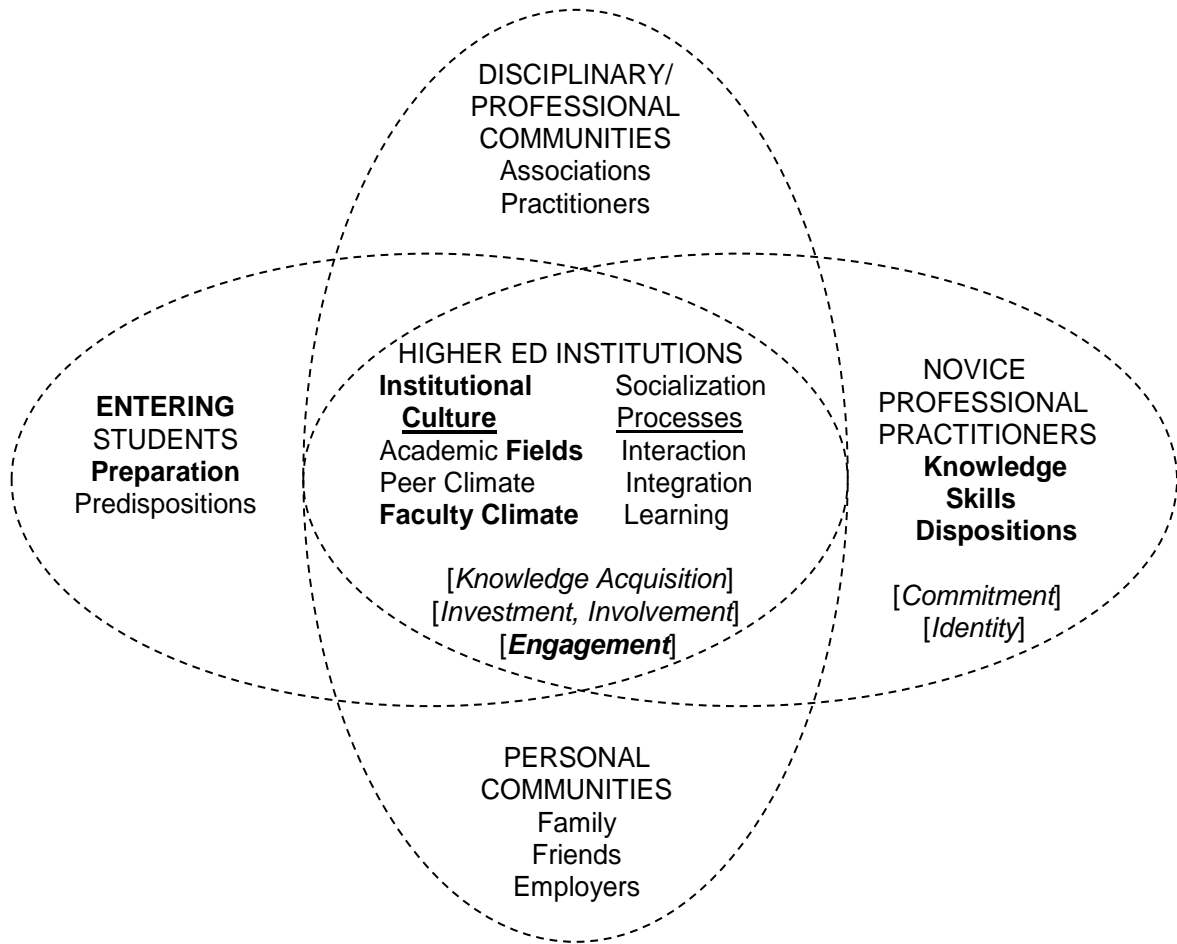
Table 11. Demographics of Graduates.

Pseudonym	Sex	Working as a PT	Working in Mississippi	Area of Practice
Alexander	Male	Yes	Yes	Urban
David	Male	Yes	Yes	Rural
Elizabeth	Female	Yes	Yes	Suburban
Grace	Female	Yes	No	Urban
Joshua	Male	Yes	Yes	Urban
Julia	Female	Yes	Yes	Suburban
Katherine	Female	Yes	Yes	Suburban
Noah	Male	Yes	Yes	Rural
Samantha	Female	Yes	No	Urban
Scott	Male	Yes	Yes	Suburban
Wyatt	Male	Yes	Yes	Suburban

Thematic Findings

Aspects of three components of the Twale et al. (2016) framework (Figure 1) were mentioned prominently in participant comments and they are used to present the data in three thematic sections. As a part of the *Academic Resources*, these sections include *Inputs*, *Environment*, and *Outcomes*. *Inputs* are related to the entering African American students’ “beliefs and values (predisposition to influence)” whereas *Environment* is specific to the “organizational structures and institutional culture with which students interact” (Twale et al., 2016, p. 86). The last theme, *Outcomes*, is associated with results of the socialization process.

Figure 1. Conceptualizing Graduate Student Socialization: Re-visiting the Weidman-Twale-Stein Model (adapted from Weidman, 2006; Weidman, et al., 2001) *



ACADEMIC RESOURCES: INPUTS (I)	ENVIRONMENT (E)	OUTCOMES (O)
Interactive Stages: Anticipatory	Formal, Informal	Personal

* Bolded elements in the framework differ from Weidman, et al., 2001.

Figure 1. Source: Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of Color: Revisiting the Weidman-Twale-Stein Framework. *Western Journal of Black Studies*, 40 (2), 87. Used with authors' permission.

Inputs

Inputs align with the entering students of the framework. Three subthemes were identified and included attitude toward admissions, exposure to physical therapy, and quotas. Attitude toward admissions included emotions that were first experienced upon learning of acceptance to the program and attributes that assisted with perseverance while in the program. Exposure to physical therapy, especially at an early age, examines when a student is first introduced to the physical therapy field. Lastly, quotas are the idea that only a certain number of African Americans are accepted to the program and once the quota is reached, no additional African American students are given admission.

Attitude toward admissions. All of the graduates reported feelings of excitement upon discovery of their acceptance to the program. The majority noted that these feelings remained the same throughout the course of the three years. Some of the graduates' feelings were associated with their being an African American who was accepted to the program. David's excitement was in part due to having been given the opportunity that many in his community were not given. He noted that "most of the people that I came up with [*sic*], when they get [*sic*] out of school, they went and found a job on the pipeline or some blue-collar job. It was well, but it wasn't what this is." Samantha felt humbled upon finding out that she had been accepted to the program. She reported "to be considered and have the opportunity to pursue a doctorate is just crazy to me because not many people in the African American community get to pursue higher education." Katherine's feelings were related to concerns for how she would be treated while in the program. "The thoughts of 'I hope that I'm treated fairly! I hope race doesn't play a factor into it, that I'm just treated like a student, on my knowledge, my professionalism, my character.'"

Some of the students spoke of various attributes that would not only help them with admissions, but with the program, too. Excitement and perseverance aided in completion of the curriculum for several of the graduates. Grace believed that “[excitement] pushed me to get finished because I was so happy and so excited to be a therapist.” Determination aided Alexander in his quest for success. He believed that “you've got a lot of trials and obstacles you have to face and go through. If you stick with it, you can make it, anybody can make it, along with a lot of prayer and faith.” All the experiences while in school, from the coursework to the clinical experiences, helped Katherine realize that physical therapy is what she was created to do. “I was definitely built for this career.” Her entire experience at UMMC including clinical work, classroom experiences, and academics contributed to “the new PT that I am today.” After graduation, she exclaimed, “I just feel fulfilled! I'm living my dream!” For Julia, the attitude felt with admissions carried over into her life after graduation. “I can accomplish anything I put my mind to. School was tough, but I just stayed focused!”

Early exposure to physical therapy. The majority of the graduates believed that exposure to physical therapy should be early in a student’s education. Whereas some had the opinion of this being a part of the middle school/high school experience, others believed that exposure at the undergraduate level was appropriate. This was especially true at Historically Black Colleges and Universities (HBCU). Noah stated, “Go to the black schools and promote the school. Tell them about the profession . . . and when you graduate, this is what could be waiting for you, career-wise.” Belief that current African American students and graduates participate in the promotion of the field was at the forefront. Samantha felt that this was important because “people tend to, if they see somebody like them, they can relate more and they're more likely to say, ‘Hey, I'll do this.’” David expressed similar thoughts as a result of his

experience of “right before I came to UMMC and saw [a faculty member], I had never seen an African American physical therapist ever in my life.”

Quota. Many of the graduates mentioned the idea of a quota when discussing admissions. Though quotas are not used in any capacity in the admissions process, the graduates felt that this was a possibility and wondered about the implications of it, from a committee standpoint as well as from future applicants’ standpoint. Katherine questioned if the committee members felt “we've met our quota for the African-Americans. We can't pick any more.” David believed that there was a “cycle” of how many African American students are admitted yearly.

Like you guys were whatever, a class of eight or nine one year, and then another class of eight or nine, and then the next year it would be two. And then the cycle would go on again. . . . I felt like it was a quota that the program was trying to do.

Possible future students may be discouraged from applying to the program at UMMC as a result of the idea of a quota. Additionally, success for African American students in the program may be impacted. Potential African American students have questioned Noah as to whether or not there is a quota and he mentioned the difficulty that an African American student may face when there is the possibility of being only one in a class of 50.

Do they have a quota? . . . Which, that's the myth. . . . It's what I didn't learn about the program, how do they feel about minorities? . . . I don't know how y'all accept, but [in one cohort] there's one black student. So that's a really big discrepancy. It's hard for one black student to succeed in a room full of 50 that is not like her.

Recommendations. An interesting finding relative to the *Inputs* theme was the numerous recommendations by the graduates. These recommendations were related to admissions, mentoring, and suggestions for African American applicants. Two of these topics,

admissions and mentoring, were discussed in the literature review of the first chapter.

Recommendations to the admissions committee were specific to the admissions process (i.e. discontinuing picture taking on the day of the interview) and comparing all components, such as GRE and GPA equally among all groups in an effort to increase the number of African American students in the program (Table 12). According to Capers et al. (2018), Ohio State University College of Medicine was able to make significant increases in the number of minority students with implementation of a more holistic admissions process. This included ending the use of photographs during the committee's review of the potential students.

Table 12. Recommendations for Admissions

Pseudonym	Comments
Katherine	Don't take any pictures [during admissions]. Just write down some things that can make you remember that person without using race or anything like that. When you're going back through . . . and just look at the pure facts, and then just see based on these grades, based on this interview, based on the GRE score, the amount of community service, the amount of observation hours that they have, who went above and beyond, who was a little mediocre? Just look at those things and not just the skin color.
Alexander	Come up with a balance to where you won't have these overly one-sided classes.
Wyatt	When doing interviews, let's do an apples to apples comparison. Everybody is the same. Let's build a class that way.
Grace	We just need to be accepted.

Mentorship is the idea of a physical therapist providing support to those students considering the profession and/or enrolled in the program. The graduates believed that this was an important element for success in the program (Table 13). According to Prince and Williams (2017), mentoring is imperative to increasing African American male physicians due to limited resources in the home environment and exposure to the healthcare fields. Graduates of the physical therapy program were interested in participating in mentoring activities.

Table 13. Recommendations for Mentors

Pseudonym	Comments
Samantha	Let them [HBCU students] see students that are similar to them and that took similar paths to them and let them be accessible to them so they can be able to talk and ask questions and, you know, build those connections.
Noah	Seek out mentors, and study as hard as you can because for that one person that could just be in the program by themselves [<i>sic</i>], if you fail, there's no other blacks there."
Katherine	I've always said that I would like to do a mentorship program. . . . Just tell you what you need to do. Things that I wish someone would have told me, too.

Lastly, many of the graduates had recommendations that were supportive of future physical therapy students (Table 14). All graduates who had suggestions wanted to ensure successful admission to the physical therapy program at UMMC. These ideas ranged from specific suggestions on how to complete the application process to how to be confident during the interview process.

Table 14. Recommendations for African American Physical Therapy Applicants

Pseudonym	Comments
Julia	Just apply. You may not be picked the first time, but do not give up.
Grace	Start early [application process] so that you don't have to hurry and try and get everything in because anxiety is going to come in.
Joshua	I always tell them that you can't listen to what other people are saying. You have to work, if that's something that you want to do.
Alexander	The main thing is once you get to the interview process, be who [<i>sic</i>] you are. Be genuine. . . . Be proud of who you are and where you come from.
Noah	Be yourself and tell your story, and don't be afraid to just say, 'I am trying to become a PT to become a good role model for my community.

As the graduates entered the physical therapy program at UMMC, a variety of inputs were noted. These included attitude toward admissions, exposure to physical therapy, and quotas. Their attitudes related to their acceptance was similar and their attributes aided in successfully completing the program. Early exposure was the thought for the graduates with

seeking out opportunities to promote the physical therapy program. The last subtheme, quotas, was mentioned by several of the graduates and was believed to have potential negative impact on the attempts at diversifying the program.

Environments

The environment that African American students function in while in graduate school is reflective of major factors including “ ‘faculty climate’ as a pivotal element of ‘institutional culture’ and ‘engagement’ as an interpersonal mechanism for learning about and, over time, deciding whether or not to embrace, the norms of ‘academic programs’ ” (Twale et al., 2016, p. 86). Subthemes include limited diversity, faculty relationships, peer culture, and microaggressions. Graduates reported positive and negative aspects of their environment, which could impact success in the physical therapy program.

Limited diversity. The physical therapy faculty at UMMC is not diverse. This is an issue that many institutions across the country are experiencing (Turner, Gonzalez, & Wood, 2011). Current faculty is comprised of a Chinese American, a Nigerian American, and the remaining faculty is Caucasian. Graduates of the program were acutely aware of the limited diversity of the faculty, the program, and the profession. Joshua reported the lack of diversity might negatively impact patient care resulting in health disparities. This thought reiterates the idea that by improving the diversity of healthcare providers, health disparities will improve (Nelson, 2002). He appeared to have an understanding of this concept when he declared “You have diverse patients. . . . They feel more open to talk about patient care of [*sic*] somebody who's the same race as them.” Wyatt's thoughts centered on comparison of UMMC with other schools around the nation. “It's better than some places, and I think the reason it's better . . . is we're in Mississippi and we try to make a real, real effort to make that so.” Additionally, Joshua looked

at it from a physical therapy profession perspective. . . . “Even when I look at it in the profession, I just feel like there should be a little bit more diversity.”

Students from a lower socioeconomic status face difficulties that other students do not which may impact their decision to attend graduate school. Some of these issues may be related to finances, family stress, and time required to complete a graduate program (Mompremier, 2009). Scott questioned whether or not this was a part of the problem with the diversity of the physical therapy program at UMMC.

I don't know if a lot of black people weren't applying. I don't know if the scores weren't high enough. . . . The more I moved up, the less I saw specifically black men as far as education. I think that could be basically because . . . it's not as important as what's going on in the house right now. 'Cause [*sic*] if you're in the house and your mom is struggling to make ends meet or the family needs you to work, most African-American males are being pushed towards trades or something that can get money right away, right out of high school. . . . Sometimes it's a more pressing issue for them to go out and work and provide for their household.

Though efforts are currently in place to increase diversity at UMMC, additional improvements are necessary to improve it. The graduates were aware of those efforts by the school. Grace had positive comments about the efforts toward this goal.

I feel like UMMC is trying. I remember they had a diversity program where they had different students come in and talk about their experiences. I think they are trying really hard to make everyone feel comfortable in the program.

Views often vary on the impact of attempts at improving diversity. The efforts by UMMC to improve diversity was viewed as “smoke and mirrors” to Noah. He believed that the

school presented misleading information to the public about the diversity of the school. He was unwilling to allow his likeness to be used as a part of any marketing strategies about diversity.

It was always interesting to me to walk in UMMC's libraries, and if you look at those pictures [on the walls], it was always black students on the pictures with diplomas. . . . And then they would get you to try to sign these waivers to release your photos, and I was, "Always no," because this is a misrepresentation of what this school really looks like. So I felt like the picture was propaganda. I was always wondering about the school as a whole, not just the program.

Faculty relationships. Many of the graduates discussed relationships with faculty. The type and depth of these relationships varied between those interviewed. As a whole, the relationships were varied between them. The relationships ranged from being positive to being non-existent. Some of the causes of the more superficial relationships appeared to be related to interpersonal skills.

Positive relationships with faculty were helpful in progressing through the program for some of the graduates. Julia appreciated the "open door policy" and Katherine believed that this was part of her ability to succeed. "I've been in almost every one of my teacher's office asking questions. That's how I got through it, by just asking questions." Elizabeth reported, "I feel like y'all really cared about what we're going through."

A personal relationship with faculty was not always an occurrence for the graduates. Some believed that one must maintain a professional relationship with more personal topics being off-limits. Alexander considered his relationships with the faculty to be "pretty good."

I felt like I was able to come to anybody to ask a question and get right answers. I really didn't have any challenges with the relationship. Depending on how deep you want

to go into relationship, that depends, because some stuff you feel comfortable talking about with professors and some stuff you don't. I just try to keep it at a professional level.

Faculty interpersonal skills may have impacted relationships with the graduates.

Openness to interactions may play a part in the level of closeness that is felt and personalities may not match. Samantha felt that relationships are developed through a willingness to offer aid and to create those relationships.

I think my bonds with people depended on how open or willing to help they were. So, for the teachers that I really felt like I could talk to, . . . there were people that encouraged us to ask questions in class . . . Or if the class was [*sic*] having trouble in one area, they'd spend time to try to help us figure it out. And some of the faculty, not very many . . . they would just to try to make stuff challenging, just to be challenging, just to say, "Ha, I gotcha [*sic*]." But overall, I had good relationships and good feelings about the faculty.

Scott enjoyed his relationships with the faculty. In his opinion, any issues that may have been present were not related to race.

I love the faculty as a whole. It was [*sic*] a few people that kind of rubbed me the wrong way, but to stay on topic with African-American, . . . I don't believe it was because of that. I don't know for sure. It's just some people you hit it off with, some people you don't. As a whole, I thought the faculty was great.

In contrast, some relationships between the graduates and the faculty were limited or non-existent. This was related to feelings that faculty expectations were for poor academic outcomes or from the lack of trying to get to know the student. Having a majority of Caucasian faculty

impacted the relationship between one of the graduates and the faculty. Grace felt that some faculty assumed that she would not do well in the curriculum.

I didn't talk much to faculty unless it was really just about school. I had certain teachers who I knew I could talk to and others were kind of hard to read. . . . Or you feel like all eyes are on you sometimes. Or if you do well . . . and they weren't expecting you to do well. And they may feel like they were just encouraging you . . . but we see it as "Oh you weren't expecting me to do well. You thought I would be at the bottom of the class, but I ended up being up here."

The fact that faculty did not know Noah's name after having been in the program for almost three years was telling of the relationships he had with faculty. As a result of this, he did not believe that he could talk candidly with faculty.

I didn't really have a real relationship with the faculty. . . . I would go see my teachers about my tests, but I'm still in the third year, and people were still calling me another name. . . . It definitely wasn't a one-on-one type of relationship with the majority of my professors. I didn't really think I could talk to them about a lot of things outside of what was going on inside the school.

Julia attended an HBCU for her undergraduate studies. Transitioning to a school with a majority of Caucasian faculty affected the relationships Julia had with them. She felt that to interact with the faculty, she would have to change who she was.

I would probably say I did not have a relationship with them, besides if I attended some type of group tutoring. I guess my challenges were, they didn't look like me or talk like me, so it was more of, you have to . . . adjust the way that you talk so you don't get looked at as being, like, ghetto, or, you know, not being disrespectful. And you have to

talk with them, not that I'm a very disrespectful person, but you have to change the way that you talk to people. And, I guess I just didn't get that warm feeling that they wanted a relationship.

Other difficulties related to transitioning from an HBCU to UMMC were reported by some of the graduates. They reported going through an adjustment period when going from schools where they had been in the majority to being one of the minority. "This was my first experience of being a minority," reported David when asked about the challenges he faced during school at UMMC. For Noah, "getting used to being the minority in a class" was challenging, and "coming to UMMC was the first time I had ever been in class with white people throughout my entire life." Julia discussed difficulty with transitioning to a school that had Caucasian faculty as a result of her background. "I came from an all-black school with all-black instructors. It was a little different transitioning to a school where it was all-white classmates, white instructors. . . . The way everything flowed was different. It was a challenge."

Peer culture. According to Weidman et al. (2001), the socialization process of a graduate student may be impacted by how they enter a graduate program, as one of a cohort or as an individual. Being a part of a cohort will influence learning processes and "enriches the experience socially and emotionally" (Weidman et al., 2001, p. 62). At UMMC, students enter the physical therapy program as part of a cohort model. Graduates of the program discussed at length the peer culture within their respective cohort. Relationships with their African American peers were unanimously positive, whereas, assessments of the relationships with peers of other ethnicities received mixed reviews.

"Family" was a term used to describe the relationships with their African American classmates. Many of those interviewed remain close years after having finished the program.

Elizabeth reported, “So other African-American students in my class, those are my best friends to this day. I still talk to everybody. Those are my people. Much love to them.” According to Samantha, “they were really like my family away from home.” According to Noah, the bond formed between he and his African American classmates aided in the successful completion of the program. “With all the African-American students, we were real close-knit. We built a close bond, and we made sure everybody was straight.”

Having similar backgrounds was important to some of the graduates. Being able to relate to each other aided in the ability to be successful in the program. Joshua believed, “it was just easier to be around those particular students, just because it was somebody that looked like you.” David expressed similar thoughts and was appreciative of having other African American students in his cohort.

With PT school, all of us just seemed to gel, all the African Americans. And so it was good to go through all of that with someone who was going through some of the same things as you were going through.

Alexander agreed that being a part of a group of people who are similar to him was important to his success in the program. He believed that a reason for the closeness was related to the small number of African Americans in his class. The closeness that he reported as being present during school has remained after graduation.

We were all close and that being the reason because we were so few in numbers. . . . Real relationships. . . . I think that was important because when you're going through a challenging program, and . . . you've always been told you can't do this. . . . It's good to have somebody else who can relate to those things and keep you encouraged. Nothing is given to us. . . . I had to work hard and earn it. And when you have people that know

where you're coming from, it makes it easier to develop a relationship with them.

Whereas all relationships between the graduates and their African American peers were viewed in a favorable light, relationships with classmates of other ethnicities varied. They ranged from being “great” to having only one Caucasian friend to feeling excluded by Caucasian classmates. David “was good with everybody,” and Scott reported, “They were great! I could talk to anyone I liked!” Katherine was close to many in her class. “I could work well with most of my classmates. . . .We respected each other. And that is all that I could ask for! “You treat me fair; I’ll treat you fair!” “

Having good relationships with some people while not having good relationships with others was something that a few African American graduates expected. Wyatt reported, “I’m really close with other students in class too. I didn’t have the best relationships with some people. Some were nonexistent and that’s to be expected.” Joshua felt that “you’re not going to be best buddies with every single person that you encounter. This is a taste of reality!” Elizabeth reported only having strong relationships with her roommates when talking about the relationships with peers of other ethnicities. “I wouldn’t say I formed any strong relationships besides my roommates. I’m definitely still [sic] friends with them!” Grace felt isolated at times.

With the other students, sometimes, we did try to talk to them, and they would kind of push us out a little bit, as far as if you asked for notes or about notes, they would ignore you. It was little small things that constantly happen, and then you get to the point where you don’t talk to anybody.

Microaggressions. Not every African American student may recognize microaggressions, but this does not mean that they do not occur. These incidents are considered to be “subtle acts of racism” and defined as “brief everyday exchanges that send denigrating

messages to people of color because they belong to a racial minority group” (Eisen, 2015, p. 47).

Typically, these exchanges occur more than one time, and the individual feels the effects of continuous degradation. Some of the graduates described various events that occurred during their experience within the curriculum, ranging from during the interview process, in the classroom, while participating in extracurricular activities, and while in the clinical environment. Noah described an event that took place when he interviewed.

During my interview process, I remember specifically being asked, “Do I feel like my college [an HBCU] was challenging?” And I would say around my second year, me and some of my classmates [*sic*] were talking about our interview process, and I was like, “Did they ask you was [*sic*] your school challenging?” They were like, “No. That's low-key, a disrespectful question.” Because I remember feeling disrespected about the question, because I was [*sic*] “I went to an HBCU . . . and so you ask me, was my school challenging? And you didn't ask any other applicants was their school challenging?” My school was an HBCU; their school is a PWI [Predominately White Institution]. I mean, that's the only difference, so “what are you trying to say?”

Noah described an event that occurred in the classroom related to an instructor giving an exam that he felt had a nuance of racism.

It would be subtleties in class. I specifically remember a professor walking in and we're sitting and taking a test, and she's like, “It's crowded on this side of the room.” And I looked to the opposite side of the room, and there was [*sic*] way more people on that side of the room, but the people on my side of the room, it was all the black students together. On the other side of the room, it was just white students. I remember some of these, and I just remember thinking, “All racism ain't [*sic*] blatant.” Not to say that they

were racist, but it's a racist undertone. Sometimes I feel like people don't understand that they have a racist undertone without being blatantly racist.

An additional incident occurred with a group project. Noah felt that he was being disregarded when expressing his opinions to the group.

I specifically remember being in a research group and dealing with the fact that . . . I could say something that I believe is right, and my peers . . . would be like, "Eh, I don't know." They could say the exact same thing, but they would respect their opinion.

Other graduates noticed microaggressions as well. These were in the classroom as well as outside of the classroom. Elizabeth stated, "Just talking about race is an issue because we all notice it. Sometimes it can kind of feel like it's being ignored just because it's not ever talked about." Interactions with some classmates were challenging for Samantha. "The biggest thing was the frustration of being in class with some people who weren't open-minded or understanding and having to keep trucking and not acknowledge it because you don't want to be a person who makes a scene."

Microaggressions may be felt at any point in a student's educational experience. Incidences may occur outside of the classroom setting, such as with intramural sports. Wyatt and Alexander described their experiences related to team sports. Typically, a cohort will put together one team for each sport, and this team will represent their class. A friend and classmate asked to join the intramural team and Alexander stated, "They shied away from him." As a result of this, another team was formed. Alexander discussed this team.

Our own team was very diverse. We had all the African Americans; we had Hispanic, Asian and even the other ethnicity, Caucasian . . . so we had two PT teams. One all just one ethnicity, the other very diverse. And I think because we were so well-diverse, that's

the reason we took home the whole thing on that whole flag football tournament that semester. . . . I really wish we could have had just one team. . . .It just goes to show you, teamwork works. Diversity works. So that was just kinda [*sic*] one incident. Not such a big deal . . . but it is something that kind of resonated with me throughout the program.

Microaggressions were not only discovered in the classroom setting, but also in the clinical environment. As part of the curriculum, students are required to complete four 8-week clinical experiences. They go into the clinic of their choice to learn from physical therapists and the students are given opportunities to treat patients. Noah also discussed microaggressions when going into the clinics as it related to his name. “On paper, that doesn’t look like a black name. You wouldn’t know that I was black. But when I walk in, you would see they would be like [*sic*], ‘Oh, it’s a black dude.’ “

Wyatt had additional concerns with the physical therapy program and his cohort. He spoke about how he “questioned administration at times and even integrity at times.” He decided to send an email to inform the leadership of the program about issues going on within the class and was upset when nothing was done to address the issues. According to Eisen (2015), “ultimately, the failure to acknowledge a system of racism renders people of color’s voices silent and functions as yet another microaggression” (p. 47).

I felt like there wasn't a cultural sensitivity. It was like cultural insensitivity going on. There were times within the class where I felt like students were being malicious towards other students or excluding people. . . . So the email was just basically, I was using events that occurred. . . . I know people went and talked to the administrative people wherever they were, whoever they be [*sic*], whoever the people chose to go talk to about it, and nothing was done. That bothered me because we're professional. We're educated enough

to understand that in this world of PT, diversity is uber important. Whether people want to admit it or not, some people don't want to be diverse. Some people don't want to have the diversity occur because it threatens the actual normal thing. Change is hard for people. You change something, something else changes.

Recommendations. As demonstrated earlier in this chapter, the graduates made recommendations that were specific to the *inputs* section. Additional recommendations are included in the *environment* theme and are related to diversifying the department and recommendations for future African American physical therapy students. Though only two of the graduates mentioned diversifying faculty as a way to improve diversity of the program, these recommendations are important (Table 15). According to Twale et al. (2016), “the lack of faculty of color posed trust issues with students of color” and “without a critical mass of diverse faculty and peers in the graduate program, entrant students of color struggle to find advisors and mentors” (p. 82). These recommendations for diversifying faculty could be instrumental in providing ways to improve the diversity of African American students.

Table 15. Recommendations for Diversifying Faculty

Pseudonym	Comments
Wyatt	Diversify your department. Diversify your department as soon as possible because it allows for the visibility to be better for people to actually want to come back.
David	Maybe hiring more African American staff, not to replace anyone, but just for those coming in to see, ‘Hey, there’s someone like us here!’
Wyatt	Have more people invited back for talks. . . . Seeing people of the same ethnicity I am talking makes me feel good. It makes me think that the program actually cares about me.”

Additional recommendations were made for ways in which future students of the physical therapy program could successfully navigate the curriculum (Table 16). The graduates felt that it

was imperative that they provide ideas that could help students complete the program. As discussed earlier, all graduates wanted future students to be successful in their attempts to complete the program.

The limited diversity of the program, faculty and students, was felt to be hindering to the program. Relationships between the African American graduates and the faculty varied with some having positive relationships and some having no relationships. Additionally, the relationships between the African American graduates and their peers varied depending on if same ethnicity or different. Lastly, microaggressions were reported by some of the graduates. Whether the environment was considered to be positive or negative could be influential in the successful completion of the program by African American students.

Table 16. Recommendations for Future African American Physical Therapy Students

Pseudonym	Comments
Alexander	[Once admitted], stay focused, continue to work hard, try not to be intimidated. You have what it takes to succeed regardless of what anybody tells you or who is around you or our surroundings or where you come from.
Noah	Congregate with other black students in different programs because it's important to see some black faces and try to find some comfort in them. They are going through the same type of grind that you're going through.
Katherine	Don't slack off! . . . Do what you have to do to be successful because not only does it look good for you; it looks good for your program. And don't let them regret putting you in! . . . Use your resources and use your time wisely!
Grace	Don't let all of this stress you out, because everyone is stressed out. The whole program is about learning how to be under this kind of stress and still get through it, because that's just life."
Katherine	Build great relationships with your professors . . . so that you can have the open line of communication.
Grace	Don't think that you are in it by yourself because a lot of teachers, you can go to talk to them [<i>sic</i>] and they'll help you.
Samantha	Form a network, whether that be with other students or other faculty.
Katherine	Learn from your classmates because they may have a way that they learn something that is just brand spanking new to you, and you can get it a lot faster sometimes from them rather than in class.

Outcomes

Weidman et al. (2001) found that “a culminating outcome of the graduate and professional socialization process is an orientation toward professionalism that elevates the holder of a specialized body of knowledge to a position that characteristically receives certain esteem, benefits, and privileges” (p. 47). The *outcomes* that an African American student may accomplish can be at any point in the socialization process. For the graduates of our program, the subthemes that emerged included career development, personal growth, and community engagement.

Career development. For the graduates, a new career emerged upon completion of the physical therapy program at UMMC for the graduates. This offered the certainty of financial security and a variety of work environment options. Grace believed “the PT program taught me everything I know about physical therapy.” For Wyatt, he was provided with “security” and that “I knew as a PT, when I get a license, I can get a job anywhere.” Samantha and Julia believed that the exposure they received in school helped in the area of PT in which they now work. Samantha reported, “The program exposes you to different areas of PT that you may not have heard of.” Julia stated, “I guess it changed my mind on what I wanted to do when I finished physical therapy school.” Katherine discussed how working with her classmates helped prepare her to work with others in the workplace.

It just goes back to when we had to do group work. Being able to work with others prepared me and reinforced it to me that you are going to have to work with a lot of other people once you get out in the working world, so I feel like this program thoroughly prepared me for what to expect.

Personal growth. Changes in personal attributes may be achieved through the completion of a graduate program, such as the physical therapy program at UMMC. Subthemes ranged from increased confidence to improving openness to increasing expectations of one's self. Alexander reported, "I think it's made me a lot more confident as far as competing with everyone else. If I can get through that program and I can be one of the best just like anybody else could be one of the best."

Going through the program aided Julia in improving her ability to be more open. "It's made me a lot more personable. I like to talk more. I feel like I am an introvert. I don't really like talking, but it makes me talk more and be friendlier."

Scott has increased expectations of himself after having completed the program. He feels that this is a direct result of expectations placed on him by the faculty and the program.

They demanded a lot out of us and the fact that they demanded a lot out of every student, I felt like it put me in a different mindset when I left. And because they demanded a lot out of me, I demanded more out of myself once I left the program.

Community engagement. One characteristic of the program that was discussed was the community service hours, which are required as a part of the curriculum. The program allows a student to tailor his or her service hours to meet their specific interests. This made a positive impact on several of the graduates. This community engagement carried over into the graduates' lives after having completed the program. Samantha appreciated the program's required community service.

One of the things that I really liked about UMMC was that they are service driven. . . .

They made a point of saying every semester you need to have this number of community service. So for me, that was a big part of me becoming a physical therapist. I didn't do it

for me. I did it because I wanted to be able to work with others and help make people enjoy their lives and get back to their sense of self.

Grace reported that community service aided her ability to determine disparities in the community and aid in her treatments of her patients.

We do a lot of community service here at UMMC and that helps a lot because you learn how to go out and look for things that the community needs without them actually telling you ‘hey look this is a problem.’ So I really love that with the community service. That really helps you when you go into your program to really have that compassion that you have for your patients.

Elizabeth believed that the program aided in treatment of her patients. “Respecting who they are as a person and their viewpoints without it being offensive, not feel like it’s a personal attack on you and letting them be them, and you be you, and that’s fine!” Joshua feels that the program aided in his ability to treat his patients as well. “You’re not going to get to choose your patients who walk in the door or the patients in the facilities, so you have to treat everybody the same. You can’t treat one patient bad [*sic*]!”

Many of the graduates who were interviewed had varied outcomes as a result of completing the program. Though varied in nature, they all demonstrated improved lives, personally and professionally. Career development aided in improved socioeconomic status and opened up opportunities to a variety of practice settings. Personal growth and community engagement were positive aspects that contributed to bettering the graduate as a professional, but also positively impacted the areas in which they worked and lived.

Implications

The findings of this manuscript run parallel with the framework by Twale et al. (2016), especially as related to the socialization process of African American graduate students. The interviews of the graduates of the program provided rich data that will be used in helping answer the questions provided in the research plan. This information will aid in determining ways in which to enhance the diversity of the physical therapy program at the University of Mississippi Medical Center School of Health Related Professions.

Summary

Completing and analyzing interviews with eleven of the African American graduates of the physical therapy program at UMMC was one way to study our problem of practice, limited African American diversity within the physical therapy program at UMMC. The expectation of using data collected from this study in conjunction with data from the quantitative admissions study and the qualitative study of current UMMC graduate students will aid in the process of answering our two research questions. Utilizing the framework by Twale et al. (2016) and interviews of African American graduates of the physical therapy program at UMMC SHRP, three themes emerged that included *inputs*, *environment*, and *outcomes*. Utilizing the subthemes discovered will aid in helping answer our question: “What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?” Recommendations, specific to recruitment efforts, mentor programs, cultural competency, and admissions process, will be made that may help increase the African American diversity of the program.

BIBLIOGRAPHY

- Capers, Q., McDougle, L., & Clinchot, D. M. (2018). Strategies for achieving diversity through medical school admissions. *Journal of Health Care for the Poor and Underserved*, 29(1), 9–18. <https://doi.org/10.1353/hpu.2018.0002>
- Center for Disease Control. (2013). CDC health disparities and inequalities report. *Morbidity and Mortality Weekly Report*, 62(3), 1–187.
- Commission on Accreditation in Physical Therapist Education. (2017). *Aggregate program data: 2016-2017 physical therapist education programs fact sheets*. Retrieved from http://www.capteonline.org/uploadedFiles/CAPTEorg/About_CAPTE/Resources/Aggregate_Program_Data/AggregateProgramData_PTPrograms.pdf
- Eisen, D. (2015). Constructing "Hawaiian," post-racial narratives, and social boundaries at a predominantly white university. In E. M. Lee & C. LaDousa (Eds.) *College students experiences' of power and marginality: Sharing spaces and negotiating differences* (pp. 46-63). New York, NY: Routledge.
- Fenderson, A., & Fenderson, J. (2015). First generation. Retrieved from <https://www.youtube.com/watch?v=pfDx4duheHk>
- Glesne, C. (2016). *Becoming qualitative researchers: An introduction* (5th ed.). Boston: Pearson Education Inc.
- Mompremier, L. (2009). Socioeconomic status and higher education adjustment. *The SES Indicator*, 2(1). Retrieved from <http://www.apa.org/pi/ses/resources/indicator/2009/04/adjustment.aspx>

- Nelson, A. (2002). Unequal treatment: Confronting racial and ethnic disparities in health care. *Journal of the National Medical Association, 94*(8), 666–668.
- Prince, M., & Williams, K. A. (2017). Suggestions to increase the number of African-American male physicians. *American Journal of Cardiology, 119*(8), 1281–1283.
<https://doi.org/10.1016/j.amjcard.2016.12.022>
- Turner, C. S. V., Gonzalez, J. C., & Wood, J. L. (2011). Faculty of color in academe: What 20 years of literature tells us. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 41–73). New York: Routledge.
- Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of color: Revisiting the Weidman-Twale-Stein framework. *The Western Journal of Black Studies, 40*(2), 80–94.
- University of Mississippi Medical Center. (2018). *2018-2019 Bulletin* (pp. 1–327). Retrieved from www.umc.edu/bulletin
- U.S. Census Bureau. (2010). *2006-2010 American community survey*.
- U.S. Census Bureau. (2016). *Annual estimates of the resident population by sex, age, race, and Hispanic origin for the United States and states: April 1, 2010 to July 1, 2015*.
- Weidman, J. C., Twale, D. J., & Stein, E. L. (2001). *Socialization of graduate and professional students in higher education. A perilous passage?* (3rd ed., Vol. 28). San Francisco, CA: Jossey-Bass.
- Wilcox, K. C., Weber, M., & Andrew, D. L. (2005). Factors influencing minority students' choice of physical therapist education programs. *Journal of Physical Therapy Education, 19*(3), 8–14.

CHAPTER V: PRACTICE RECOMMENDATIONS

By Melanie H. Lauderdale, Kimberly R. Willis, & Sherry T. Colson

As faculty in the Department of Physical Therapy at the University of Mississippi Medical Center (UMMC), we are acutely aware of the lack of African Americans applying and being admitted to the physical therapy educational program. This lack of diversity may compromise the depth of our students' learning experiences and preparation for professional practice. The literature identifies the importance of diversity for students of all races in the classroom (Gurin et al., 2011). Furthermore, the lack of diversity is evident across all doctoral healthcare fields (Thomas, 2014). Diversity within the healthcare workforce can positively impact access to healthcare and improve patient satisfaction (The Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce, 2004). As faculty and members of the Department of Physical Therapy Admissions Committee, we are challenged with the task of increasing diversity, specifically African American students, within the school and workforce. Our problem of practice attempts to address this disparity. The Carnegie Project on the Education Doctorate principles of ethics, equity, and social justice (Carnegie Project on the Education Doctorate, 2018) are deeply rooted within our problem and serve as the foundation for change.

The conceptual framework used for this dissertation was created by Twale et al. (2016). It describes the socialization process of African American graduate students. This process is a non-linear approach to how students, entering a professional program, progress from *entering students* to *novice professional practitioners*. Students are allowed to move through the various

components of the framework on an individual basis and in a varying sequence. In addition to the previously mentioned components, the framework consists of three additional ones: *disciplinary/professional communities, higher ed institutions, and personal communities*. All of these components contribute to the socialization of African American graduate students.

By incorporating the framework by Twale et al. (2016), we were able to “walk through” the student’s journey through the physical therapy educational process from beginning to end. In order to make recommendations for increasing the diversity of African American students in physical therapy, we explored three facets of the problem. First, we examined the motivation and influences that led a student to select a field of healthcare. African American students enrolled in doctoral programs in medicine, dentistry, pharmacy, and physical therapy were solicited to participate in three focus groups. Questions were selected in order to identify what motivated or influenced the student to select his or her career field. Three focus groups were conducted, and themes and codes were identified. These themes were compared within the four healthcare fields in order to identify areas that can assist in attracting and exposing African Americans to the field of physical therapy.

Secondly, we evaluated the admissions criteria from a quantitative perspective and assessed correlations between admissions data, including undergraduate grade point averages (GPA), interview scores, Graduate Record Exam (GRE) scores, and first year success as measured by doctoral program GPAs. By assessing this quantitative data, we were able to identify weaknesses in our admissions process and components that may be limiting African American applicants from being accepted to the program. Admissions data was obtained from records of the Department of Physical Therapy and first year GPAs were obtained from the registrar’s office. Data was analyzed utilizing SPSS statistical software package.

Finally, 11 individual interviews were conducted with African American UMMC physical therapy alumni with the goal of identifying strengths and weaknesses within the existing program as well as to help gain insights into students' perspectives of the UMMC physical therapy program. The interviews took place either by phone, skype/FaceTime, or face to face. The interview results were sorted into codes and themes emerged. This information gleaned from the interviews was utilized to recommend improvements within the educational environment.

The Findings

Chapter Two

The overall inquiry questions this study is attempting to address include (a) How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC? and (b) What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC? In order to explore this line of inquiry in-depth, the investigation for this chapter was narrowed to the specific question, "What motivates and influences a student to select a particular career field?" The goal was to identify main factors that motivate or influence a student to select a specific field of healthcare and use these factors in formulating a plan to recruit more African American students to the field of physical therapy. This line of inquiry reflects the *entering students* phase of the Twale et al. (2016) framework. Through exploration of African American students currently enrolled in UMMC doctoral programs which include medicine, dentistry, pharmacy, and physical therapy, we were able to identify three main areas of motivation which include past exposure, extrinsic influences, and future expectations.

Students from medicine, dentistry, pharmacy, and physical therapy all identified individuals or situations that exposed them to their respective field at an early age. Many voiced establishing relationships with professionals that both influenced their decision to enter a particular field or mentored them through shadowing. In contrast, many students from all four healthcare programs included in this project also identified individuals or groups that had a negative influence on them. These negative influences could potentially limit other students from entering a career in healthcare and included friends and family that did not support higher education due to financial and time commitments. Most of the students within the focus groups identified strong family support for them to enter a healthcare educational program and this support appeared to be a compelling influence in pursuing a career in a doctoral healthcare field.

Extrinsic influences include both positive and negative repercussions. These influences include financial limitations, lack of academic preparation, limited confidence and self-efficacy, and lack of support from undergraduate faculty. Also included in these influences are cultural differences within cohorts that could affect performance while attending school and matriculation through the program. Influences also include microaggressions and poor cultural awareness among peers.

The final theme identified within the focus groups was future expectations of each student. All students voiced the desire and expectation of helping people. Many were influenced by experiences with loved ones or personal incidents that motivated them to enter their field to improve healthcare for their family and others of their race. All sought stability and job security. Work-life balance was extremely influential among the expectations described by dental students and physical therapy students but not the medical students. Veal et al. (2004) cited that regular hours, access to family time, and high salaries were among the reasons to select

dentistry above other healthcare fields. This difference may be attributed to the nature of a medical doctor's work schedule being less structured or regimented.

The Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce (2004) reported minorities such as African Americans are more likely to treat indigent patients and return to underserved areas. Students within the medical school focus group expressed the desire to return to either their home towns or areas that are underserved by healthcare professionals. In contrast, both physical therapy and dental students looked forward to leaving Mississippi and exploring other cities and towns that, in their opinion, could offer more social activities. Finally, all students sincerely desired to foster and mentor other African Americans into their field of study. All desired to improve the diversity within their given field.

Chapter Three

The third chapter of this manuscript continues to address the *entering students* aspect of the Twale et al. (2016) framework. In this chapter correlations between admission data points and first year GPAs were determined. Currently there are six admission data points used when considering an applicant for the physical therapy program. Those six points include average file review score, average interview score, GRE quantitative score (GRE_Q), GRE verbal score (GRE_V), overall college GPA (GPA_O), and required (pre-requisite) college GPA (GPA_R). All of these variables, along with the GRE total score (GRE_T) and writing score (GRE_W), were correlated with GPAs for the first three semesters of the physical therapy program (Summer_GPA, Fall_GPA, Spring_GPA). The correlations were done for all students and were separated by race to determine any differences between White/Caucasian and African American students.

While most of the variables demonstrated little to no correlation, some of them did have a weak correlation and a few had a moderate correlation. Overall GPA and GPA_R had weak correlations with program GPA for all students as well as African American students and students of other races in at least either the fall or spring semesters. GRE scores were not correlated with GPAs in any semester for all students, but when separated into races, all four GRE scores were weakly or moderately correlated to the Summer_GPA only for African American students. While this is an interesting finding, one must consider that the sample size for the African American group was very small and there was only one other correlation with GRE scores and fall and spring GPAs for African Americans, which was GRE_W and Spring_GPA. Therefore, there is not enough data to support making recommendations for using the GRE scores as a predictor of success for African Americans because there was a small number of students in this population and no consistency across the semesters. While GRE and GPA scores are very objective, the file and interview scores ostensibly evaluate the personal attributes the applicant possesses. Once again, the file and interview scores were not correlated for all students, White/Caucasian students, or students of other races, but the interview scores were correlated across all three semesters for African American students with a weak to moderate correlation.

The correlations provide a plethora of data, but overall, the lack of stronger correlations with any of the admissions variables with any group of students may indicate that the use of this data in the admissions process may not be as effective as thought. The GPA appears to be the best predictor for all students across semesters. While the data is limited due to the small sample size of African American students, the interview scores may be useful in identifying successful African American students, while the GRE scores may help to indicate students who may not be

successful in the first summer semester. Again, this must be used very cautiously due to the small sample size.

Chapter Four

The fourth chapter of the manuscript addresses the experiences of African American physical therapy graduates while they were students in the program at UMMC. Eleven interviews were completed, transcribed, and analyzed. Utilizing the framework by Twale et al. (2016), the socialization process was explored in an effort to identify graduate perceptions that may limit enrollment and persistence of African American students in the physical therapy program at UMMC.

The first theme identified with the graduates, *inputs*, aligns with the entering students section of the Twale et al. framework (2016). All of the graduates' attitudes toward admissions were positive and some of the graduates discussed attributes that aided in their matriculation of the program. Many of the graduates expressed early exposure to physical therapy as key to aiding in improving diversity of the program at UMMC. The idea that the admissions process included a "quota" was the final subtheme. Though quotas are not utilized in any capacity in the admissions process, some of the graduates felt that a quota for African American students was in place and that upon reaching the quota, no additional African American students were admitted.

The *environment* in which the graduates functioned while in the physical therapy program was the second theme identified. It included limited faculty and student diversity, faculty relationships, peer culture, and microaggressions. Graduates gave a variety of ideas of how the limited diversity of the program may impact healthcare. Faculty relationships varied as did interactions with peers of ethnicities different than their own. The relationships between the graduates and their African American peers were always considered to be positive.

Microaggressions were noted throughout the three years in different areas, including within the classroom, with extracurricular activities, and in the clinical environment.

The final theme identified with the graduates was *outcomes*. The graduates noted positive outcomes upon successful completion of the program that included career development, personal growth, and community engagement. They believed that opportunities were provided to them as a result of being a physical therapist. Having completed the rigorous program helped several realize the grit and determination within themselves, and this was sustained during their career. Lastly, community service opportunities aided in many of the graduates' feelings of community engagement after graduation.

An interesting addition to the chapter includes recommendations by the graduates. These were included in the *inputs* section and in the *environment* section. Within the *inputs* theme, recommendations were focused on admissions, mentors, and African American physical therapy applicants. Within the *environment* theme, recommendations were made for diversifying faculty and for future African American physical therapy students. All recommendations made by the graduates were positive with the hope of improving the diversity of the physical therapy program at UMMC. The suggestions were considered by the authors when formulating the overall recommendations for this project. By having input from past students, the recommendations will hopefully address some of the factors that are perceived to limit the diversity of the physical therapy program.

Summary

The overarching question addressed in this dissertation is “How do program processes and student perceptions limit the enrollment and persistence of African American students in the physical therapy program at UMMC?” Quantitative data analysis of admission data, focus

groups of current doctoral students, and interviews with physical therapy program graduates were conducted in order to glean insights to the answer to this question. The final goal of this project is to answer the second question “What program revisions or enhancements can be made to increase the enrollment and persistence of African American students in the physical therapy program at UMMC?” Several insights were discovered following the analysis of the data collected which was used in making recommendations to increase the enrollment and matriculation of African American students within the physical therapy program at UMMC.

Exposure to a healthcare field early in life had a strong influence and impact on each of the focus group participants as well as the interviewed graduates. The students had established relationships with clinicians, shadowed other healthcare providers, or had personal experiences with the care of family members or themselves. This exposure occurred most often prior to entering college. Veal, Perry, Stavisky, and Herbert (2004) expressed similar findings in their study of students in dentistry. Prince & Williams (2016) and Rao & Flores (2007) also identified exposure to medicine at an early age as a strong influence on medical students' choices in a career. Therefore, potential African American students need to be exposed to the field of physical therapy before entering college.

Focus group participants and graduates who were interviewed reported feeling inadequately prepared for post graduate work. Many reported lack of science classes and subpar high school education. Data collected in this study comparing African American GRE scores and GPAs with Caucasian scores revealed overall lower scores for African American applicants. Camara & Schmidt (2006) also reported African Americans performance scores on the GRE and the MCAT were lower than Caucasian, Asian, and Hispanic students. This racial discrepancy in test scores may support the inadequate preparation within many of the African American

communities. In addition, Prince & Williams (2017) reported lower levels of educational preparedness among African American medical students.

There are conflicting reports within the literature regarding the predictability of success in graduate school based on GRE scores and college GPA. Shiyko & Pappas (2009) reported GRE scores as strong predictors of academic achievement in physical therapy school as well as GPA for students younger than 25. However, Moneta-Kiehler, Brown, Petrie, Evans, & Chalkley (2016) found the GRE a poor predictor of board exam pass rates and graduation rates for biomedical students in graduate school. Interestingly, this study also found GRE scores to be a moderate predictor of first semester GPA only.

A support system was shown as a strong influence on choice of career and on matriculation, both positively and negatively. The lack of a support system during career planning often led to steering away from higher education. The members of the focus groups and interviews all described a positive support system that encouraged them to enter a healthcare field and offered financial and emotional support. Included in this support system are mentors and role models. Many of the students involved in this project reported a positive influence from role models within their respective professions. Most expressed the desire to become mentors to aspiring healthcare professionals upon graduation. In contrast, lack of support and lack of role models were a deterrent to entering a healthcare field. While the majority of the focus group participants and graduates that were interviewed voiced positive support, the students in this study identified lack of support as a barrier for potential students. Similarly, Rao & Flores (2007) identified lack of role models and lack of exposure to medicine as barriers for medical students entering an academic program. Prince & Williams (2007) and Girotti, Park & Tekian

(2015) also found the utilization of mentors and role models a strong positive influence on students entering a healthcare field.

Steele & Aronson (1995) identified feelings of low self-esteem and general lack of acknowledgement of African American intellect and aptitude a barrier to staying in medical school. Students from all focus groups and some of the graduates interviewed mirrored similar stereotypes and felt, as an African American, they were considered less intelligent by both peers and faculty. Furthermore, the focus group students felt they had to work harder for their grades and recognition than their Caucasian peers. Being a minority made African American students feel different and set apart from other members in their cohorts. Gurin et al. (2011) reported that a solo student in the classroom or a very small percentage of a minority within a cohort can be detrimental to the minority. Here, Gurin et al. (2011) suggested the minority students' otherness is emphasized, "In such situations, the solo or token minority individual is often given undue attention, visibility, and distinctiveness, which can lead to greater stereotyping by majority group markers" (p. 271). These subtle microaggressions may impact a student's matriculation or decision to enter a healthcare field. Lack of cultural competence among medical, dental, pharmacy, and physical therapy students at UMMC may also affect persistence of African American students within their respective programs.

All students interviewed expressed concerns regarding financial cost of attendance. Most have accrued substantial debt in order to obtain their degree, but all accepted this responsibility as a consequence of their education. However, cost of attendance may be a barrier in considering a career in healthcare. Rao & Flores (2007), Prince & Williams (2017), Girotti, Park & Tekian, (2015) and Capers, McDougle & Clinchot (2018) all identified the cost of attending a medical program a barrier to enrollment for African American students.

Lack of African American faculty among healthcare programs was cited by the students in this study as a concern and possible barrier to attendance and matriculation. African American students look for faculty of color as mentors and role models. Turner, Gonzales & Wood (2011) reported the lack of African American faculty as a barrier to attendance. Wilcox, Weber, & Andrew (2005) reported the presence of African American faculty influenced a physical therapist's choice of school to attend. Increasing diversity among faculty appears to be an influence on a student's perceptions of the quality of education and the relationships between students and faculty.

These findings offer valuable insights into students' perceptions and experiences before, during, and after graduating from a healthcare doctoral program. In addition, the analysis of success predictors may prove important in assessing the admissions process. African American students report experiences that appear to be unique to their race. This includes but is not limited to: poor academic preparation, the presence of microaggressions, and lower standardized test scores. These insights can be used to address the lack of African American students in physical therapy. As a result of this inquiry, the physical therapy department at UMMC has already taken steps to increase diversity by making changes to the admissions process. Emphasis on quantitative data such as GPA and GRE scores has been reduced and a more holistic approach has been taken. The literature review that examined healthcare programs addressing lack of diversity universally agreed on a holistic admissions approach that lessens the emphasis on quantitative criteria such as GPA and GRE scores and increases the emphasis on qualitative data such as life experiences, personal attributes, special talents, and perceived potential (Capers, et al., 2018; Price et al., 2007; Felix et al., 2012; Ballejos et al., 2015). In the next section, program and policy changes within the Department of Physical Therapy at UMMC will be recommended

in order to improve the application, enrollment, and matriculation of African American students in physical therapy.

Improving Practice

The goal of this project is to determine ways to increase African American diversity in the UMMC physical therapy program. Using the collaborative approach described, we were able to study this problem through several lenses with different types of data, including qualitative and quantitative. By considering all the findings, we have several recommendations to help improve the equity and justice in the physical therapy program at UMMC.

Programmatic Changes

Recruitment efforts. One of the themes that emerged in the focus groups was that exposure to the chosen healthcare profession was a factor in deciding to pursue that field. Graduates also expressed the importance of recruiting African American applicants and educating them on the requirements and attributes that are needed for the physical therapy program. Many focus group and interview participants also indicated that reaching African American students at a young age is important and that seeing other African American health care providers in their field of interest encouraged them to pursue a certain field. Some of the focus group participants from other programs indicated that they did not have any knowledge about the field of physical therapy when making a career choice. Currently, the career fairs and program awareness days that promote physical therapy are conducted with multiple other allied health programs. Recruitment efforts should be developed with a dedicated goal of exposing young African American students specifically to physical therapy. These efforts should target African American students at the junior high or high school level and should include the

presence of African American physical therapists and physical therapist students to promote the program and answer questions about their experiences. Because some of the graduates mentioned a rumor of a “quota” of African American students admitted, education regarding the admissions selection process is important to aid in alleviating this concern. Because the Physical Therapy Department at UMMC does not have any African American faculty, pointed efforts will need to be employed to have previous African American graduates and current African American students available to participate in the recruitment efforts of students, including providing remuneration when necessary.

Mentor programs. Along with increasing African American presence in the recruitment efforts, mentor programs should be developed to help increase the diversity in the physical therapy program and to give African American students necessary support while in the program. Many of the African American graduates interviewed reported a willingness to mentor potential and current African American students. Several were interested in returning to their schools as part of a planned activity to expose other students to the physical therapy field. Previous African American students who are now practicing clinicians could be invited to participate in a structured mentoring program for potential and current African American students. By creating a mentor program, potential African American students would be exposed to the field of physical therapy with a practicing physical therapist that, as one of the graduates interviewed stated, “looks like them,” and current students would have a person to discuss some of the difficulties and challenges they have being an African American in the program with someone who has experienced those challenges first hand. Another benefit of the mentoring program could be financial support. Several African American students and graduates expressed concerns about the financial aspect of graduate education, and mentors could give firsthand experience and

suggestions on ways to navigate the financial aid aspect of higher education. Hopefully, having a mentor when preparing for acceptance and during the program would encourage those African American graduates to then become a mentor to other potential African American students.

In addition to having African American mentors, faculty mentors are also important. Currently, the physical therapy program does not have any African American faculty members, and recruitment of faculty members in general in Mississippi is difficult. Therefore, recruiting African American physical therapy faculty is even more difficult. Establishing a faculty mentor program targeting African American physical therapy students who demonstrate an interest in academia could significantly change the faculty demographics. The goal of this mentor program would be to expose African American physical therapy students to the faculty role and mentor them in the steps to take to eventually pursue a career in academics. In the meantime, UMMC may pursue post-doctoral, visiting faculty, or professionals in residency programs to enhance faculty diversity.

Cultural competency. Racial microaggressions were experiences that were discussed both in the interviews and focus groups. These “subtle acts of racism” (Eisen, 2015, p. 47) were experienced within the classroom and among members of the various cohorts. Establishing a mandatory cultural competency training in the first year of the program for students and faculty may assist in decreasing the microaggressions that African American students are experiencing and would also help the Caucasian students become more culturally aware, which is extremely important in the health care field. Currently, cultural competency is a part of the program curriculum, but students are not exposed to it until their second year of the program. By implementing a cultural competency training earlier in the program, students will be more aware of the importance of being cognizant of differences among classmates. Currently, there are

many programs on this topic on campus offered to faculty, but none are required. Requiring faculty to also attend the trainings would be beneficial, especially because all the faculty sit on the admissions committee and participate in candidate interviews.

Student groups. Many students that participated in the focus groups were members of Black Representation in Medicine (BRIM). According to the UMMC website, the purpose of BRIM “is to increase the number of African-American men and women who apply, gain admission, and successfully matriculate into graduate programs related to healthcare professions, specifically medicine” (University of Mississippi Medical Center, n.d-b, para. 6). Currently, BRIM is limited to students in the medical program, but the purpose of the student group seems to allow for students of other disciplines to join. Because UMMC already has BRIM established, facilitating entrance of physical therapy students into BRIM may be the best way initially to get African American physical therapy students involved in a student group. This group would not only assist African American physical therapy students with a support system that would be beneficial for the student experience, but these groups could also contribute to recruitment efforts.

Admissions Process. One section of this project evaluated the program’s admission process and found that few of the admission variables have consistent correlation with academic success as defined by first year GPA for any students, and when there is a correlation, it is a weak and inconsistent one. Given this lack of meaningful findings, the admissions process and data that is used to assist committee members with their decisions needs to be reviewed. First, the committee members need to be notified of the current findings, and then the committee or a subcommittee should begin to assess other ways to evaluate the applicants for the physical therapy program.

There are several things the committee may consider when planning for changes in the admissions process. They may consider seeking out like institutions with a larger minority student population and inquiring about their admissions process. Another suggestion would be to explore alternatives of tools that better predict success in all students but do not limit minority populations and using them while also continuing to assess if they are successful predictors for the students that are admitted to the program.

Implementation Timeline

Recommendations are only just recommendations unless they are put into practice. In order to implement the recommendations from this project, a timeline of goals needs to be established. We feel that there are two initial goals that need to be met, and by meeting those goals, subsequent goals can be realized. One of the first things to address is getting African American physical therapy students involved in a student group. By getting them involved in an African American group of students, the goals for recruitment and mentoring could be identified and facilitated by the student group. As discussed earlier, BRIM is already established, so faculty could speak with the BRIM president about including physical therapy students and having the president talk to the students about membership at the beginning of the 2019 fall semester. If the BRIM group is resistant to accepting physical therapy students, faculty could work with African American students to establish a student group for African American physical therapy students, or for a larger population of allied health students, during the 2019 fall semester.

Throughout the fall 2019 semester, the physical therapy faculty could work with students involved in the student group to begin to develop recruitment efforts that target African American students. With the lack of African American faculty, students will be key players in

the development and implementation of new recruitment efforts. During the same timeframe, a mentoring program could be established. Mentoring and recruitment have some overlap with mentoring serving as a form of recruitment, so these two tasks would need to be developed concurrently.

A new cohort enters in the summer semester, and one of the courses the students take is an introduction to physical therapy. This class would be an appropriate place to incorporate a cultural competency training program. Because of the timing of this project, a pilot cultural competency program could be initiated in the fall semester of 2019 for the faculty. This would allow the training to take place for the faculty before interviews in the spring of 2020, and would also give the faculty a way to assess the program before offering it to students. Once the faculty are satisfied with the cultural competency training, the new cohorts could begin the training, starting with the cohort beginning in the summer of 2020.

The interview and admissions process begins in November each year. In order to make the changes in the interview process, any changes must be approved by the entire committee before November. Therefore, after completing this project, the data and recommendations can be submitted to the committee and changes can be discussed over the 2019-2020 academic year with a goal to have changes in place for November 2020. Given the major changes that are recommended, it would be difficult from a time perspective to make appropriate and successfully changes for the process beginning in November 2019. Although the implementation date is over a year away, it allows ample time for the data to be disseminated to the admissions committee and for the committee to thoughtfully consider ways to improve the admissions process to allow for an increase in diversity in the physical therapy program.

Stakeholders and Budgetary Implications

In order to implement changes in any capacity, support from stakeholders as well as financial resources are required for meaningful change. In order to gain the financial resources, several stakeholders must be engaged in the project. The School of Health Related Professions (SHRP) as well as UMMC are committed to promoting diversity. Many of the key players in SHRP must be involved for the financial support as well as the programmatic support. The Dean of SHRP as well as the Chair of the Physical Therapy Department must be involved to make a positive move towards increasing African American presence on the faculty and in the classroom. Both of these stakeholders have been extremely supportive of this project so obtaining their support for the recommendations of this project should not be difficult but still must be strategically planned. In order to gain their support, we plan to present a concise summary of the recommendations with proposed changes and timeline, including the financial resources as well as personnel required to implement the changes.

In order to implement some of the recommended recruitment efforts and admissions process changes, the Director of Admissions and Learning Advancement for SHRP must also be committed to the changes. Currently, recruitment of students is done by the Director of Admissions and Learning Advancement and her staff on behalf of the entire SHRP which includes 12 degree programs. To implement some of the recruitment recommendations from this project, we would design a recruitment plan based on our recommendations and meet with the Director of Admissions and Learning Advancement to convey the importance of having targeted recruitment on behalf of the physical therapy program and to discuss ways to implement our plan. We would plan to work with her office to encourage our African American students and former graduates to assist and be involved in recruitment efforts.

Lastly, the Office of Diversity and Inclusion (ODI) would also be a key stakeholder necessary to make our project implementation successful. The ODI at UMMC “guides strategies for integrating diversity and promoting excellence into UMMC’s three mission areas – education, research and health care” (University of Mississippi Medical Center, n.d-a, para. 1). The resources that the ODI already has in place on campus could help with many of our efforts. For example, the ODI could possibly assist with providing the recommended cultural competency training. The ODI could also potentially provide support for the African American student group and could assist with implementation of the mentoring program. Once again, in order to involve the ODI, our data and recommendations would be presented to them in an open conversation about ways they could support our plans to increase diversity in the physical therapy program. In addition, the ODI may have some ongoing efforts that are being used in other healthcare programs on campus that could be shared with the physical therapy program.

One part of presenting these recommendations to the stakeholders will involve describing the budget needed to execute the plans. While preparing for meeting the stakeholders, budgetary considerations will be included in the presentation. A few budgetary considerations include marketing efforts, faculty time and productivity, and training costs. While there are resources on campus to promote marketing and recruitment, there will be costs associated with targeted recruitment which may involve expanding the colleges visited and the faculty and staff that attend. With marketing and recruitment as well as making major revisions to the admissions process, faculty time must be considered. The physical therapy faculty are currently working at full capacity, so when faculty devote time to the recommended efforts, time must be taken from other tasks. Therefore, the consideration for additional faculty or staff or additional compensation or relief for existing faculty must be addressed in order to effectively make a

change. Lastly, costs for cultural competency training must be considered. While the ODI may have resources to assist, adequate training of students and faculty may come at a cost, especially if an expert is recruited for the training.

Data Collection and Program Evaluation

With many recommendations, we will need to assess the changes made to the physical therapy program in order to determine their impact and effectiveness towards obtaining the goal of increased diversity. In order to accurately assess the programmatic changes, data will need to be collected and evaluated. In order to assess our recruitment efforts, the number of qualified African American applicants can be tracked over the next five years. Once this data is collected, we can compare current data to the previous five years to determine if there has been an increase. Secondly, the changes in the admissions process can be assessed by determining if the percentage of admitted African American applicants compared to the total number of African American applicants is increasing from previous years. Also, once the admissions process has been revised, the correlations between first year GPA and new measures can be assessed. Lastly, qualitative data will be collected from African American students to determine the impact of recruitment efforts, mentoring, and the establishment of student groups. Ultimately, the number of African American students who are admitted to the physical therapy program can be tracked over the next five years to determine if our recommendations and action plans have made an overall impact on increasing the African American diversity in the physical therapy program.

Reflection

While the three companions working on this project are all individuals, we feel that our views, feelings, and plans for action have changed in similar ways as a result of this doctoral

program and dissertation in practice. Prior to beginning work on this topic, we knew we valued diversity, but through our work, we realized our actions regarding diversity were more passive. We did not take an active role in promoting diversity or working to effectively improve diversity. We knew there was a problem with diversity from looking around the classroom, but we did not delve into the data and try to find a solution. After working on this project, we are now more aware of the literature surrounding diversity in healthcare fields and are committed to making a real change. We have plans to continue to use data from the program to assess our changes and to initiate further changes as the need arises. In our discussions about our data and project, we have also gained the support of our Dean and Chair to allow us to implement our changes.

Dissemination

While the information gathered in this project is specific to the UMMC physical therapy program, the data collection as well as recommendations and results can be shared with other programs. The problem of practice of lack of diversity in the physical therapy program is not unique to the UMMC physical therapy program or to physical therapy in general. This problem is present in many areas of healthcare education nationwide. In order to share our findings, we plan to pursue publication of the data and recommendations in physical therapy literature including the *Journal of Physical Therapy Education* as well as present our findings at conferences such as the Educational Leadership Conference sponsored by the American Physical Therapy Association. Additionally, we may pursue publication of our finding in the *Journal of Allied Health* as a way to disseminate the information to a broader audience.

Conclusion

The attempt to determine the answers to our problem of practice, lack of diversity of the physical therapy program at UMMC specific to African American students, has been thoroughly assessed. We chose this topic for a variety of reasons: the number of African American physical therapists does not represent the demographics of Mississippi (United States Census Bureau, 2016), the lack of African American physical therapists is limiting the ability to address health disparities of minority patient populations (Gurin, et al., 2011), and because of our personal experiences with African American students as teachers in the program. We explored the problem in a thorough manner with quantitative data analysis, focus groups, and individual interviews. Our problem of practice was viewed through multiple lens, including students who have chosen physical therapy as well as those who have chosen other health care fields, African American graduates of the program, and from a quantitative lens of the admissions process.

We utilized the Twale et al. (2016) framework which is related to the socialization process of African American students to explore our problem of practice. We also used it to help demonstrate the focus areas when making our recommendations. Four of the five components of the framework were found to have areas of limitations on the enrollment and persistence of African American students in the physical therapy program at UMMC. These included *entering students*, *disciplinary/professional communities*, *higher ed institutions*, and *personal communities*. The component that did not demonstrate any limitations to enrollment and persistence of African American students in the program was *novice professional practitioners*. The recommendations made by the authors address these four components of the framework.

For those *entering students*, two recommendations are made. First, include early recruitment efforts which should aid in an understanding of the physical therapy profession and

the requirements for admission. Early exposure, specifically, prior to graduating from high school, may improve knowledge about physical therapy and aid in increasing numbers of African American students. The second recommendation involves having the admissions committee revise the current admissions process, given the findings from this project.

One recommendation, the creation of mentoring programs, addresses the framework's components of *entering students*, *personal communities*, *disciplinary/professional communities*, and *higher ed institutions*. These programs would be beneficial to those students, the *entering students*, who are considering applying to the program. Those students who are admitted would continue to benefit from the mentoring during their three years in the program, during the component of *higher ed institutions*. Finances was a burden to graduates as a part of the *personal communities*. During mentoring sessions, graduates of the program could provide personal experiences when talking about financial needs. Our hope would be that those who were mentored would choose to become a mentor after graduation, when a *novice professional practitioner*, and continue to represent minority populations in the physical therapy associations as a part of *disciplinary/professional communities*. Thus, the graduate would remain a part of the mentoring program at UMMC.

An additional recommendation of cultural competency being introduced earlier in the curriculum would also address the framework's component of *higher ed institutions*. Early *interaction* with their classmates during the cultural competency portion of the curriculum, especially those of a different ethnicity, would increase early *learning*. This could aid in the goal of reducing or eliminating perceived microaggressions and improve relationships by learning about each other and aiding in the *socialization process*.

A final recommendation is the student groups which would again be a part of the framework's component of *higher ed institutions* which constitutes part of the *peer climate* of the *institutional culture*. Because BRIM is a student group already instituted at UMMC, we, as a faculty, would want to encourage participation in the group by the African American physical therapy students. We would want to collaborate with members of BRIM and leadership of the medical school to determine how to facilitate physical therapy students' entrance into the program.

All these recommendations address the questions we originally posed regarding limitations to enrollment and persistence of African American students in the physical therapy program at UMMC. Upon implementation, we expect to see our numbers of African American applicants increase and our numbers of African American students in the program to increase. Continued analysis of our efforts will determine how successful we have been to increase the diversity of the physical therapy program at UMMC and to guide us in the future of increasing the diversity of our program with other ethnicities.

BIBLIOGRAPHY

- Ballejos, M. P., Rhyne, R. L., & Parkes, J. (2015). Increasing the relative weight of noncognitive admission criteria improves underrepresented minority admission rates to medical school. *Teaching and Learning in Medicine: An International Journal*, 27(2), 155–162.
- Camara, W., & Schmidt, A. (1999). Group differences in standardized testing and social stratification. College Board Report No. 99-5
- Capers, Q., McDougle, L., & Clinchot, D. M. (2018). Strategies for achieving diversity through medical school admissions. *Journal of Health Care for the Poor and Underserved*, 29(1), 9–18. <https://doi.org/10.1353/hpu.2018.0002>
- Carnegie Project on the Education Doctorate. (2018). The Framework. Retrieved August 9, 2018, from <https://www.cpedinitiative.org/page/framework>
- Eisen, D. (2015). Constructing "Hawaiian," post-racial narratives, and social boundaries at a predominantly white university. In E. M. Lee & C. LaDousa (Eds.) *College students experiences' of power and marginality: Sharing spaces and negotiating differences* (pp. 46-63). New York, NY: Routledge.
- Felix, H., Laird, J., Ennulat, C., Donkers, K., Garrubba, C., Hawkins, S., & Hertweck, M. (2012). Holistic admissions process: An initiative to support diversity in medical education. *The Journal of Physician Assistant Education*, 23(3), 21.
- Girotti, J. A., Park, Y. S., & Tekian, A. (2015). Ensuring a fair and equitable selection of students to serve society's health care needs. *Medical Education*, 49(1), 84–92. <https://doi.org/10.1111/medu.12506>

- Gurin, P., Dey, E. L., Hurtado, S., & Gurin, G. (2011). Diversity and higher education : Theory and impact on educational outcomes. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 249–277). New York: Routledge.
- Institute of Medicine (US) Committee on Institutional and Policy-Level Strategies for Increasing the Diversity of the U.S. Healthcare Workforce. (2004). *In the Nation's Compelling Interest: Ensuring Diversity in the Health-Care Workforce*. (B. D. Smedley, A. Stith
- Moneta-Kiehlar, L., Brown, A.M., Petrie, K., & Evans, B. (2017). The limitations of the GRE in predicting success in biomedical graduate school. PLOS ONE, 12(1):
doi:10.1371/journal.pone.0166742
- Price, S. S., Brunson, W. D., Mitchell, D. A., Alexander, C. J., & Jackson, D. L. (2007). Increasing the enrollment of underrepresented minority dental students: Experiences from the dental pipeline program. *Journal of Dental Education*, 71(3), 339–347.
- Prince, M., & Williams, K. A. (2017). Suggestions to increase the number of African-American male physicians. *American Journal of Cardiology*, 119(8), 1281–1283.
<https://doi.org/10.1016/j.amjcard.2016.12.022>
- Ratanawongsa, N., Howell, E., & Wright S. (2006). What motivates physicians throughout their careers in medicine? *Comprehensive Therapy*, 32(4), 210-217
- Rao, V., & Flores, G. (2007). Why aren't there more African-American physicians? A qualitative study and exploratory inquiry of African-American students' perspectives on careers in medicine. *Journal of the National Medical Association*, 99(9), 986–993.
- Shiyko, M. P., & Pappas, E. (2009). Validation of preOaadmission requirements in a doctor of physical therapy program with a large representation of minority students. *Journal of Physical Therapy Education*, 23(2), 29-36

- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, 69(5), 797–811.
<https://doi.org/10.1037/0022-3514.69.5.797>
- Thomas, B. (2014). College of health and health care disparities: The effect of social and environmental factors on individual and population health. *International Journal of Environmental Research and Public Health*, 11(7), 7492–7507.
- Turner, C. S. V., Gonzalez, J. C., & Wood, J. L. (2011). Faculty of color in academe: What 20 years of literature tells us. In S. R. Harper & J. F. L. Jackson (Eds.), *Introduction to American higher education* (pp. 41–73). New York: Routledge.
- Twale, D. J., Weidman, J. C., & Bethea, K. (2016). Conceptualizing socialization of graduate students of color: Revisiting the Weidman-Twale-Stein framework. *The Western Journal of Black Studies*, 40(2), 80–94.
- University of Mississippi Medical Center. (n.d. a). Office of Diversity and Inclusion. Retrieved from <https://www.umc.edu/odi/Office-of-Diversity-and-Inclusion-Home.html>
- University of Mississippi Medical Center. (n.d. b). Student Interest Groups. Retrieved from <https://www.umc.edu/som/Students/Student%20Life%20and%20Organizations/Student%20Interest%20Groups.html>
- Veal, K., Perry, M., Stavisky, J., & Herbert, K. (2004). The pathway to dentistry for minority students” From their perspective. *Journal of Dental Education*, 68(9), 938-946.
- Wilcox, K. C., Weber, M., & Andrew, D. L. (2005). Factors influencing minority students’ choice of physical therapist education programs. *Journal of Physical Therapy Education*, 19(3), 8–14.

VITA

Melanie Hand Lauderdale, PT, DPT
Department of Physical Therapy
School of Health Related Professions,
University of Mississippi Medical Center

EDUCATION

University of Mississippi
Oxford, MS
2016-present
Doctor of Education in Higher Education/expected graduation August 2019

University of Mississippi Medical Center
Jackson, MS
2007-2008
Doctor of Physical Therapy/August 2008

University of Mississippi Medical Center
Jackson, MS
2004-2006
Master of Physical Therapy/May 2006

Mississippi State University
Starkville, MS
1999-2003
Bachelor of Science in Biological Engineering, minor in General
Business/December 2003

LICENSURE INFORMATION/CREDENTIALS

Licensed Physical Therapist	State of Mississippi	# PT 4066
Basic Life Support Instructor	AHA	August 2016
Neurologic Certified Specialist	ABPTS of APTA	June 2013
Stroke Scale Certification	NIH	August 2011
Credentialed Clinical Instructor	APTA	November 2007

EMPLOYMENT AND POSITIONS HELD

Associate Professor
Department of Physical Therapy, School of Health Related Professions
University of Mississippi Medical Center, Jackson, MS
June 2016-present
Neurologic Physical Therapy Residency Faculty, June 2013-present

Pediatric Physical Therapy Residency Faculty, June 2018-present

Physical Therapist, PRN
Department of Rehabilitative Services
University of Mississippi Medical Center, Jackson, MS
June 2012-present

Assistant Professor
Department of Physical Therapy, School of Health Related Professions
University of Mississippi Medical Center, Jackson, MS
June 2012-June 2016

Physical Therapist (Full Time)
Center Coordinator of Clinical Education (2008-2012)
Department of Rehabilitative Services
University of Mississippi Medical Center, Jackson, MS
June 2006-June 2012

Lab Instructor
Department of Physics
Mississippi State University
Starkville, MS
2001-2003

PUBLICATIONS

Peer reviewed publications

Willis KR, Lauderdale MH. The effects of electrical stimulation on urinary incontinence in women with multiple sclerosis: A systematic review *Biomedical Sciences Instrumentation*. 2019; 55(1), 105-108.

Abstracts

Campbell AC, Cialone SJ, Killen BS, Scruggs MG, Lauderdale MH. Cryotherapy and self-reported fatigue in individuals with multiple sclerosis: A systematic review. School of Health Related Professions Annual Research Day, April 2019; 23,20-21. [Abstract from meeting proceedings]

Madden JJ, Lauderdale MH. Prehabilitation and post-surgical function in thoracic surgery patients: A systematic review. School of Health Related Professions Annual Research Day, April 2019; 23,24-25. [Abstract from meeting proceedings]

Harrison J, Malone K, Nielsen N, Wies A, Lauderdale M. Effects of early mobilization on improving function in mechanically ventilated patients in the intensive care unit: A systematic review. School of Health Related Professions Annual Research Day, April 2018; 22, 10. [Abstract from meeting proceedings]

Rowan L, Kulzer Z, Alford B, Weaver S, Jones B, Lauderdale M. Advanced physical therapy in mechanically ventilated ICU patients: A systematic review. School of Health Related Professions Annual Research Day. April 2017; 21, 21-22. [Abstract from meeting proceedings]

Coley AW, Dimino PJ, Horlock SG, Kennedy KD, Matthews LE, Nguyen DT, Lauderdale MH. A systematic review on the effects of resistance training combined with aerobic training on insulin resistance in obese adolescents. School of Health Related Professions Annual Research Day, April 2016; 20, 18-19. [Abstract from meeting proceedings]

Cooper JE, Dodder KL, Josey RB, McFerrin ME, Milner, EJ, Roberts BR, Lauderdale MH, McGlawn RH. Effectiveness of the McKenzie method in decreasing disability in patients with low back pain: A systematic review. School of Health Related Professions Annual Research Day, April 2015; 19, 6-7. [Abstract from meeting proceedings]

Lauderdale MH, Slaughter JP, Creel SN, Easterling KD, Nixon KC, Pratt JM, Reynolds BE, Wells KS. Effects of early mobility on length of stay for intensive care unit patients: A systematic review. School of Health Related Professions Annual Research Day, April 2014; 18, 20. [Abstract from meeting proceedings]

Boothe SK, Crosswhite CR, Fandel PM, Josey JL, Randall CS, Thompson JI, Barnes LJ, Lauderdale MH. Effects of hyperbaric oxygen therapy on delayed onset muscle soreness: A systematic review. School of Health Related Professions Annual Research Day, April 2014; 17, 27-28. [Abstract from meeting proceedings];

SCIENTIFIC AND PROFESSIONAL PRESENTATIONS

Poster presentations

Campbell AC, Cialone SJ, Killen BS, Scruggs MG, Lauderdale MH. Cryotherapy and self-reported fatigue in individuals with multiple sclerosis: A systematic review. School of Health Related Professions Annual Research Day, April 2019.

Madden JJ, Lauderdale MH. Prehabilitation and post-surgical function in thoracic surgery patients: A systematic review. School of Health Related Professions Annual Research Day, April 2019.

Harrison J, Malone K, Nielsen N, Wies A, Lauderdale M. Effects of early mobilization on improving function in mechanically ventilated patients in the intensive care unit: A systematic review. School of Health Related Professions Annual Research Day, April 2018.

Lauderdale MH, McGlawn RH, Weber MD. Frequency and types of mobile devices used by students in physical therapy education. American Physical Therapy Association's Combined Sections Meeting, New Orleans, LA. February 2018.

Rowan L, Kulzer Z, Alford B, Weaver S, Jones B, Lauderdale M. Advanced physical therapy in mechanically ventilated ICU patients: A systematic review. School of Health Related Professions Annual Research Day, April 2017.

Coley AW, Dimino PJ, Horlock SG, Kennedy KD, Matthews LE, Nguyen DT, Lauderdale MH. . A systematic review on the effects of resistance training combined with aerobic training on insulin resistance in obese adolescents. School of Health Related Professions Annual Research Day, April 2016.

Cooper JE, Dodder KL, Josey RB, McFerrin ME, Milner, EJ, Roberts BR, Lauderdale MH, McGlawn RH. Effectiveness of the McKenzie method in decreasing disability in patients with low back pain: A systematic review. School of Health Related Professions Annual Research Day, April 2015.

Lauderdale MH, Slaughter JP, Creel SN, Easterling KD, Nixon KC, Pratt JM, Reynolds BE, Wells KS. Effects of early mobility on length of stay for intensive care unit patients: A systematic review. School of Health Related Professions Annual Research Day, April 2014.

Boothe SK, Crosswhite CR, Fandel PM, Josey JL, Randall CS, Thompson JI, Barnes LJ, Lauderdale MH. Effects of hyperbaric oxygen therapy on delayed onset muscle soreness: A systematic review. American Physical Therapy Association's Combined Sections Meeting, Las Vegas NV. February 2014.

Boothe SK, Crosswhite CR, Fandel PM, Josey JL, Randall CS, Thompson JI, Barnes LJ, Lauderdale MH. Effects of hyperbaric oxygen therapy on delayed onset muscle soreness: A systematic review. School of Health Related Professions Annual Research Day, April 2013.

Pearson RH, Hand MG, Flowers KD, Hopson HL, Singley LH. Implicit and explicit attitudes of students enrolled in a physical therapy and occupational therapy program toward obesity. School of Health Related Professions Annual Research Day, April 2006

Professional presentations

Willis K, Lauderdale MH. The effects of electrical stimulation on urinary incontinence in women with multiple sclerosis: A systematic review. Southern Biomedical Engineering Conference. February 24, 2019.

Lauderdale, MH. Being an effective clinical instructor (in-service). University of Mississippi Acute Care Physical/Occupational Therapy Department, August, 28, 2013.

Lauderdale, MH. Modifying and implementing exercise prescriptions. Southern Association of Cardiovascular and Pulmonary Rehab Spring Conference. April 12, 2013

Panel Member
Orthopedic Nursing Conference: “Strains, Sprains, and Pains...Oh My”
March 28, 2008

GRANT ACTIVITY

Title: Wellness and Weight Family Group Project
Anticipated Dates: 10/01/2015 – 09/30/2016
Role: Co-I
Funding Source: UMMC Department of Pediatrics, Rhodes-Cai Research Award:
Intradepartmental Discovery Support Program (IDSP)

Title: Helping Inform Parents of Healthy Options to Provide (HIP HOP) for Child Health
(1R21NR016097-01)
Anticipated Dates: 09/01/2015 – 08/31/2017
Role: Co-I
Funding Source: Unfunded

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

American Physical Therapy Association, 2012-present
Acute Care Section, 2013-present
Education Section, 2012-present
Neurology Section, 2012-2013
Specialization Academy of Content Experts (Neurology) Exam Item Writer,
2016-present

Mississippi Physical Therapy Association, 2012-present
Treasurer, 2014-2016

Alpha Eta, 2006-present
UMMC Chapter President, 2016
UMMC Chapter President Elect, 2015
UMMC Chapter Secretary, 2014

SERVICE TO THE COMMUNITY

Junior League of Jackson
Children’s Health Management Team Chairman
2019-present

Junior League of Jackson
Project Development Chairman
2018-2019

Wholesome and Healthy (program to promote healthy lifestyles in children)
Junior League of Jackson/Operation Shoestring
Chairman (2017-2018)
Co-Chairman (2016-2017)

Project Volunteer (2015-2016)

Rockin' Mamas, Wiser Women's Hospital
Junior League of Jackson
2014-2015

Physical Therapist Volunteer
Jackson Free Clinic
2013-2016; 2019

Reach Night, Batson Children's Hospital
Junior League of Jackson
2013-2014

Nursery Volunteer
Christ United Methodist Church
2012-present

Reach Day Parties, Batson Children's Hospital
Junior League of Jackson
2012

Senior Project Judge, Topic Specialist
Northwest Rankin High School
2009-2011, 2015

Medical Mission Trip to Honduras
Salt and Light Foundation
June 2009

**SERVICE TO THE UNIVERSITY/COLLEGE/SCHOOL ON COMMITTEES/
COUNCILS/COMMISSIONS**

Institutional

Group on Women in Medicine and Science
University of Mississippi Medical Center
2018-present

Schwartz Center Rounds Committee
University of Mississippi Medical Center
2018-present

Taste of UMC Planning Committee, Chef Recruitment Chairman
University of Mississippi Medical Center
2013, 2014, 2015

School of Health Related Professions

Technology Development Committee
School of Health Related Professions
2016-present

Interprofessional Education Committee
School of Health Related Professions
2015-present

Multicultural Affairs Committee
School of Health Related Professions
2014-2016

Physical Therapy Student Admissions Committee
School of Health Related Professions
2015-present, co-chairman
2012-2014, committee member

Departmental

Laboratory Structure, Supplies, and Planning Committee
Department of Physical Therapy
School of Health Related Professions
2018-present

Class Advisor to the Physical Therapy Class of 2018
Department of Physical Therapy
School of Health Related Professions
2015-2018

Student Handbook Committee
Department of Physical Therapy
School of Health Related Professions
2014-2015

Scholarship and Awards Committee, Chairman
Department of Physical Therapy
School of Health Related Professions
2013-present

Class Advisor Committee
Department of Physical Therapy
School of Health Related Professions
2013-2017

Research Committee
Department of Physical Therapy
School of Health Related Professions
2013-2015, 2016-2018

CAPTE Accreditation Committee
Department of Physical Therapy
School of Health Related Professions
2012-2015, 2016-2017

Non –academic advisor for 9-13 physical therapy students, annually
Department of Physical Therapy
School of Health Related Professions
2012-present

Student Promotions Committee
Department of Physical Therapy
School of Health Related Professions
2012-present

HONORS AND AWARDS

Class of 1991 Physical Therapy Clinical Education Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

Alpha Eta Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

The Robert B. Weaver Physical Therapy Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

Outstanding Physical Therapy Student Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

Physical Therapy Scholastic Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

Academic Excellence Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

Research Award
School of Health Related Professions, University of Mississippi Medical Center
May 2006

PROFESSIONAL CONTINUING EDUCATION ATTENDED

Advance Rehabilitation for the Acute/Subacute Cardiovascular and Pulmonary Patient
Good Heart Education
Memphis, TN
October 13-14, 2019

Combined Sections Meeting
American Physical Therapy Association
New Orleans, LA
February 22-24, 2018

Combined Sections Meeting
American Physical Therapy Association
Anaheim, CA
February 18-20, 2016

*Developing High-Quality Multiple-Choice Questions to Assess Application of Knowledge
using Patient Vignettes*
Specialization Academy of Content Experts, American Physical Therapy Association
Anaheim, CA
February 17, 2016

Fall Meeting
Mississippi Physical Therapy Association
Meridian, MS
September 20, 2014

Specialist Certification Examination Item Writing: An Overview
American Physical Therapy Association
Online Course
April 30, 2015

Fall Meeting
Mississippi Physical Therapy Association
Biloxi, MS
September 20, 2014

Combined Sections Meeting
American Physical Therapy Association
Las Vegas, NV
February 3-6, 2014

Teaching in Medical Education: For Faculty
University of Mississippi Medical Center
Jackson, MS
September 2012-June 2013

New Faculty Development Workshop
Education Section, American Physical Therapy Association
Indianapolis, IN
May 16-19, 2013

Post-Stroke Spasticity
University of Mississippi Medical Center
Jackson, MS
May 8, 2013

2012 Stroke Symposium
University of Mississippi Medical Center
Jackson, MS
November 6, 2012

Fall Meeting
Mississippi Physical Therapy Association
Jackson, MS
September 22, 2012

Advances in Motor Control and Learning for Neurological Rehab
Cross Country Education
Jackson, MS
January 11, 2012

Overview of Fracture Management
University of Mississippi Medical Center
Jackson, MS
June 26, 2010

Strategies for Excellence in Stroke Care
PESI HealthCare
Baton Rouge, LA
February 19, 2010

APTA CI Education and Credentialing Program
American Physical Therapy Association,
Jackson, MS
November 3-4, 2007

Wounds: Pathway to Healing
University of Mississippi Medical Center
Jackson, MS
November 2, 2006

Multiple One Hour Conferences in the areas of Rehab, Neurology, and Ethics
University of Mississippi Medical Center
2007-2019