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## The Successful Characteristics That Contribute to Black Male Students Matriculating into Medical School

Cedric Brown  
*University of Central Florida*

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THE SUCCESSFUL CHARACTERISTICS THAT CONTRIBUTE TO BLACK MALE  
STUDENTS MATRICULATING INTO MEDICAL SCHOOL

by

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A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Education  
in the Department of Educational Leadership & Higher Education  
in the College of Community Innovation and Education  
at the University of Central Florida  
Orlando, Florida

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Major Professor: RoSusan Bartee

## **ABSTRACT**

In 2019, individuals that identified as Black represented 13.4% of the U.S. population, 12.5% of the undergraduate student enrollment population and 7.1% of the medical school population. Subsequently, this has yielded a 5% Black physician population and workforce consisting of just 2.3% Black male physicians (AAMC, 2018). The disproportionately low Black physician representation contributes to greater healthcare disparity outcomes within the U.S. Black population. This study is centered on the post-positive characteristics of Black male medical students that have successfully overcome barriers to entry and matriculated into medical school. The phenomenological post-positive study was conducted through the lens of Self-Efficacy Theory and Critical Race Theory. This qualitative study utilizes a phenomenological approach and semi-structured interviews to collect the steep, rich-lived experiences of the participants (Siedman, 1991). A purposive sampling and snowballing sampling methodology was used to acquire a six-participant sample population of Black male medical students. An in-depth review of the data revealed seven emerging themes associated with Black male students overcoming barriers to matriculate into medical school: 1) Educational Cost, 2) Honors College, 3) Motivation, 4) Support, 5) Academic Excellence, 6) Diversity and Inclusion, and 7) AMCAS Application Process. Higher education institutions, higher education practitioners and Black male premedical students would benefit from the findings outlined in the study. Future research should center on comparative studies focused on the role of the honors college, PWI and HBCU medical institutions and cultural variances among Black subcultures.

## **ACKNOWLEDGMENTS**

This dissertation is dedicated to the memory of Artillis L. Brown. She was an amazing mother and the inspiration to pursue my doctoral degree. Although she was unable to see my graduation, she will forever be with me in spirit. This dissertation is also dedicated to my father (Neal), my wife (Angie), my two children (Arya & Cat), my Abuelos (Silvio & Irma), and to the rest of my family, who have always loved me unconditionally and whose unwavering support carried me through the completion of my dissertation. Finally, I want to express my sincere gratitude to my committee chair (Dr. RoSusan Bartee), co-chair (Dr. Michael Preston), and my committee members (Dr. Thomas Cox, Dr. Soraya Smith, Dr. Nancy Marshall) for their constant support, reassurance, and encouragement.

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## **LIST OF ACRONYMS AND ABBREVIATIONS**

AICE- Advanced International Certificate of Education

AP- Advanced Placement

AAMC- American Association of Medical Colleges

AMCAS- American Medical College Application Service

DE- Dual Enrollment

GPA- Grade Point Average

HPSP- Health Professional Scholarship Program

HBCU- Historically Black Colleges & University

IB- International Baccalaureate

MCAT- Medical College Admission Test

NHSC- National Health Service Corps

PWI- Predominately White Institution

PSLF- Public Service Loan Forgiveness

STEM- Science Technology Engineering Mathematics

SSE- Student Self Efficacy

USML- United States Medical Licensing Examination

# CHAPTER ONE: INTRODUCTION

## General Background

The American Association of Medical Colleges (AAMC, 2021), the governing body for medical schools, projects that by the year 2034 the United States will have a deficit between 37,800 and 124,000 physicians. The physician deficit is the result of inadequate legislation, industry strategic planning, a growing population, an aging U.S. population and a retiring physician population (AAMC, 2021). The resulting physician deficit may exacerbate existing healthcare disparities that disproportionately affect underrepresented communities of color (Laurencin & Murray, 2017). Research shows that underrepresented communities of color adhere to medical consultation and treatment to a greater degree when the consultation is conducted by a physician of similar cultural or ethnic background (Talamantes et al., 2019).

An increase in the Black physician population may mitigate healthcare disparities affecting the Black population (Alsan, al., 2018). According to the U.S. Census (2019), the Black population is the second largest minority demographic and represents 13.4% of the U.S. population. However, among the U.S. physician population, Black physicians represent 5% of the physician population, with 2.3% of the Black physician population male and 2.7% female (AAMC, 2019e). The disproportionate deficit of Black physicians is consistent and is reflected within the Black medical school matriculant and applicant population. As such, it is imperative to review the medical school educational pipeline to improve the development of Black male physicians.

According to the AAMC (2017), the percentage of Black medical school applicants in 1980 was 7% and the percentage of Black medical students enrolled into medical school was 6%.

By 2016, the percentage of Black medical student applicants had increased to 8.2% and the percentage of Black medical students enrolled into medical school also increased to 7.1%. Additional analysis details a widening acceptance rate among Black medical school applicants in comparison to other racial demographics. According to the AAMC (2017), the Black medical student acceptance rate in 1980 was 42.4%, which was comparable to acceptance rates across all racial demographics. The Black medical student acceptance rate dropped to 35.4% in 2016, while all other racial demographics remained consistent with acceptance rates established in 1980. Further analysis details that Black female medical student enrollment increased from 391 in 1978 to 936 in 2019. In 1978, the Black male medical student enrollment population was 542, increasing to 604 in 2019. (AAMC, 2015; AAMC 2019b). An 11.5% increase in the Black male medical student population, when compared to a 140% increase in the Black female medical student population, illustrates a 40-year stagnant growth rate in the Black male medical student population.

The growing gap between Black male and Black female medical school enrollment and acceptance is not limited to the black medical student population. According to the National Center for Education Statistics (2021), female student enrollment represented 51% of the national enrollment of students in 1980. The enrollment gender gap has increased, as female student enrollment now represents 57% of the national student enrollment population (National Center for Education Statistics, 2021). The gender enrollment trends are further reflected within the medical student applicant population. According to the AAMC (2021), female students represented 29.5% of the medical student applicant pool in 1980; however, in 2019, female students represent 50.9% of the medical student applicant pool. The increase in the number of

female medical student applicants mirrors the medical school enrollment population, as female medical students represent 50.5% of the medical student population. The nominal representation of Black physicians warrants further inquiry into the pre-medical school admission process, as stagnant growth in the black male medical student population is disproportionate when compared to the percentages reflected within the medical student population.

In the wake of the passing of affirmative action (1965 Executive Order 11246), universities quickly developed inventive admission procedures to increase the representation of underrepresented student populations. These innovative admission practices included: (a) separate admission standards, (b) quotas, and (c) point systems. (Mickey-Pabello & Garces, 2018). Although inventive, effective, and well intentioned, these admission practices were ill fated and held legal liability - they faced legal challenges in court and were found to be discriminatory. The Supreme court case, Regents Univ of Cal v. Bakke (1978), found that the utilization of racial admission quotas violated the Civil Rights Act of 1964. Regents Univ of Cal v. Bakke (1978) established a legal precedent and a functional framework that guided the admission policies of colleges and universities. The prevailing Supreme Court ruling held that race cannot be utilized as the sole determinant factor within the admission process; however, race can be utilized as one of several determining factors within the admission process. In response to the Supreme Court's ruling, several states drafted and passed legislation which legally bypassed the Supreme Court ruling and effectively prohibited the utilization of race within the admission process. In response to restrictive admission legislation, the development of holistic admission was created. Holistic admission is designed to allow universities the flexibility to loosely define diversity in accordance with their institutions mission statement. The AAMC

officially recognizes the importance of diversity within the medical education process and within the subsequent physician population and advises their member institutions to adopt holistic admissions in lieu of metric based admissions (AAMC, 2020).

Increases within the underrepresented student population can be attributed to a variety of mitigating factors; however, research has demonstrated that holistic admission yields greater diversity of underrepresented student populations (Grabowski, 2017). Holistic admission practices have led to an increase in the underrepresented female student populations, wherein female students represent 50.5% of the medical student population (AAMC, 2021). However, holistic admissions have failed to increase representation of Black male medical students - the growth of the Black male medical student population has remained stagnant over the last 40 years (AAMC, 2015; Talamantes et al., 2020). Given that growth in the Black male medical student population has increased at a disproportionately lower rate than other underrepresented student populations, additional consideration should be given to factors beyond the holistic admission practices.

The cost of attending medical school can be prohibitive for students that come from an economically disadvantaged background. According to a report by the AAMC (Youngclaus & Fresne, 2020), 73% of medical students graduate medical school with debt in 2019. Students graduating from a public medical school have an average student debt of \$250,222 and students graduating from a private medical school have an average student debt of \$330,180. As cost and undergraduate academic competitiveness rises, the medical student population is increasingly becoming homogeneous. The holistic admission process permits a variety of factors to shape the development of a diverse student body; however, undergraduate student debt and medical school

cost of attendance may be insurmountable barriers to entry for many underrepresented populations. Based upon self-reported data on the AAMC matriculating student questionnaire, Black medical students have the highest percentage of undergraduate student debt when compared to other racial demographics (AAMC, 2019f). According to the AAMC matriculating student questionnaire, 22.9% of Black medical students matriculate into medical school with a minimum of \$50,000 of undergraduate student debt (AAMC, 2019f). Additionally, the cost to apply to medical school is prohibitive and can cost thousands of dollars after accounting for primary application fees, secondary application fees, MCAT fees, college service fees, air travel fees, hotel fees, transportation fees, and professional attire fees (Mill et al., 2019).

#### Statement of Problem & Purpose of the Study

There is a significant need to increase the Black physician population, given that the existing health disparities negatively affect the U.S. Black population (Laurencin & Murray, 2017). As medical schools are the principal facilitators for physicians to enter the medical profession, it is incumbent upon medical schools to reevaluate the medical school admission process. The barriers to entry for Black male medical students are multifaceted and require a renewed holistic approach from all relevant associated bodies. This study explores the success of Black male medical students on overcoming the barriers to entry (i.e., financial, academic, and social) into medical school (AAMC, 2018, Talamantes et al., 2019). This study was not designed to explore the barriers to entry for Black male medical students. For the purposes of this study, the race/ethnicity designation of “Black” comprises African American medical students and medical students that self-identify as “Black.”

### Significance of the Study

According to Torres (2018), minority populations are more receptive to medical consultation and treatment when receiving care from physicians with similar cultural demographic background. As such, improving the number of Black male physicians is an important factor which can lead to improving the healthcare outcomes of individuals within the Black community. Therefore, the significance of this study can lead premedical advising offices and medical schools to developing and nurturing the shared motivating characteristics that have led to Black male medical students to successfully overcome barriers and transition into medical school. These characteristics could improve the number of Black male medical students matriculating into medical school and subsequently improve the number of Black male physicians entering the physician workforce.

### Definitions of terms

Attrition: Students that do not maintain consecutive semester enrollment.

Persistence: The inherit motivation to remain enrolled within the higher education system until the desired degree is conferred.

4-year Graduation Rate: The percentage in which students complete institutional graduation requirements within 4 years of degree initiation.

6-year Graduation Rate: The percentage in which students complete institutional graduation requirements within 4 years of degree initiation.

Black: A person who self-identifies as having a racial identity of either African American, Afro-Caribbean or any other racial group that originates from Africa



Medical School Applicant: A student intending to apply for acceptance into a U.S. accredited medical school.

Medical School Matriculant: A student that has received and accepted an offer of admission into a medical school, culminating into medical school enrollment.

### Research Questions

The principal aim of this study is to investigate the shared lived experienced of Black male medical students matriculating into medical school, through the lens of Self-Efficacy Theory and Critical Race Theory (CRT). The following research questions guided the study in alignment with the principal question:

1. How do structural and systematic systems of inequalities, as outlined in CRT, influence Black male medical students' experience with medical school matriculation?
2. How do Black male medical students perceive self-efficacy as a determinant factor within their matriculation into medical school?

### Theoretical Framework

With the emphasis of this study focusing on addressing the success factors contributing to Black male medical school enrollment, it is beneficial to review this study through the lens of both Critical Race Theory (CRT) and Self-Efficacy Theory. Originating in response to a concern of a dissipating civil rights movement and a minimization of racial equities, CRT was founded to provide a holistic approach to racial and structural discrimination (Delgado et al., 2001). Critical

Race Theory is founded in sociological and legal theory. Self-Efficacy Theory is based upon social cognitive theory and posits that high degrees of self-efficacy result in high degrees of stress management and achievement. The intersection of Critical Race Theory and Self-Efficacy Theory illustrate the influence of structural racism and structural discrimination on the self-efficacy of Black male students. These theoretical frameworks guide the conceptual framework of the study.

#### Limitations

There are three limitations to this study: (1) population size, (2) limited availability of study participants, and (3) virtual environment. The overall population size of Black male medical students inherently results in a limited sample population to which the study has access. The availability of study participants due to the rigor of medical school curriculum and external community commitments also limits study participation. The virtual environment limits the communication of body language communication that otherwise may be apparent in a traditional in-person study.

#### Delimitations

The study is subject to delimitations such as: (a) undefined cultural background of participants, and (b) participants were all from allopathic medical schools. The study participants were drawn from a two large, predominately white institutions located in the southern United States. The institutional demographics results in the study not being generalizable to all colleges and universities. Furthermore, the sample population self-identifies with the umbrella term “Black” and does not allow for delineation of sub-cultures; therefore, the results of the study may

not be applicable across all sub-cultures. Finally, given that the sample population was compiled from only allopathic medical schools, the results of the study may not accurately reflect the experiences of osteopathic medical students.

### Assumptions

The effectiveness of this study is contingent upon the assumption that the participants are appropriately representative of the Black male medical student population - this study is centered on the characteristics of Black male medical students that have contributed to overcoming barriers to entry into medical school. Additionally, the study assumes that the selected participants received adequate academic and professional preparation for entrance into medical school. This study assumes that the participants held a comprehensive understanding of the purpose of the study and earnestly participated in the study. Finally, the study assumes that the results and analysis of the study accurately reflect the experiences of the participants. The assumptions of this study are mitigated by conducting a purposive sampling methodology and by meticulously informing the participants of the purpose of the study. The researcher further mitigated the study assumptions by conducting an exhaustive participant response validation process, to ensure accuracy of the participants' responses and a comprehensive accounting of the participants verbal and non-verbal communications.

### Organization of the Study

This study is compiled of five chapters, which appropriately frames the purpose, background, results, and conclusions of the study. Chapter 1 outlines the study and provides a description of the problem, definition of related terms and the purpose of the study, Chapter 1

identifies a theoretical framework and the research questions that guide the study. Additionally, Chapter 1 provides an analysis of the study's assumptions and limitations.

Chapter 2 details the literature surrounding Self-Efficacy Theory, Critical Race Theory, and outlines how the intersection of these theories frame the context of the study. Additionally, Chapter 2 thoroughly reviews the medical school admission process, affirmative action, barriers of entry for Black male medical students, and contributing factors to medical school matriculation.

Chapter 3 addresses the qualitative methodology utilized within this study. Chapter 3 appropriately defines the participant population and the subsequent sampling procedure. Additionally, Chapter 3 illustrates the data collection procedure, and the data analysis process.

Chapter 4 introduces the results of the study, transcription, decoding, and theming. Appropriately, Chapter 4 reviews the application of the study results through the lens of the research questions. Chapter 4 details the importance of the study and defines how the results of the study address the research questions guiding the study.

Chapter 5 presents an overview of the study, methodology, and results. Furthermore, Chapter 5 is a discussion of the implications of the study results and the subsequent conclusions formulated by the study. Chapter 5 acknowledges the limitations of the study and the suitable application of the study given the limitations of the study. Chapter 5 concludes with recommendations for additional research initiatives.

### Summary

This chapter introduced the purpose and significance of the study. This chapter discussed the guiding research question and sub-questions guiding the study. The chapter introduced the theoretical framework of the study and outlined the design of the study. The next chapter of the study explores the literature review surrounding the study.

## CHAPTER TWO: LITERATURE REVIEW

### Underrepresented Physician Population

According to a study conducted by Tikkanen and Abrams (2020), the United States (U.S.) as a percentage, maintains higher healthcare cost and poorer healthcare outcomes (i.e. chronic disease, obesity and preventable deaths), when compared to countries with socialized healthcare systems such as Switzerland, Germany, France, Sweden, Canada, Norway, Netherlands, United Kingdom, Australia, and New Zealand. The existing U.S. healthcare system erroneously targets and funds reactive healthcare measures instead of funding preventative healthcare measures (i.e., physician capacity, physician access, etc.). The minimal increases in physician capacity and development originates from the enactment and implementation of inadequate healthcare legislation, such as the Balanced Budget Act of 1997. This legislation limited the development of medical residency programs at teaching hospitals to funding levels established in the 1996 federal budget (AAMC, 2020). In 2010, a study conducted by Bodenheimer and Pham estimated that 65 million Americans lived in areas that were designated as having insufficient primary care physicians. Furthermore, according to a report conducted by the AAMC (2018), the U.S. healthcare system will have an estimated physician shortage between 37,800-124,000 by the year 2034.

Due to structural inequities, the existing physician shortage is evident among Black Americans, as Black Americans account for approximately 13.4% of the U.S population but Black physicians account for only 5% of the physician population and Black male physicians account for 2.3% of the physician population (AAMC, 2018; U.S. Census, 2020). Existing research has focused on the barriers to entry for underrepresented student populations, which has

resulted in the development of recruitment and matriculation-yielding initiatives (i.e., targeted academic advising, mentoring, academic pipeline programs, loan forgiveness, etc.) (AMSNY, 2020; AAMC, 2019). Representation of underrepresented medical students has steadily increased, specifically within rural and female medical student populations; however, these initiatives have failed to significantly increase the Black medical student population. According to the AAMC (2019), the Black medical student population, as a percentage, has fluctuated between 6 -7% since 1978. Further analysis details that the legislative efforts within three of the most populous states – Florida, California and Texas - were designed to minimize the effectiveness of affirmative action measures; thereby, adversely influencing the expansion of the Black male medical student population (Grabowski, 2017; Mickey-Pabello & Garces, 2018; U.S. Census, 2019).

There is a dire need to increase the Black physician population, specifically the Black male physician population, to address the healthcare disparities and structural inequities adversely impacting the U.S. Black population. These healthcare disparities were exacerbated during the Covid-19 healthcare pandemic (Long et al., 2020). A study published in the Journal of the American Medical Association found that in the city of Chicago, Black Americans represented just 30% of the population but 50% of the Covid-19 cases and 70% of the Covid-19 deaths (Yancy, 2020). The study also found that in 131 of majority Black counties throughout the U.S., Black Americans contracted Covid-19 at three-times the rate as predominantly white counties; deaths because of Covid-19 were six-times the rate of predominantly white counties.

As a practical matter, increases in the Black male physician population must originate from increases in the Black male medical student population. The existing research on Black

male students has highlighted barriers to entry within the educational pipeline (i.e. Black graduate students, secondary education students, postsecondary education students) (Huerta et al., 2016; Laurencin & Murray, 2017; Klopfenstein, 2004; Finn & Scanlan, 2020). Additionally, research has exposed premedical school debt, education law and medical school admission practices as existing barriers to entry into medical school (Grabowski, 2017; Mickey-Pabello & Garces, 2018; Dugger et al., 2013). Given the established diverse student enrollment goals of medical schools and associated accrediting bodies (i.e., Association of American Medical Colleges), additional research steeped in Critical Race Theory and Self-Efficacy Theory - with a focus on the success of Black male medical students - could provide a conceptual framework to address the Black male medical student shortage.

### Theoretical Frameworks

Critical Race Theory (CRT) derives from the civil rights movements and ethnic research, covering cultural, social, and economic structures. CRT structural foundation is based upon legal studies and has expanded to other activist movements such as the feminist movements (Delgado & Stefancic, 2001). Distilling these two movements has led CRT to focus on the intersection of race, power, and social roles. As described by Delgado & Stefancic (2001), CRT consists of five fundamental themes: 1) racism is common, 2) interest convergence, 3) social construction, 4) differential racialization, and 5) legal storytelling.

As the civil rights movements illustrated a need for incremental change of federal legislation to address racial inequities under existing law, the development of Critical Race Theory advanced the conversation around racial inequities beyond federal legislation parameters,



and into the structural foundations of American society. Critical Race Theory exposes the normalcy and inherent design of racial inequities within all aspects of American society, including education (Parker & Lynn, 2002). As stated by Bowman et al., (2009), CRT is defined as:

Race and racism are a part of the American social fabric. They have been woven into its fabric through a unique history that has included slavery and the eugenics movement. As such, race and racism are ordinary to everyday life in America; they are always present in our society. Indeed, the manifestations of racism within the criminal justice system reflect the ordinariness of race and racism in the greater American society. (p. 239)

A principal tenet of Critical Race Theory is that racism is embedded within society; therefore, racism is conventional and expected. Critical Race Theory is accurately represented within the definition of structural racism, which can be defined as, “The macro level systems, social forces, institutions, ideologies, and processes that interact with one another to generate and reinforce inequities among racial and ethnic groups” (Gee & Ford, 2011, p. 3). Institutional racism is a distillation of structural racism, and is defined as institutional policies, practices or opportunities that intentionally or unintentionally benefit one group of individuals at the detriment of another group of individuals, which lead to an inequitable impact (Clair & Denis, 2015; Ward, 2016).

Institutional racism is evident within the U.S. education system, even though the education system is mistakenly considered as both accessible and equitable. According to Kohli and Quartz (2014), Black students are more likely to be placed in lower academic rigorous coursework than their White counterparts. Enrollment into lower academic courses negatively

influences a student's ability to attain admission into a competitive college or university. Competitive colleges and universities consider student academic course rigor as a metric to review within the admission process. As such, Black students are placed at a competitive academic disadvantage, when compared to their White counterparts. The ramifications of the Black student enrollment into lower-level courses leads to a greater percentage of Black students enrolling into remedial college courses upon matriculation into a college or university. The enrollment of remedial college course work can negatively influence a student's ability to persevere and persist to degree completion and can influence a student's ability to gain admission into a competitive advanced degree or graduate degree program (Darling-Hammond, 2001).

Self-Efficacy Theory originates from Bandura's social cognitive theory and is steeped within the sciences of social psychology (Bandura & Adams, 1977). Self-Efficacy Theory postulates that individuals with a high degree of self-assurance maintain a high degree of intrinsic self-worth, accomplishment, and stress management. According to Bandura (1994), "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (p. 1). Additionally, Bandura found that individuals with a high degree of self-efficacy exhibited a high level of persistence and personal achievement. According to Bandura (1994), self-efficacy is principally developed via: mastery of experiences, social models, social persuasion, and stress reduction. The development of self-efficacy through the mastery of experiences is the result of accomplishments over challenging obstacles. The social model reflects the cultural structures that portray homogeneous individuals as oneself; thereby, enhancing self-efficacy. Social persuasion is the application of social

affirmation, which leads to improved self-efficacy. Furthermore, stress reduction assists in the development of self-efficacy by cultivating a constructive mental landscape, in which self-efficacy can grow and develop.

### Educational Pipeline

According to the AAMC (2007), Black male premedical students represented 2.3% of the matriculated incoming class of 18,858 for the 2006-2007 admission cycle. In the 2018-2019 admission cycle, the Black male premedical student matriculating population increased to 2.8%. The percentage of matriculating Black male premedical students remains the lowest percentage of racial gender subgroups. Effective comprehension of the medical school admission process through the lens of Critical Race Theory and Self-Efficacy Theory requires a comprehensive review of structural and institutional frameworks that influence the development of Black premedical students throughout the educational pipeline.

The medical school educational pipeline mirrors the traditional educational pipeline of entering and graduating high school, followed by the enrollment, retention, and completion of undergraduate degree programs, with the eventual enrollment within the workforce (Torraco & Hamilton, 2013). A notable difference within the medical school educational pipeline is enrollment within medical school after completion of an undergraduate degree. Within each transition, there is an attrition percentage or drop-out rate which has culminated in an average high school graduation rate of 85% and an average 6-year undergraduate graduation rate of 60%. Conversely, the attrition percentage is greater within the Black student population, as the high

school graduation rate is 79% and the 6-year undergraduate graduation rate is 40% (NCES, 20219).

Historical inequities are influenced by family median household income and educational achievement data. Reardon (2018) states,

Family income has become more predictive of children's academic achievement, so have educational attainment and cognitive skills becomes more predictive of adults' earnings.

The combination of these trends creates a feedback mechanism that may decrease intergenerational mobility. (p. 186-187)

According to the U.S. Census (2019), the average household income, excluding Black households, was \$76,781. Conversely, Black Americans averaged the lowest income, earning \$45,438. Further analysis of income growth from 2008-2019, indicates a marginal growth of 13% in income for Black Americans; however, the income for all other racial demographics grew by 17%. The lack of economic growth within Black American households directly influences Black student achievement, as there is an established relationship between parental income, parental education, and student achievement.

Social inequities within the school setting also impact Black students early within the K-12 system. According to the U.S. Department of Education (2016a), Black preschool children represent 19% of the preschool population, but 47% of the preschool suspended population. Additionally, Black preschool children received suspensions 3.6 times more than white preschool students. The trend of school suspensions continues into the K-12 system as 18% of Black students receive suspensions compared to 5% of white students. Black male students represent 8% of the K-12 student population, but disproportionately represent 19% of the

expelled student population. Additionally, within secondary school, calculus is only offered at 33% of schools with a greater percentage of Black and Latino students instead of white students. These institutional inequities are reflected in foundations found within CRT, as structural bias has prevented Black students from receiving equitable educational preparation for post-secondary education. These educational, economic, and social inequalities have restricted Black students from receiving equitable education and access (Rothstein, 2015).

The early attrition of Black students within the educational pipeline is influenced by the structural and institutional barriers to success that restrict high school achievement and limit access to competitive four-year institutions. The lower high school graduation percentage for Black students is reflective of the structural barriers to success that have plagued minority communities. These barriers of success can be traced to a history of educational inequality, segregation, marginalization, redlining, and oppression, which actively prohibited educational advancement within the Black community. The opportunity for Black students to actively pursue higher education did not occur until the 1960's with the decision of *Brown v. Board of Education*, the Civil Rights Act of 1964 and the signing of Executive Order 10925 (i.e., Affirmative Action). According to Carey (2019), historical inequities such as structural marginalization, unfair academic assessment practices, racial and socioeconomic cataloging, inequitable economic support, and inequitable social support for underrepresented student populations within secondary education burden Black student academic performance within secondary school; thus, adversely impacting Black students' ability to successfully transition to post-secondary education.

Historically, admission into a four-year research university as a first time in college (FTIC) undergraduate student, requires a minimum of a competitive high school grade point average (GPA), a rigorous high school course curriculum, a competitive Scholastic Aptitude Test (SAT), and/or a competitive American College Test (ACT). Colleges and universities may require additional non-academic performance metrics within the admission process, such as: notable letters of recommendations, essays, volunteer experience, leadership experience, resumes, etc. Depending upon the design and institutional mission of the college or university, academic performance metrics (i.e. GPA, SAT, ACT) outweigh non-academic performance metrics within the admission process. Competitive universities' strict reliance on academic performance metrics within the admission process places Black students at a distinct disadvantage. According to the National Center of Education Statistics (2019), the average SAT score in 2018 was 1068 and the average ACT score was 20.8. Further analysis from the National Center of Education Statistics illustrates that Black students averaged a 946 on the SAT and a 16.9 on the ACT. The reliance of the SAT and/or ACT within the admission process is based upon the belief that each exam provides a degree of measurement in relation to the student's aptitude and ability. Recent research questions the validity, reliability, and inherent biases of standardized exams (e.g., SAT and ACT) (Belasco et al., 2015). This has resulted in notable prestigious universities and university systems (i.e., Harvard, Princeton, Stanford & University of California system, etc.) eliminating standardized exams within the admission process (UC Office of the President, 2020; Jaschik, 2020).

Academic performance within secondary institutions (i.e., high schools) are essential admission requirements within the post-secondary admission process. Competitive four-year

university admission committees review high school GPA to a degree that extends beyond the student's respective numerical value. Admission committees review the strength of course rigor, the number of STEM courses completed, the number of advanced courses completed and grade trend. Depending upon the university, additional weighting is given for completion of advanced college course work, such as: Advanced Placement (AP), International Baccalaureate (IB), Advanced International Certificate of Education (AICE) and Dual Enrollment. Advanced college courses benefit students significantly within the admission process as it improves their overall admission competitiveness, enhances their cumulative GPA and provides the student the opportunity to earn transferable college credit. Advanced course work, such as advanced placement (AP), is not available to all secondary students. According to a study conducted by the Finn & Scanlan (2020), "Students whose parents graduated from college were nearly twice as likely to participate in AP as those whose parents did not complete high school" (p. 9). Further analysis showed that students from lower-socioeconomic backgrounds were 33% less likely to enroll in an AP course than students from mid-to high-level socioeconomic backgrounds. Additionally, Black students were the lowest racial demographic that participated in advanced placement courses and maintained the lowest performance on Advanced Placement courses (College Board, 2014).

As universities and colleges become increasingly competitive, academic achievement within academically competitive courses (e.g., International Baccalaureate, Advanced Placement, AICE Cambridge, Dual Enrollment) is essential to gaining admission, as lower-level courses are considered less competitive by admission departments (Warne, (2017). Colleges and universities' reliance on advanced placement courses have adversely influenced the opportunities

for minority students to matriculate into desirable institutions. A study conducted by Klopfenstein (2004), found that within the Texas public secondary school system, income was the principal determinant of Advanced Placement participation. Klopfenstein's (2004) study found 76 percent of Black students were considered low-income, resulting in Black males participating in AP courses at half the rate as their comparable white counterparts. Klopfenstein's study also found that Black students exhibited a 10 percent AP drop-out rate from freshman year to senior year. Conversely, the white student AP drop-out rate was less than 2 percent. The increased importance of AP course work within the college admission process coupled with initial lower enrollment of Black students within AP course work, in addition to Black students maintaining a higher AP drop-out rate than their respective counterparts, contributes to the inability of Black students to matriculate into selective colleges and universities.

Inequitable distribution and participation of Advanced Placement coursework can be attributed to the following factors: lack of academic preparation prior to secondary school, existing school culture, financing of public-school system, community support, and personal challenges impacting underrepresented minorities. Although Black students have consistently endured these structural challenges, Black students are successfully transitioning to four-year universities - 50.7% of high school graduates matriculate into college or university (BLS, 2018). Black male students that transition to four-year universities contribute their success to factors including familial support, parental engagement centered on education, supportive educational professionals, personal and professional mentors and early exposure to a college campus (Squire & Mobley, 2015).



### Post-Secondary Educational Pipeline

The suppressed number of Black students that matriculate to the next stage of the educational pipeline (i.e., College), experience additional factors that contribute to attrition prior to degree completion (i.e. graduation). The prevailing factors that contribute to the attrition of Black students within this stage of the educational pipeline are:

- 1) Cost of Attendance- The anticipated cost of tuition, institutional fees, textbooks, academic supplies, food, housing, transportation, and qualified personal expenses
- 2) Student personal debt: The amount of debt incurred by a student while attending an institution of higher education that is owed to a private or public lending institution.
- 3) Campus racial climate: The institutional culture of promoting a diverse climate and welcoming environment that is accepting of Black culture.
- 4) Inadequate racial representation: Low enrollment of Black students and faculty/staff.
- 5) Geographic location: The physical location of the university lacks a population that is supportive and welcoming of Black culture.
- 6) Lack of academic preparation and college familiarity: Inadequate k-12 academic preparation and insufficient family college experience and support.
- 7) Institutional curriculum: Curriculum designed for degrees that have traditionally low Black student enrollment (JBHE, 2005).

Student socioeconomic status and financial aid are leading factors within a student's college selection process and serve as notable factors that influence student persistence and attrition (Cabrera et al., 1992). According to a study conducted by Stage and Rushin (1993), parental income was the leading factor influencing student attrition, only behind high school GPA and

parental education (Pascarella et al., 2005). Financial aid is an essential tool for Black students to fund their educational endeavors, as Black Americans earn the lowest average annual income of \$45,438. Financial aid in the form of grants has a positive influence on persistence and degree completion. According to a study conducted by Nguyen et al., (2019), persistence and degree completion rates increase by 1.5 to 2% per \$1000 awarded in grant aid.

The Higher Education Act (HEA) of 1965 was signed into law by President Johnson (AAU, 2017) to improve the educational and socioeconomic achievement of Americans. The HEA established federal grants and loans to assist with college affordability. Over the duration of the past 30-40 years, federal grants have diminished while college tuition has increased. According to the College Board (2021), public college tuition has increased from \$3,800 per year in 1990 to \$10,560 per year in 2020. Federal and institutional grants can assist with the college affordability, however, the true cost of attendance may not be covered solely by the awarding of institutional and federal grants (Lustig, 2020). The affordability gap established by the difference between the cost of attendance of institutional and federal grants has contributed to the increase in student loan debt (College Board, 2021). The debt incurred by students can influence student persistence and degree completion (Stewart et al., 2015).

The factors that influence persistence further influence degree attainment. As such, Black students have an undergraduate four-year and six-year graduation rate of 21% and 40% respectively from a four-year postsecondary institution; however, the average four-year graduation rate and six-year graduation rate are 41% and 60%, respectively (NCES, 2019). There is a gender achievement gap of 6% among students – females have an average six-year graduation rate of 63% and males have an average six-year graduation rate of 57%. The gender

achievement gap is greater among Black students, as females have a six-year graduation rate of 44% and males have a six-year graduation rate of 34% (NCES, 2019). The educational completion gap is exacerbated by the fact that Black students enroll into college or universities at a significantly lower rate of 56.5%, 13% lower than the average enrollment rate for all racial demographics (NCES, 2019).

The dramatic tuition increases over the past 30 years, coupled with continued decreases in student federal aid, have led colleges and elective officials to develop innovative practices to alleviate the financial burden on students (Ma, al., 2020). Prestigious colleges such as Brown, Columbia, Cornell, Dartmouth, Duke, College of the Ozarks, Stanford, and Harvard waive the tuition requirement or provide scholarships that cover the full cost of attendance. These institutions tie the scholarship funding to the students' parental income levels to ensure that only students falling below a specific income bracket qualify. Notably, many of these institutions are private and have broad alumni bases and substantial endowments which allows for flexibility within the awarding of student aid. Public universities and colleges have explored the idea of free tuition for student populations that fall below a specific income bracket. The state of Nebraska's higher education system has a scholarship funding program (Nebraska's Promise) which is designed to cover the full cost of tuition for any Nebraskan that has an annual family income below \$60,000. The Nebraska's Promise scholarship is applicable for two-year or four-year institutions (University of Nebraska, n.d.). A similar, but limited scholarship program has been enacted within the state of California (California Promise). The California Promise scholarship is restricted to community colleges and requires students to demonstrate financial need as determined by the Federal Application for Student Free Assistance (FASFA) (CCC, n.d.). The

development and implementation of these scholarship programs may alleviate the financial burdens placed upon students and mitigate the influence that socioeconomic status has on student persistence.

Research conducted by Astin, (1975) did not find that socioeconomic status significantly influenced student persistence, but the following did: (1) academic preparation,(2) educational aspiration beyond bachelor's degree, (3) methodical study habits, (4) parental education attainment, (5) familial status, (6) on-campus housing, (7) on-campus employment, and (8) on-campus involvement (Seidman, 2012; AAC&U, 2019). These factors are applicable to all students; however, due to the structural inequalities outlined in Critical Race Theory, Black students experience lower academic preparation, educational aspiration, and poorer study habits than white and Asian students. These factors culminate into lower-than-average degree attainment and minimal upward mobility for the Black community.

According to the U.S. Bureau of Labor Statistics (2016), higher education degree attainment is a leading contributor to upward economic mobility. However, the structural inequalities experienced by Black students contribute to a stagnant growth within Black student undergraduate degree attainment and advance degree attainment; thereby, limiting the Black community from making substantial gains in upward economic mobility (Haveman & Smeeding, 2006). Student enrollment trends by gender illustrate a continuing transition from male students to female students, as female students' representation has increased from 51% of the total higher education enrollment population in 1980 to 57% of the total higher education enrollment population in 2019 (National Center for Education Statistics, 2021). In 2019, White male student representation has cumulatively decreased by 6%, to 43%, Asian male student representation has

cumulatively decreased by 7%, to 46%, Hispanic/Latino male representation has cumulatively decreased by 8%, to 41%, and Black male student representation has cumulatively decreased by 6%, to 36% since 1980 (National Center for Education Statistics 2021). While Black male students have experienced comparable declines in enrollment, when compared to White, Asian, and Hispanic student populations, Black male students represent the smallest percentage of the undergraduate student population (Flowers, 2002). Existing literature demonstrates that male student enrollment has been continuously declining since 1980. Although the Black male student population is 39.2% of the total Black student population, the overall enrollment percentage of Black male students is 4% (NCES, 2021; AAMC, 2021). This notably smaller student population leads to a nominal eligible premedical student population. Based upon the literature, barriers to success imposed upon Black students are acutely influencing Black male students more than Black female students (Laurencin & Murray, 2017).

When reviewing student academic completion, the concepts of student retention theory are considered to improve student degree completion. Two guiding retention theories developed by Tinto and Astin have influenced educational policies and practices since 1975. Tinto's (1987) retention theory postulates that student persistence and degree completion can be achieved through early institutional engagement with students. Tinto's retention theory is conducted within three stages: (1) student disengagement from prior communities, (2) student transition from prior to communities to college communities, and (3) complete student integration within college communities (Tinto, 1987; Seidman, 2012). Astin's retention theory postulates that student involvement leads to increased persistence and student involvement is composed of five tenets: (1) Student physical and psychological investment, (2) Student involvement is based upon

a continuum, (3) Student involvement is measurable, (4) Student academic and personal development is proportional to the quality of student involvement, and (5) Educational policies and procedures are measured by increases in student involvement (Astin, 1985 Seidman, 2012). These guiding theories were developed based upon a student population that was primarily homogeneous and did not appropriately account for the diverse populations that comprise the student populations of modern institutions of higher education (i.e. transfer, Black, Hispanic, Asian, first-generation immigrant students, etc.). Astin and Tinto's retention theories are supported by research conducted by Strayhorn (2014), which found that an institution's campus ecology has a significant influence on the ability for Black male students to develop a sense of engagement and acceptance. Additional research conducted by Brown (2006) and Harper & Quaye (2007), found that Black males are more likely to engage in non-academic campus related events, such as: (a) student government sponsored events, (b) intramural athletic events, and (c) predominantly Black affiliated student organizations.

A summation of Tinto's retention theory states that students should fully integrate into the culture and environment of their respective college or university to improve persistence and degree completion. Tinto's theory places the burden of assimilation onto the student. Astin's retention theory further supports the importance of integration and involvement; however, Astin outlines the importance of institutions to develop educational policies and practices that create an environment that elicits student involvement and engagement (Astin, 1984). Research on Black student persistence has found that institutions that have implemented religious engagement opportunities, academic challenges, mentorship opportunities and have created an environment of acceptance, are more successful in Black student persistence (Holland, 2014; Astin, 1984;

Wood & Harris, 2015; Farmer & Hope, 2015; Wood & Ireland, 2014). Historically Black Colleges and Universities, for example, have an established history of developing and implementing these educational programs and opportunities to elicit student involvement and engagement to improve student persistence and degree completion.

Further analysis of Black student retention yields research that is inconsistent with a tenet of Tinto's retention theory, student disengagement. Tinto's retention theory was developed in 1975 and based upon a study with a participant population that was predominately representative of one culture. As such, Tinto's retention theory does not comprehensively reflect the multitude of cultures and sub-cultures that comprise the modern student population. Tinto's retention theory postulates that students must disengage from prior communities, as a means to develop new and engaging connections within the college community. Research shows that within the Black community, familial relationships have symbolic cultural significance; therefore, disengagement from prior communities can be difficult for Black students (Franklin, 2007). This claim is supported by Brooks (2015), who found Black student persistence was positively influenced by familial engagement.

Aspects of Astin and Tinto's retention theories are found within U.S. federal education policy. The federal TRIO program was enacted during the reauthorization of the Higher Education Act in 1968 and was designed to provide services and programs to assist low-income and underrepresented students. A significant component of the federal TRIO program is the Student Support Services Program (SSS). The U.S. Department of Education defines the SSS program as:

Through a grant competition, funds are awarded to institutions of higher education to provide opportunities for academic development, assist students with basic college requirements and to motivate students toward the successful completion of their postsecondary education.

Student Support Services (SSS) projects also may provide grant aid to current SSS participants who are receiving Federal Pell Grants (#84.063). The goal of SSS is to increase the college retention and graduation rates of its participants. (p. 1)

The SSS programs provide funding for retention and degree completion initiatives such as: (a) academic, (b) tutoring, (c) academic advising, (d) financial aid, (e) career counseling, (f) graduate counseling, (g) mentoring, and (h) housing.

### Black Graduate Student Education Experiences

The National Center for Education Statistics (NCES, 2017) reported that of the 1.5 million faculty at degree-granting postsecondary institutions, only 3% are Black males. Black students account for 9.4% of the overall graduate student population and Black males represent 2% of the graduate student population (Okahana & Zhou, 2019). The inadequate representation of Black faculty leads to long-term academic problems within the Black student population, as the lack of proportionate representation within the faculty population leads to Black male students' inability to connect and develop mentoring relationships with Black faculty.

Additionally, institutional racism influences Black faculty retention, as many Black faculty indicate feelings of isolation and discrimination. Research on Black faculty found that Black faculty are overrepresented in lower-paying academia positions and overrepresented in non-tenured track positions (Flaherty, 2020).



According to a report provided by the National Science Foundation (NCSES, 2017), 72.6% of doctorate recipients were from a household in which at least one parent held a bachelor's degree and 42.7 % of doctorate recipients were from households in which a parent held an advanced degree. Only 49.7 % of Black doctorate recipients were from households in which at least one parent held a bachelor's degree. The relationship of racism, racial inequities, and racial bias among minorities within an educational environment is well established. There are structural and institutional barriers within higher education that prohibit Black students from successfully matriculating into undergraduate education programs, as well as successfully persisting until graduation and into graduate level education. According to a study conducted by Gildersleeve et al. (2011), Black and Latina/o students within a graduate-level education program at a predominately white institution (PWI) participated in detrimental behavior such as: self-censorship, questioning of self-efficacy, difficulty adopting to rules and norms, and lack of minority scholarship. Additionally, Black and Latina/o students experience degrees of isolation, racial stereotypes, minimization of experiences, and the burden of educating white peers on cultural engagement and education (Harris & Linder, 2018; Williams, al., 2018). These psychological struggles are documented among a study conducted by Tuitt (2011) at a PWI, wherein Black students struggled with cultural acceptance among their own cultural peers and the predominate cultural group.

### Historical Black Colleges and Universities

The first HBCUs were established in the 1830s during legal segregation with the mission of educating Black Americans. Prior to the passing of the Higher Education Act of 1965, the

majority of Black undergraduate students were enrolled at a HBCU. In 1976, HBCUs had a total enrollment of 223,000 students with a non-Black student enrollment of 15 percent. In 2010, HBCU enrollment growth increased to 327,000 students with a non-black student enrollment of 24 percent. Historically Black Colleges and Universities do not enroll a greater percentage of the Black student population, as the majority of Black students matriculate into PWIs (NCES, 2018). Historically Black Colleges and Universities continue to serve an essential role in the development and production of undergraduate and advanced degree attainment, which translates into socioeconomic advancement and upward mobility (Gasman et al., 2008). In 2016, HBCUs represented 3% of colleges and universities; however, HBCU's produced 27 % of the Black student population graduating with a bachelor's degree within a STEM major. This achievement is further exemplified, as HBCUs represent 21 of the top 50 institutions graduating the largest number of black students that pursue doctorates in STEM related fields (U.S. Department of Education, 2016).

Research shows that PWIs have greater institutional resources than HBCUs. The availability of institutional resources is a factor that is considered within student college choice, as students select institutions that offer greater course/program availability and institutions that are not cost prohibitive (Chapman, 1981). As HBCUs have lower institutional resources, Black students matriculate into PWIs in greater numbers than HBCUs; however, black students that matriculate into an HBCU indicate a greater degree of faculty interaction, institutional support and positive self-perception. Historically Black Colleges and Universities have an established history of serving underrepresented populations, students from lower socioeconomic statuses and students with lower academic preparation than their PWI counterparts. According to Gordon et

al. (2021), HBCUs have exhibited a greater degree of student interaction from faculty and have established an environment of institutional support which has contributed to the development and success of their student population. Recent research has found that when accounting for socioeconomic status and institutional size, HBCUs graduate Black students at a higher rate than their PWIs peers (Gordon et al., 2021; Wyllie, 2018).

While the literature details considerable barriers to entry for Black medical students, the literature also highlights examples of Black male premedical students successfully matriculating into medical school. According to the AAMC (2019c), HBCUs develop and graduate the largest population of Black premedical students. According to the AAMC (2019d), the largest PWI graduated half the amount of Black premedical students as the largest HBCU producer of Black premedical students. Additionally, a premedical student development model, created by Xavier University of Louisiana (XULA), developed a core curriculum without electives and incorporates MCAT preparation during the freshman year (Butler, 2010).

### Medical School Admissions

The U.S. medical school admission process is governed and outlined by the American Association of Medical Colleges (AAMC). The accrediting body outlines the formidable admission process that premedical students must endure to further educational endeavors within medical school. The medical school admission process requires considerable academic commitment and non-academic participation. The AAMC outlines a defined academic course of study for premedical students to matriculate into medical school. Non-academic requirements are established by each individual medical school institution, in alignment with their respective

vision and mission of the institution (i.e., community service volunteer, medical volunteering, physician shadowing, medical mission trips published research, etc.). Given the rigor and extensiveness of the medical school admission process, students benefit from following an established defined educational and personal pathway from freshman year (Richardson et al., 2014). According to the AAMC (2020), medical school applicants must successfully complete a U.S. bachelor's degree or a U.S. advanced degree, in addition to meeting specified course requirements within the "hard" sciences. (i.e., biology, chemistry, physics, organic chemistry, etc.) and maintain competitive cumulative and science GPAs. In addition to maintaining a competitive college GPA, students are required to complete the Medical College Admission Test (MCAT) (AAMC, n.d.). The MCAT is weighed considerably within the admission process, as the MCAT correlates with performance on the United States Medical Licensing examination (USMLE), which is a performance metric utilized by medical residency directors within the residency selection process. Additionally, residency placement within competitive residency programs is a performance metric utilized by medical schools for national rankings, thereby distinguishing the quality of the medical school. (AAMC, n.d.; Richardson et al., 2014).

Black students that persevere to the next stage of the medical school academic pipeline (i.e., medical school applications) represent 8.4% of the medical student applicant pool. In comparison, Asian students represent 21.3% of the applicant population and White students represent 46.8%. Black students that persist to the final stage of the medical school academic pipeline (i.e., matriculation into medical school), represent 7.1% of the medical school matriculant population, thereby, illustrating an additional decrease in Black student representation. Conversely, Asian students comprise 21.3% of the medical school matriculant

population and White students comprise 49.9% of the medical school matriculant population (AAMC, 2019). Both Asian and White demographics reflect an increase in representation within the matriculant population in relation to their respective representation within the applicant population. The increase in Black student attrition within this stage of the medical school educational pipeline in relation to the decrease in Asian and White student attrition reflects a structural disconnect among the respective student populations. The racial educational achievement gap within the educational pipeline culminates in a limited pool of aspiring Black medical students, which leads to an underrepresented population of Black physicians.

#### Affirmative Action and Admission Practices

The signing of President Kennedy's 1961 Exec. Order No. 10925, commonly referred to as affirmative action, and the passing of the Civil Rights Act of 1964, have led to multiple legal and ethical cases surrounding the medical school admission process. The literature has shown that Regents of the University of California (Univ. of Cal) v. Bakke (1978) is one of the most prominent and impactful legal cases influencing medical school admission today. Regents of the Univ of Cal v. Bakke (1978) broadly challenged the legality of affirmative action within the admission process and the subsequent utilization of novel admission practices designed to address the lack of underrepresented communities (i.e., female, Black and Latino students), within the medical student population (Mickey-Pabello & Garces, 2018). According to court documents, Regents of the Univ. of Cal, established 16 spots of their 100-class matriculating roster for underrepresented students; however, Allen Bakke, after twice failing to gain acceptance, sued Regents of the UC citing the Civil Rights Act of 1964. Although well

intentioned, the Supreme Court ruled that separate admission standards based upon race were unconstitutional regardless of their intent. As such, this precedent has been the guiding principle within medical school admission practices and has led to subsequent court cases and state legislation prohibiting the use of race within admission practices (Mickey-Pabello & Garces, 2018; Santos et al., 2010).

Subsequent court cases have been reviewed by the Supreme Court in relation to affirmative action. Notable, *Grutter v. Bollinger* (2003) and *Gratz v. Bollinger* (2003) are unique and consequential within the undergraduate and professional admission process as both cases address the utilization of race within the admission process on the undergraduate and graduate level. Barbara Grutter sued the University of Michigan for their utilization of race as one of many factors within the admission process. The Supreme Court upheld precedent established in *Univ. of Cal v Bakke* (1978) citing that race may be a factor within the admission process if it is in the government's interest and does not guarantee admission based solely upon race.

Additionally, Jennifer Gratz sued the University of Michigan for its utilization of a point system, which provided significant weighting to minorities within the admission process. The Supreme Court ruled in favor of Gratz, citing the University of Michigan point system established an unfair racial advantage within the admission process. The Supreme Court decisions in *Univ. of Cal v Bakke* (1978), *Grutter v. Bollinger* (2003), and *Gratz v. Bollinger* (2003) has created an admission framework that is endorsed by the American Association of Medical Colleges (2020).

The admission framework established by Supreme Court precedents relating to affirmative action is centered on race as one factor among several comprehensive factors, with no consideration given to the establishment of admission race-based quotas. This framework has

greater significance when consideration is given to states that have legislated anti-affirmative action initiatives. Given the impending physician shortage and lack of growth within the minority physician population, coupled with the increase demand for minority physicians, the AAMC encourages its members to implement an admission practice known as holistic admission in lieu of metric only admission practices.

The holistic admission practice provides flexibility to universities to define diversity and to permit for non-metric-based variables to be utilized within the admission review process. The transition to holistic admission practices has resulted in increased diversity within underrepresented medical student population, with female students experiencing the largest population gains. (Grabowski, 2017; AAMC, 2019a). Notwithstanding, the holistic admission process has not yielded the same population gains for Black medical students, especially Black male students. Therefore, additional consideration regarding the cost of medical school attendance and the subsequent relationship to Black male medical school matriculation should be reviewed.

#### Cost of Attending Medical School

The medical school application process, in addition to being overtly competitive, has a considerable financial burden which can be economically challenging depending upon the student's socioeconomic background. Premedical students are expected to budget for an expensive application process, which can cost thousands of dollars for the initial stages of the application. In addition to existing undergraduate cost of attendance, students are expected to budget for MCAT preparation courses and MCAT study material course material (i.e. flashcards,

practice exams, tutors, test prep books, etc.), which can cost thousands of dollars in addition to the required MCAT exam registration cost, which is a minimum of \$320. Additionally, premedical students are expected to pay a minimum of \$170 to complete the required American Medical College Application Service (AMCAS) and then pay an additional \$41 per school to send the completed AMCAS application to the student's preferred medical schools. Each individual medical school has an additional secondary application fee that can range as low as \$30 to upwards of \$100.

Students that receive opportunities to interview at their preferred medical schools may be required to interview in person. The in-person interview process incurs additional costs such as airfare, rental cars, mass transit, lodging, food and professional attire. In addition to the cost incurred during the medical school admission cycle, students are expected to budget for additional expenses, as medical schools host admission yielding events late within the admission cycle, which require the physical attendance of the student and additional travel related cost (AAMC, 2015; Murphy, 2019). Lastly, each medical school can assess an electronic record fee for the submission of required transcripts in addition to enrollment deposits, which are utilized to reserve the student's class seat.

In 2019, the average public medical school cost of attendance was \$250,222 and the average private medical school cost of attendance was \$330,180 (Budd, 2020). Given the cost of tuition and premedical school application preparation and application process fees, in addition to miscellaneous medical school cost, it is unsurprising that 73% of medical students graduate with debt (Budd, 2020). There are several comprehensive scholarship and loan forgiveness programs, that are designed to ease the amount of student debt incurred by medical students. The National



Health Service Corps (NHSC), Health Professional Scholarship Program (HPSP), and the Public Service Loan Forgiveness (PSLF) are common loan forgiveness and scholarship programs promoted by the AAMC (AAMC, 2021). The NHSC is principally focused on encouraging students to practice medicine in residency specialties that are experiencing acute physician shortages in rural or underserved geographic locations. National Health Service Corps full-time participants receive \$20,000-\$25,000 per year of tax-free loan forgiveness (HRSA, 2021). The HPSP is a military scholarship designed to address physician shortages within the Veteran's Administration. Health Professional Scholarship Program participants receive an officer salary equivalent to their military ranking and full cost of attendance. The PSLF program is designed to encourage increased employment within the public sector. Physicians working within the public sector are eligible to have qualified student loans forgiven after a 10-year repayment period has been completed (AAMC, 2021).

In addition to the challenges facing Black male medical student enrollment, there is an increasing trend that the medical student population is becoming economically homogenous; a greater percentage of medical students come from families with rates of high degree attainment and higher income earnings. In 2007, 77% of first-year matriculated medical students reported parental household-income within the top two quintiles (AAMC, 2018). Ten years later, the percentage of matriculated medical students with parental household-income within the top two quintiles remained unchanged at 77%. Additionally, 83% of households within the top two quintiles reported earning a minimum of a U.S. bachelor's degree, thereby establishing a correlation between degree attainment and income potential. The relationship between degree attainment and income potential is evident when reviewing data from the U.S. Census Bureau

(2019), which indicates that only 9% of the existing U.S. population that holds a minimum of a U.S. bachelor's degree is Black. Conversely, approximately 78.5% of U.S. population that holds a minimum of bachelor's degree is white. As such, this is further evidence that medical school matriculation is increasingly tied to generational education, wealth and existing social structures. The resulting racial and socioeconomic homogenous physician population is not reflective of the goals and mission of the AAMC and their member medical institutions.

### Summary

This chapter analyzed and reviewed the research encompassing Black male medical students matriculating into medical school. According to Moustakas (1994),

...preparing to conduct a phenomenological study involves review of the professional and research literature connected with the research topic and question. The investigator assesses the prior relevant studies; distinguishes their designs, methodologies, and findings from the investigator's own study; and indicates what new knowledge he or she is seeking and expects to obtain.” (p 104)

The subsequent purpose of this study is to evaluate lived experiences surrounding Black male medical students from a positivist perspective, with a degree of focus on the successful characteristics portrayed by Black male medical students. The following chapter outlines the research methodology of the study.

## CHAPTER THREE: METHODOLOGY

### Introduction

This qualitative phenomenological study sought to engage Black male medical students and to accurately convey the rich lived experiences of Black male medical students. These findings will develop a deeper understanding of the successful characteristics that have led to Black male medical students matriculating into medical school. Another purpose of this study was to explore how Black male medical students perceive self-efficacy and how this perception influenced their educational attainment. The significance of a qualitative phenomenological research approach was the expression of the participants' personal stories, as each of these personal stories are reflections of the participants' consciousness (Siedman, 1991). The consciousness of the participants served as a guide for their cultural, social, and educational experiences. This study assumed that the participants had met the minimum academic and non-academic admission requirements and had experienced similar cultural lived experiences. Moustakas (1994) describes phenomenological research as,

Evidence from phenomenological research is derived from first-person reports of life experiences. In accordance with phenomenological principles, scientific investigation is valid when the knowledge sought is arrived at through descriptions that make possible an understanding of the meanings and essences of experience. (p. 84)

The phenomenological research approach aligned with the intent of this study, as the intent of the study was to comprehend and convey the first-person experiences and consciousness of the research participants.

This chapter will discuss the methodology utilized to address the research questions, the methodological research design, rationale, participant sampling procedure, data collection instrumentation, data analysis and positionality. The applications of qualitative research within the data collection process utilizes inductive thinking, description, and participant's viewpoint. Given (2008) notes that inductive reasoning within a qualitative research approach can be utilized to evolve existing theory or to develop comprehension of non-existent theory. The utilization of inductive reasoning within a qualitative phenomenological research approach allows the researcher to understand the data conveyed by the participants. Furthermore, the researcher outlines their positionality, and the researcher engages in the Epoche process. The Epoche or "Bracketing" process is a method of removing, to a notable degree, the researcher's personal biases, prior associations, and subjectivity, to ensure that the researcher's personal bias does not unduly influence the interview or focus group (Moustakas, 1994).

The researcher used a qualitative research design with a phenomenological research approach to address the principal questions guiding this study. The researcher designed the following research questions to address the principal guiding question of the study.

1. How do structural and systematic systems of inequalities, as outlined in CRT, influence Black male medical students' experiences with medical school matriculation?
2. How do Black male medical students perceive self-efficacy as a determinant factor within their matriculation into medical school?

Multiple forms of qualitative instrumentation were implemented to achieve saturation of the data related to Black male medical student perseverance. This chapter follows the following qualitative research format: (a) Setting; (b) Selection of Participants; (c) Instrumentation; (d) Data Collection; (e) Data Analysis; (f) Positionality.

### Setting

This study was a multi-institutional study focused on medical universities located in the southern United States. This study purposely selected participants who were undergraduate graduates from both PWI and HBCU institutions. The interviews were conducted virtually via an online virtual teleconferencing platform (e.g., Zoom).

With consideration given to the health, safety and availability of the participants, the researcher elected to utilize a virtual teleconferencing platform for the study setting. In addition to the health and safety of the study participants, the virtual teleconferencing platform allowed for the study participants to participate in the study interviews in their preferred remote location. Furthermore, the virtual teleconferencing platform allowed for ease of participation. The virtual teleconferencing platforms allowed for audio and video recording as well as a basic transcription. Furthermore, the virtual teleconferencing platform user interface was simplistic, user friendly and did not require account registration or unnecessary downloading of software.

### Selection of Participants

According to Palinkas et al. (2015), “purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest” (p. xx). Black male medical students are a specialized population of students with rich lived experiences that this study is centered on. The researcher purposely selected participants that yielded sufficient data to assist with the development of the study. By reviewing data reported by the AAMC (2019), the researcher identified multiple medical school institutions in the southeast with significant populations of Black premedical student graduates and Black medical student matriculates. The student service offices and the diversity and inclusion offices at each respective medical school were contacted to inquire about the opportunity to engage with their students that meet the prescribed sample population criteria. The researcher implemented a purposeful sampling process and a snowballing sampling process to yield a sufficient sampling population.

Giorgi (2009), describes the purpose of phenomenology as a method of describing the meaningful lived experiences of participants with as described by the participants. Qualitative research inherently utilizes a small sample size to ensure that the researcher can obtain the holistic experiences of the participants. Given that this study utilizes a phenomenological research design, the recommended sample population size to achieve saturation of the data was a minimum of six participants and no more than twelve participants (Creswell & Creswell, 2018; Stewart et al., 2011).

Upon developing a list of potential study participants, the researcher e-mailed each potential participant with an outline of the proposed study and to request their participation.

Participants that respond with an affirmative response received a welcome email and request from the researcher to complete the attached Demographic Survey, Student Self-Efficacy (SSE) assessment and Explanation of Research form (Appendix C, Appendix D and Appendix E). The demographic survey provided the researcher with a profile of the participants' cultural, socioeconomic and academic background. The SSE scale, created by Schmitz and Rowbotham (2013), is based upon the Teacher Self Efficacy (TSE) scale. The SSE scale is designed to adequately and effectively assess student self-efficacy in the areas of: (a) academic performance, (b) skill and knowledge development, (c) social interaction with faculty, and (d) coping with academic stress. The SSE scale is a 10-question assessment that utilizes a four-point response format: 1-point (not at all true); 2-point (hardly true); 3-point (moderately true); 4-point (exactly true). The Explanation of Research form (Appendix G) describes in detail the purpose of the study, the study procedures, the anticipated duration of the study, participant confidentiality and contact information for the researcher. The researcher submitted for the university Institutional Review Board (IRB) at the researcher's home institution.

### Instrumentation

There are four data collection instruments that are common within qualitative research studies: (a) qualitative observation; (b) qualitative interviews; (c) qualitative documents; and (d) qualitative audiovisual and digital materials (Creswell & Creswell, 2018). The intent of a phenomenological study is to focus on the lived experiences of the study participants. Qualitative semi-formal interviews are the principal data collection instrumentation. The difficulty of

recruiting this limited population of students adversely affected the implementation of additional instrumentation procedures (i.e. focus group).

*Table 1: Research Question & Instrumentation Relationship*

<b>Research Questions</b>	<b>Instrumentation</b>
1. How do structural and systematic systems of inequalities, as outlined in CRT, influence Black male medical students' experience with medical school matriculation?	<ul style="list-style-type: none"> <li>• Demographic Survey</li> <li>• Semi-Formal Interview Questions</li> </ul>
2. How do Black male medical students perceive self-efficacy as a determinant factor within their matriculation into medical school?	<ul style="list-style-type: none"> <li>• Student Self-Efficacy Survey</li> <li>• Semi-Formal Interview Questions</li> </ul>

### Data Collection

The study participants were selected from the class rosters of medical schools located in the South. Upon IRB approval, the researcher emailed each participant to schedule interviews. Once confirming an appropriate date and time for the interviews, the researcher emailed each



participant a Zoom meeting request, which included a summarization of the study and the purpose of the virtual meeting. The participants responded to the e-mail with acknowledgement and affirmation of their continued participation.

The researcher conducted semi-structured interviews utilizing computer software (e.g., Zoom), which creates a virtual meeting environment. The researcher maintained copious notes during the interview processes to ensure that verbal and non-verbal data was accurately represented (Saldana, 2009). The Zoom software provided a visual and audio recording. The researcher reviewed the video recording and audio recording to ensure validity of the participants' responses. The researcher transcribed the audio recording prior to conducting the coding process and the development of themes. The researcher utilized the themes yielded from the semi-structured interviews to develop an inclusive descriptive narrative. The researcher applied pseudonyms to ensure the anonymity and confidentiality of the study participants.

The findings of the study underwent a member checking process to ensure that the participants' perspectives and experiences were properly recorded and represented. The coded data was further analyzed and placed into appropriate themes. The themes of the study represented the topics most addressed during the interview process and served as the foundation in which the researcher interpreted the significance of the data.

The trustworthiness of the research findings is essential to the foundation of the study. According to Creswell and Creswell (2018), the research can address qualitative validity by enacting appropriate validity strategies: (a) triangulate; (b) member checking; (c) rich thick description of findings; (d) reflexivity; (e) present negative or discrepant information; (f)

prolonged field time; peer debriefing; and (g) an external auditor. The researcher provided a thorough description of the findings and a triangulation of the data by utilizing three instruments.

### Data Analysis

As outlined by Saldana (2009), the researcher split the coding process into two cycles. The first cycle consisted of seven different coding methods, which embodied 23 different coding approaches. The second cycle consisted of one coding method and embodied six different coding approaches. Selecting the appropriate coding approach or approaches for each cycle of the coding process was dependent upon the purpose and nature of the study. According to Saldana (2009), “Depending on the nature and goals of your study, you may find that one coding method alone will suffice, or that two or more are needed to capture the complex process or phenomena in your data” (p. 47). The researcher implemented two different coding approaches (e.g., Descriptive; Thematic analysis) to effectively address the research questions that are guiding this study. The first coding cycle utilized descriptive coding. Descriptive coding is a summarization of a qualitative data point. Descriptive coding is an applicable coding method for most qualitative research and is an ideal coding methodology for new researchers utilizing multiple data formats (Saldana, 2009). The second coding cycle approach was determined based upon the data that the researcher transcribed and coded during the first coding cycle. The second coding cycle approach was thematic analysis coding. Thematic analysis coding is applicable when determining themes or patterns from different excerpts expanding the data derived from the interview transcripts. Similar to descriptive coding, Thematic analysis coding is ideal for beginner researchers.

The researcher implemented a data analysis procedure to appropriately yield data that could be used throughout the data collection process and the summation of the research findings (Creswell & Creswell, 2018). The raw data (i.e., transcripts, fieldnotes, interview protocols, etc.) were transcribed, organized and thoroughly reviewed. A modified seven-step data analysis process developed by Colaizzi (1978) was used to guide the data. During the semi-structured interviews, the researcher took meticulous notes to ensure that the verbal, non-verbal and emotional communication conferred by the participants was accurately collected. The data received from the one-on-one semi structured interviews were transcribed, organized, reviewed, and then coded. The subsequent themes received a thorough description and narrative discussion of the data analysis. The researcher discussed the research findings, the implications of the research and compared the research findings to existing literature. Additionally, the researcher discussed the limitations of the research and proposed implications of the research finding on future research.

### Positionality

It is important to acknowledge potential researcher unconscious bias upon a study. Unconscious bias can be the result of the researcher's personal characteristics, values, and lived experiences (Creswell & Creswell, 2018). At the time of authorship, the researcher was a 37-year-old Black/African American male with an extensive professional career in the U.S. higher education system, with a student-affairs focus on student access. The researcher has lived in the southern United States for his entire adult life; however, the researcher's early childhood was lived overseas on a military base in Germany. The researcher received a bachelor's degree in

Public Administration and a master's degree in Business from the University of Central Florida.

The researcher conducted this study as part of the researcher's doctoral degree requirements.

### IRB Approval and Ethical Consideration

The researcher began the Institutional Review Board (IRB) process, after receiving the approval of the dissertation committee. Institutional Review Board approval is necessary, given that this study is a phenomenological study and directly engages human participants. Prior to applying for IRB approval, the researcher conducted additional CITI training designed to address standards of conducting ethical research. The researcher ensured that the study participants were informed of the study's objective, ethical considerations and participants right, by providing the study participants with a copy of the IRB approved Explanation of Research Form. The study participants provided informed consent prior to participating in the study.

### Written Confidentiality

As outlined in the CITI training, the confidentiality of the study participants was essential. As a method of maintaining the anonymity, privacy and confidentiality of each study participant, the study assigned individual pseudonyms for each participant. Participant 1 is referred to as Peter, Participant 2 is referred to as Tony, Participant 3 as Roger, Participant 4 as Ken, Participant 5 as Nick and Participant 6 as Michael. The participants completed a Student Self-Efficacy Scale (SSE) and a demographic survey prior to participating in the interview process. The information yielded by the SSE and the demographic survey provides a comprehensive profile of each study participant. However, study participant anonymity was

maintained due to the use of pseudonyms. The demographic data, student self-efficacy survey and interviews were stored on a secure university assigned One Drive account.

### Summary

This chapter detailed the importance and purpose of the study and reiterated the research questions that were designed to address the principal question guiding the study. The six participants were chosen utilizing a combination of purposive and snowballing sampling procedures. The participants were selected from the rosters of PWI medical schools. The participants were restricted to medical school students and did not include medical residents to limit the degradation of their medical school transition experience. This chapter discussed the utilization of qualitative instrumentation, reliability and validity methodologies. Furthermore, this chapter provided a detailed overview of the data collection and analysis process. The ensuing chapter presents the analysis of the data yielded from the researcher's study.

## CHAPTER FOUR: RESEARCH AND FINDINGS

This chapter reveals the study findings and reviews the transcription, coding and theming process. Through the perspective of the research questions, this chapter evaluates the study results. Lastly, this chapter highlights the importance of this study in relation to the over-arching research question guiding this study.

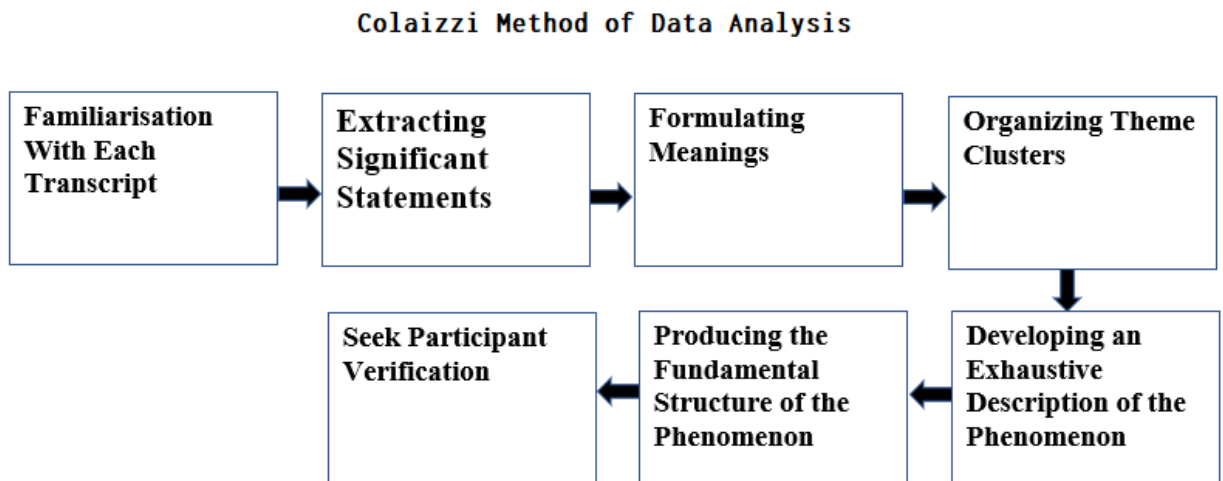
This chapter is designed to provide a comprehensive description of the study participants, while simultaneously maintaining the anonymity and confidentiality of the study participants. The descriptions of the study participants are based upon the participants' individual demographic surveys as well as the researcher's general observations. A rich and detailed description of each individual study participant is necessary to permit the reader the opportunity to visualize and comprehend the individual perspectives of the study participants in the forthcoming chapters. Although a rich and detailed description of each study participant is defined, the interviewer acknowledges that they are incapable of providing a holistic description of the study participants mannerisms and emotions exhibited throughout the study.

The study participants were from multiple institutions. Four of the study participants were from the host university. The researcher's role as a higher education professional assisted in establishing access to four participants from the host university. The remaining two study participants were from an external university. The availability of the participate population hindered the progression of the study. The researcher implemented a snowballing sampling procedure in lieu of purposeful sampling procedure, due to the researcher's inability to recruit an adequate sample population. The inability to recruit a significant sample population and the subsequent reliance on snowballing sampling procedures further highlights the importance of the

study. It is the researcher's belief that their institutional access to the host university participants may have encouraged study participation. It is the researcher's belief that each study participant intrinsically understood the importance of this study and the value that their personal stories provide.

### Analysis

Moustakas (1994) describes the importance of firsthand experience within the phenomenological research process - data derived from that firsthand experience is the result of descriptive analysis. When reviewing the data, the researcher relied upon Colaizzi's (1978) seven-step data analysis as a general guide through the data analysis process (Figure 1).



*Figure 1: Colaizzi's Data Analysis 7-Step Process*

The first stage of Colaizzi's (1978) data analysis process is to acquire a sense of the transcription. The researcher facilitated each of the semi-structured interviews and an audio and video recording of each of the interviews was cataloged. The researcher reviewed the audio and video recording two times for each participant to gain a rich description of the participants' lived

experience. The researcher took detailed notes of each interview prior to the transcription process.

As outlined by Moustakas (1994), it is important that the researcher participate in the Epoche process to minimize preconceptions and personal bias. During the Epoche process, the researcher had the audio recordings of the interviews transcribed by a third-party transcription service. The researcher then reviewed each participant's audio recording a third time and compared the audio recording to the completed transcriptions. The researcher completed this process to ensure validity of the transcription. The researcher provided the transcription and a summary of the interviews to each respective participant to allow the participants' the opportunity to clarify statements, provide necessary feedback and to ensure that their "voice" was well represented. Each participant indicated that the transcript accurately reflected their lived experiences and their interview.

The second stage of Colaizzi's (1978) data analysis method is the extraction of significant statements. This stage requires multiple readings of the interview transcripts to identify notable experiences that have led to the successful transition into medical school. The researcher reviewed each respective transcript twice and evaluated the transcript for significant statements and phrases that accurately depict the lived successful experiences of the participants. The researcher highlighted the significant statements on the transcripts to allow for greater ease when coding. The interviews yielded 194 significant statements. This process required a significant time commitment and was challenging; however, in accordance with Colaizzi's (1978) data analysis methodology, it was necessary to maintain familiarity and comprehension of the data. An example of the statement extraction process in Table 2.



*Table 2: Extraction of significant statement*

Example 1: “So, he definitely helped. I think he definitely, what he did, I think was give me an example or rather show me a model of what a student who aspiring to be a medical student should do. “

Example 2: “The one person that I think of when that comes to mind, he was another student. He was just a year above me, but he had already went through the entire process, so he was helping me out.”

The third stage of Colaizzi’s (1978) data analysis methodology is the formulation of meanings. This stage requires the identification of meanings within the extracted significant statements. Colaizzi (1978) recommends that the researcher “Brackets” their individual experiences and biases and attempts to perceive the phenomenon as experienced solely by the participant. This process required the researcher to reexamine their positionality, as outlined earlier in Chapter 3, and to acknowledge that their preconceived biases and experiences were beyond the scope of the participants’ experience. With the Epoche or Bracketing process concluded, the researcher proceeded to review and evaluate the extracted significant statements for meanings relevant to phenomenon of Black male students successfully transitioning into medical school.

Table 3 illustrates an example of the process of developing meanings from the extracted significant statements, which the researcher acquired in stage 2 of Colaizzi’s (1978) data analysis methodology.

Table 3: Transition of Significant Statements to Formulated Meanings

Extracted Significant Statement	Formulated Meanings
<p>The outpatient clinics are on campus, so I did some shadowing there and a little bit like a case report and stuff. And my mentor for my honors thesis was a physician there, he was ortho surgeon.</p>	<p>Successful mentorship and physician shadowing was the result of accessibility of local resources.</p>
<p>On the interview trail I was one of two or three Black students also interviewing, or just the only one. So that always, I think, kind of affects students. I think at that point I was kind of used to it and expecting it.</p>	<p>Success come from a high degree of self-efficacy and extended experience as the sole Black student in a predominately White environment.</p>
<p>I feel like half my class, it might...I think it is around half the class come from like parents of physicians and stuff like that, which, obviously you're gonna be inspired by like what your parents do and stuff like that.</p>	<p>Familial physician relationships contribute to the success of students pursuing medical school.</p>
<p>I think when you're an African American in higher education, that's something that you</p>	<p>Success comes from acceptance that the racial diversity of medical school is limited.</p>

<p>have to kind of expect, unfortunately, that it's not gonna be very diverse.</p>	
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The fourth stage of Colaizzi's (1978) data analysis methodology is theme clustering. Colaizzi (1978) recommends clustering the identified meanings that are similar or common. Once the researcher formulated the meanings, the researcher implemented the bracketing process again to minimize their preconceived bias and individual experiences during the theme clustering process. The researcher utilized coding processes as outlined by Saldana (2009) during the theme clustering process. Saldana (2009) describes coding as a word or phrase that is symbolic and summative. The researcher utilized In Vivo coding and Descriptive coding methodologies. The researcher originated the codes from the development of the formulated meanings generated in stage three.

The researcher utilized descriptive coding in the first cycle of data reduction and developed codes from the formulated meanings. Descriptive coding is ideal for new researchers and summarizes the primary subject of the passage. Descriptive coding is considered a first cycle data, which is received from the participants in the participant's own terminology. Table 3 is an example of the descriptive code process from the study's first participant (Peter):

*Table 4: Description Coding Example*

Extracted Significant Statement	Formulated Meanings	Description Coding

<p>"If you do all these things, it'll prepare you for med school." It doesn't necessarily say you're gonna get in, but it'll prepare you. In order to get in, you gotta take that next step towards you actually want it.</p>	<p>Exceeding minimums for success</p>	<p>Advanced Courses</p>
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The researcher utilized thematic analysis coding in the final step of data refinement, which was subsequently used in the theme clustering process. Each step of the coding process assisted with the clustering and theming of the data. Once the researcher coded all the interview data, 28 theme clusters emerged from the data. The researcher further distilled these clusters into seven prominent themes that were representative of the success of Black male medical students transitioning into medical school. The researcher represented the final prominent themes and theme clusters in table 4.

*Table 5: Prominent Themes and Theme Clusters*

<b>Prominent Themes</b>	<b>Theme Clusters</b>
<b>Education Cost</b>	Apprehension to incurring student debt
	College and medical school affordability

<b>Honors College</b>	Early Assurance programs alleviate acute stress
	Small class size learning and faculty engagement
<b>Motivation</b>	Desire for financial security
	Early exposure to the field of medicine
	Innate desire to help people
<b>Support</b>	Faculty engagement and Networking
	Familial Support and Geographic location
	Peer mentors, peer guidance, and networking
	Physician mentoring development and shadowing
<b>Academic Excellence</b>	History of Academic challenges
	Academically Preparedness
	Involvement in academic and leadership related clubs
	High degree of self-efficacy and self determination
<b>Diversity &amp; Inclusivity</b>	Stress felt by Black applicants exclusively as the result of being the only Black interviewee

	Greater exposure and inclusion of cultural diversity
	Cultural empowerment
	Inclusive comfortable environment
	Institutional inclusivity
	Racial Microaggressions from peers and faculty
	Resigned to minimal cultural representation in high school
<b>AMCAS Application Process</b>	AMCAS application process is poorly designed
	Inability to compete in the application process due to cost
	MCAT is biased to minorities, cost prohibitive, and benefits upper socioeconomic students
	Socioeconomic status and Parental Networking
	Stress felt by Black applicants exclusively as the result of being the only Black interviewee

The fifth stage of Colaizzi's (1978) data analysis methodology requires the researcher to develop an exhaustive description of the phenomenon by incorporating all of themes that emerged from stage four of data analysis process. Stage five of Colaizzi's (1978) data analysis methodology provides readers of this study with a holistic perspective of the participants lived experiences and stories. The researcher developed the rich data description by compiling the formulated meanings, theme clusters, and prominent themes; thereby ensuring that the entirety of the participants experience is represented. The researcher provided a rich description of the lived experiences of the participants in this chapter.

The sixth stage of Colaizzi's (1978) data analysis methodology requires the production of the fundamental structure supporting the phenomenon that the researcher is studying. Within stage six of Colaizzi's (1978) data analysis methodology, the researcher distills the exhaustive description within stage five into focused statements that accurately depict the phenomenon. In relation to this study, the researcher did not conduct this stage, due to the redundancy in data reduction. The researcher discussed the fundamental structure in Chapter 5 of this study.

The seventh stage of Colaizzi's (1978) data analysis methodology requires the researcher to seek participant verification. The researcher in this stage of the data analysis process provides the participants with the fundamental structure statements that the researcher formulated in stage sixth of Colaizzi's (1978) data analysis process. The purpose of this stage of analysis is to ensure validity of the data and to assure the participants that their "voice" and "lived experiences" were accurately reflected by the researcher. This stage also permits the participants the opportunity to modify or adjust statements. Only Participant 6 (Michael) requested a minor adjustment in his narrative, but all participants were accepting of the validity of the interview transcriptions.

### Participant Profiles

A total of six Black male medical students participated in this study. An outline of the participants' demographic profiles is listed in Table 5.1. The study participants each participated in one individual interview. All the study participants were a minimum of 18-years-old, self-identified as Black male and were active medical students at allopathic medical school.

The demographic surveys disclosed the following information pertaining to cultural background, parental education, household income, undergraduate institutional type and medical school institutional type. All the participants associate with the term Black male, however, when provided the opportunity to define their cultural background, one participant identified as Jamaican, one participant identified solely as Black, and the remaining participants identified as African American. Two of the participants identified as being a second-generation immigrant. Two participants identified as being raised in a lower socioeconomic household and four participants identified as being raised in an upper-middle- to upper socioeconomic households. The extent of parental degree attainment extended from associate degree to doctoral. Two participants were children of practicing physicians. Two participants were graduates of an HBCU. Five-of-six participants completed college credits while in high school (i.e., Dual Enrollment, AP, IB, AICE). Finally, the Student Self Efficacy (SSE) survey provided a measurable degree of student self-efficacy for each study participant. The results of the SSE survey indicated a high degree of self-efficacy among the study participants, with an average SSE survey score of 34 out 40.



Table 6. Overview of Participants

<b>Participants Pseudonym</b>	<b>Cultural Background</b>	<b>Medical Class</b>	<b>Parental Highest Degree Attainment</b>	<b>Family Household Income</b>	<b>IB, AP, AICE, DE</b>	<b>Type of Undergraduate University</b>	<b>SSE Score (10-40)</b>
Peter	Jamaican	M1	Bachelor	Lower Socioeconomic	Yes	Predominately White	36
Tony	Black	M4	Associate of Arts or Science	Lower Socioeconomic	Yes	Predominately White	32
Roger	African American	M1	Doctoral	Upper Middle Socioeconomic	Yes	HBCU	33
Ken	African American	M4	Medical Doctorate	Upper Socioeconomic	Yes	HBCU	35
Nick	Black/African American	M4	Medical Doctorate	Upper Socioeconomic	Yes	Predominately White	32
Michael	African American	M1	Doctoral	Upper Middle Socioeconomic	No	Predominately White	36

*Peter*

I had to do that all by myself, really, and it made me envious, I had a feeling of envy and bitterness towards my peers in undergrad because I knew, "This person's parents are both physicians, or this person's uncle is a physician, and this one's a lawyer."

As a medical year 1 student, Peter was the first study participant to volunteer for the study. Peter was communicative and enthusiastic about the opportunity to engage in this study and replied to the researcher's communication earnestly. As the only Black male in his medical class of 125 students, and as a graduate of a private Ivy League research university, Peter was happy to engage in this study.

The researcher's interview with Peter lasted 53 minutes and 48 seconds. The interview was conducted via an online platform known as Zoom. The researcher's initial observation of Peter was his demeanor. Peter appeared reserved and introspective. Prior to conducting the interview, the researcher spent time exchanging pleasantries and building rapport. The researcher reiterated their research topic and the importance of the study and provided Peter the opportunity to express any questions or concerns that he was fostering. At the conclusion of the rapport building, the researcher described Peter's demeanor as being less reserved. Despite his initial composed demeanor, Peter was enthusiastic to discuss his experiences as a Black male student transitioning into medical school.

Peter attended public schools in the state of Florida from kindergarten throughout high school (K-12 system). Peter excelled in the public K-12 system and received straight A's. Peter's participation in physically demanding contact sports, such as football and wrestling, led Peter to contract dermatological conditions which subsequently led to Peter's initial interest in dermatology. Additionally, Peter's mother was a dermatology medical assistant, which provided

Peter with consistent exposure to the dermatology field. These early exposures to the medical career field of dermatology, coupled with his history of academic excellence, led Peter to pursue a career as physician with a specialty in dermatology.

Peter's academic achievement was matched by his athletic prowess, which led to Peter receiving a football scholarship to an Ivy League university. Peter remained committed to his career objective to becoming a dermatologist; however, Peter had limited guidance on how to approach the medical school admission process. Due to inadequate communication and engagement with his academic advisors, coupled with combating the student-athlete stigma of inadequate academic excellence, Peter received minimal guidance on the medical school admission process. Additionally, Peter was unable to connect with existing pre-med classmates due to the student-athlete/scholar chasm that existed on the university campus. This compounded Peter's ability to proactively address medical school admission benchmarks and resulted in Peter taking a gap year as he was not academically prepared to complete the medical school entrance exam (MCAT) on his preferred timetable. The lack of adequate medical school admission guidance resulted in Peter having to self-teach/learn the medical school admission process without the assistance that some of his classmates received in the form of physician familial guidance, institutional support, etc.

Peter described his relationship with his faculty members as memorable. Peter further defined the cultural demographic distinction between his faculty members (predominately white males) and himself as evident but otherwise unimpactful as he felt all faculty members were principally focused on student development. Throughout his undergraduate education, Peter had one Black male faculty member. Peter maintained a stronger connection and ease of

communication with this faculty member as opposed to all other faculty members. Overall, Peter's relationships with faculty members were limited as his athletic commitments prohibited him from seeking an in-depth faculty/student relationship.

Peter described his exposure to cultural diversity within the educational pipeline as a funnel, with cultural diversity peaking in high school and subsequently dwindling from undergraduate to medical school. Although Peter attended a predominately white undergraduate institution, he characterized his undergraduate institution as an overtly culturally inclusive institution. Peter described the inclusivity of his undergraduate institution as unrealistic, thereby creating a bubble mentality that would not appropriately prepare students for real-world cultural engagements. Moreover, Peter described the institution's inclusivity as principally focused on messaging and not active student diversification as most minority students were student-athletes. The lack of minority representation beyond that of student-athletes led to Peter experiencing difficulties in creating relationships with non-student-athletes within the premedical course curriculum. Peter feels that the lack of minority student representation and minority student engagement is only exacerbated on the medical school level, given that he is the only Black male student in his medical school class. The limited Black male representation minimizes his ability to culturally connect with peers and creates a cultural divide.

Peter found the medical school application process stressful, but manageable. Although academically competitive, upon graduation Peter did not meet all the requirements necessary to apply to medical school. This required Peter to participate in a process known as a "gap" year. Peter attributes his inability to complete all medical school admission requirements upon graduation to the limited guidance received from his undergraduate institution. Peter successfully

utilized his “gap” year to improve his medical school application package by increasing his total number of physician shadowing hours, clinical work experience and MCAT preparation. Peter credited his mother’s professional relationship with a dermatologist for his physician shadowing opportunity and his clinical work experience opportunity was afforded to him from a professional relationship that the dermatologist maintained with a plastic surgeon. Peter applied to six medical schools in the southeast and received two virtual interviews and one acceptance.

As a student-athlete, Peter described an atmosphere of dismissiveness from his academic peers, which stemmed from a perception amongst the premedical student body that student-athletes were not academically qualified students. The atmosphere of dismissiveness prevented Peter from developing meaningful relationships with his academic peers. Notable cultural and socioeconomic differences with his academic peers contributed to Peter’s difficulty with establishing meaningful relationships. Peter categorized these differences as access to physician mentoring, admission mentoring, networking and financial security. This resulted in Peter perceiving his academic peers as privileged and contributed to a spirit of bitterness.

Peter emphasized the importance of representation, exposure and professional mentorship. Moreover, Peter held the opinion that lack of representation amongst academic peers can lead to the feeling of isolation, inability to express oneself within an academic setting and adverse mental health conditions.

The cost of applying to medical school and the cost of attending medical school resulted in Peter restricting his medical school applications to in-state institutions. Peter applied to six medical schools and received two interviews and one acceptance. Due to Peter’s lack of professional mentorship, he was surprised to learn that a number of his peers applied to 20 or

more medical schools. Peter estimates that he spent over \$3,500 on the medical school application process, which included third-party MCAT course registration. The MCAT course registration was the principal contributor to Peter's medical school expenditure. Peter holds that the medical school application process can be cost-prohibitive for students with minimal financial security and was a significant factor he weighed when applying to medical schools and when selecting which medical school to attend.

*Tony*

It was expensive. And I remember that was part of the reason why I couldn't apply to more because, I kind of grew up in a family that was kind of broke. Even if we had decent money, my parents weren't very good with spending it.

Tony is a medical year 4 student and the second study participant. Tony participated in this study in between studying for his medical board exams and conducting his medical rotations. As one of two Black males in his medical class, Tony was eager to participate in this study. Tony's interview lasted 52 minutes and 24 seconds.

The researcher's initial observation of Tony, aside from his casual dress attire, was his introspective behavior. Prior to conducting the interview, the researcher reviewed the purpose of the study and allowed Tony the opportunity to present clarifying questions regarding the study and his relative participation. Additionally, the researcher took the opportunity to inquire about Tony's overall health, wellbeing, and the progression of his medical board training. This initial engagement allowed the researcher to establish rapport. After establishing rapport, the researcher noted a noticeable change in his introspective behavior, which led to an atmosphere of openness and conversation.

Tony grew up in a rural part of Florida to an adopted father who he characterized as being older with age-related medical conditions. As a young child, Tony held little interest in medicine; however, as his father's age-related medical conditions increased in frequency, Tony's interest in the medical field increased. While in elementary school, Tony's adopted father experienced a heart attack. This notable healthcare emergency influenced Tony's perception of medicine and highlighted the importance of physicians within healthcare. As Tony grew, his pediatrician became a professional role model for physician behavior and bedside manners. Tony's pediatrician also served as a mentor and provided guidance on how to navigate the K-12 system and how to transition to college.

Tony had a natural aptitude for mathematics and the physical sciences which afforded him the opportunity to enroll in an advanced course development program (International Baccalaureate) while entering high school. At the behest of his pediatrician and mentor, Tony was convinced that the International Baccalaureate program would provide the necessary academic preparation for a solid foundation to pursue a career as a physician. The IB program provided Tony with considerable collegiate academic preparation, college guidance and additional professional mentorship. Tony graduated high school with his International Baccalaureate diploma and transitioned into a large, public, predominantly white undergraduate university. Tony's decision to enroll in the International Baccalaureate program positively influenced his undergraduate admission competitiveness which resulted in significant state and university scholarships.

Tony's acceptance into his undergraduate university included acceptance into the university's honors college and acceptance into an accelerated joint undergraduate/medical

school program. The joint/accelerated program outlined benchmarks for continuing participation and acceptance, including minimum course enrollment, successful completion of physical science courses and minimum MCAT scores. Tony received college credit for his physical science courses for successfully completing his International Baccalaureate program. At the advisement of his academic advisor, Tony enrolled in physical science courses at his undergraduate university to increase his medical school admission competitiveness. The preparation that Tony received as an International Baccalaureate participant prepared him to easily excel in physical science courses. The ease of the physical science courses adversely influenced Tony's study skills development which resulted in inadequate study skills when transitioning into medical school.

The structure of the accelerated joint undergraduate/medical school program allotted sufficient time for MCAT preparation which resulted in Tony surpassing the program's minimum MCAT requirement for continuation and increasing his competitiveness to more medical schools. The honors program connected Tony with an ortho-surgeon to serve as his thesis mentor and provided ample opportunities to volunteer in a multitude of medical settings and to shadow practicing physicians. Tony's medical school opportunities expanded beyond his undergraduate university due in large part to the structure of the accelerated joint undergraduate/medical school program, substantial university relationships within the medical community and his cumulative academic achievement.

Tony valued the relationships that he was able to develop with his faculty and advisors at his undergraduate university. These relationships assisted in the medical school application process. The general education courses were larger, which resulted in challenges in establishing



faculty relationships; however, the sequential physical science courses allotted Tony the opportunity to develop meaningful relationships with the physical science faculty over the course of multiple semesters. The honors college was invaluable in assisting with his academic and professional development. The honors college established an environment of openness and engagement as the faculty and academic advisors were readily accessible and class sizes were smaller than university classes. The honors college presented opportunities for faculty-supervised overseas medical mission trips to Panama and to the Dominican Republic. Tony's most meaningful undergraduate experience was his time serving as a resident assistant. Tony's experience as a resident assistant provided him with a meaningful leadership and crisis training perspective. As a resident assistant, Tony learned how to manage crises and how to exhibit leadership within a real-world scenario as he had to navigate sexual assault and suicide prevention cases. Tony equates these experiences to patient management and patient ownership and has relied upon these experiences throughout his medical school education.

Raised in a predominantly white, geriatric population, Tony's exposure to cultural and racial diversity was limited. Although Tony attended a large PWI university, the university was home to a large minority population and is recognized as a minority serving university. This provided Tony with the opportunity to be exposed to multiple different languages, cultures and lifestyles. Tony recounts being unable to walk across campus without hearing multiple different languages and learning about social justice from his non-binary housing advisor. The diversity of his undergraduate university was the favorite aspect of his undergraduate education and was responsible for expanding his perception and understanding of diverse cultures and lifestyles.

Although his medical school has an atmosphere of inclusivity, there is a noticeable decline in the cultural and racial representation when compared to his undergraduate university. Broadly, there are opinions and perceptions held by a minority of both faculty and students within medical school forums that are dismissive and exclusionary regarding underrepresented minorities. These perceptions are centered upon the role of affirmative action within the medical school admission process and the qualifications of underrepresented minorities matriculating into medical school. Specifically, these perceptions and opinions hold that underrepresented minorities receive an unfair advantage within the medical school admission process. Tony finds these opinions and perceptions offensive and holds that different life experiences provide different advantages within the admission process. Underrepresented minorities receive advantages within the areas of grit and dedication due to a more consistent demonstrated history of resiliency or intrinsic motivation. Conversely, students with parents that are physicians – which he estimates is approximately half his class - receive significant educational, economic and social advantages within the medical school admission process.

A significant advantage of the accelerated joint undergraduate and medical school program was the defined benchmarks for students to be competitive for admission into the medical school. Additional online support resources (i.e., Student Doctor Network) provided Tony with medical school admission statistics which allowed Tony to identify medical schools that aligned with his academic profile. Tony provided additional geographic consideration to his school selection due to affordability and proximity to family. As a result, Tony applied to 10 medical schools and received seven secondary applications. Tony was accepted into six medical

schools and his decision to attend his medical school was based predominately on cost of attendance, scholarship funding, proximity to family and medical school board achievement.

*Roger*

I went to an HBCU and it was very inclined and driven to uplift the community as far African Americans essentially, and just put your role to where you're competitive in the world at nature as it is today, but also at the same time understand that you are Black embrace it because it's nothing that you can change, but you're just as important as everybody else in the world

Roger grew up in Mississippi, where he completed his K-12 education. Roger's interest in pursuing a career in medicine stems from his grandmother's multiple cancer diagnoses. Roger would frequently attend his grandmother's oncology appointments and personally witnessed the commitment and dedication of her physician to extend her life. While in middle school, Roger had the opportunity to enroll in the Duke Tip program, an early college emersion program designed to support gifted students. The program provided Roger the opportunity to take the ACT exam while in eighth grade and resulted in an increased interest in sciences. Roger's high school human anatomy instructor taught class utilizing a college-level human anatomy textbook. This left a notable impression on his educational journey, as it challenged him and fostered a mindset focused on sciences. This mindset, and the subsequent confidence that followed, established a strong science foundation that extended into his undergraduate education.

Roger credits his undergraduate university for providing the necessary resources and academic support structure to prepare him for the medical school application process. Roger

credits his undergraduate university for providing non-academic support systems that helped with character development and leadership development. Roger also credits his undergraduate university with providing him with numerous opportunities designed to meet the minimum requirements outlined by medical schools for admission consideration. Roger enjoyed the guidance of multiple mentors throughout his undergraduate education and understood the importance of exceeding minimum requirements for medical school admission consideration. Roger's priority was to develop professional relationships and to participate in undergraduate opportunities - external and internal - that would improve his medical school application. Roger's undergraduate university provided him with academic and professional development needed to be competitive for medical school; however, he attributes his work ethic, personal accountability, confidence and commitment to medical education to his early exposure to human anatomy and his participation in the Duke Tip program.

Roger attended a predominantly white high school and was intending to enroll into a PWI until he received a competitive scholarship from an HBCU. Cost of attendance was a considerable factor within his college selection process, as Roger was acutely aware that attending medical school was an expensive endeavor. Cultural acceptance, empowerment and a competitive scholarship led to Roger selecting an HBCU as his undergraduate university. As a Black male, Roger perceived his undergraduate university as being culturally inclusive and uplifting. Roger describes his undergraduate university as developing an atmosphere of acceptance and appreciation of Black culture. Roger credits his undergraduate university for teaching him how to make an impression in a professional setting and to respect himself and his culture.

Roger's experience applying to medical school was seamless. Roger considered the medical school application process stressful; however, the stress that he experienced was the result of approaching a life goal and not the result of the overall application process. Roger's undergraduate preparation and academic achievement mitigated the stress of the medical school application process. Roger applied to three medical schools, with the cost of attendance, proximity to family and residency match rates being dominant factors within the application process. The medical school application process was seamless for Roger as he was offered admission and a full tuition scholarship to his preferred medical school.

Roger perceives his medical school as being culturally inclusive and credits his medical school for enrolling one of the largest Black medical student populations outside of an HBCU medical school. Despite the cultural inclusion of his medical school, Roger acknowledges that cultural diversity is significantly lower at his medical school when compared to his undergraduate university. Roger values the cultural composition of his medical class, as it permits opportunities to expand his understanding of varying cultures in different settings. Roger found attending an HBCU undergraduate university and then a PWI medical school benefited him as it allowed him the opportunity to grow, respect and appreciate his culture, prior to entering an environment in which his culture is underrepresented.

Physician shadowing and community service volunteering are significant components of the medical school application process. Roger's undergraduate university provided him with many opportunities for volunteering as the university had a community service graduation requirement of 120 hours. Roger experienced minimal difficulty connecting with practicing physicians for shadowing opportunities as his mother is a nurse with established relationships

with practicing physicians. The greatest difficulty that Roger experienced while completing the physician shadowing component of his application was time management.

*Ken*

My high school was a predominantly white school. And so that was a huge culture shock. I'm not gonna lie switching from a predominantly white school to HBCU, but it was one that was very well, much needed for me. I had to learn. I'm very glad' cause I learned this about camaraderie and about uplifting the people around you because that was not the culture when I was in high school.

Ken was born in Arkansas but raised in Mississippi. Ken's father is a practicing physician and recognized that Ken demonstrated a high academic aptitude at an early age. Ken's parents struggled to find an elementary school within their school district that would challenge him academically. This struggle resulted in Ken being home-schooled for second grade and then relocating to a different school district. The new school district provided academic programs, including college preparatory courses, which were challenging and aligned with his aptitude. Beginning in the eighth grade, Ken tested in advanced accelerated courses which prepared him to enroll in AP courses in high school. Ken continued to pursue opportunities to academically challenge himself and enrolled principally in AP courses throughout high school as AP course curricula were rigorous. The rigor of the AP courses subsequently prepared him for the rigor of college coursework.

Ken participated competitively in high school athletics, excelling in football, track and tennis. Additionally, Ken pursued opportunities to become involved in scholastic student organizations such as the decathlon team, speech, and debate teams. Ken's desire to engage

within his community presented opportunities for medical community service. Ken's desire to serve within his community continued as he transitioned to his undergraduate university.

Ken's advanced academic preparation in high school prepared him to enroll in his university's honors program. When selecting his academic career path, Ken was acutely aware of the demands required of a practicing physician. As a practicing physician, Ken often perceived his father as being absent. This perception led Ken to enroll in college as a political science major with the intention of pursuing a career in law, serving underprivileged communities. Ken's educational career path shifted upon volunteering at a free clinic and engaging with patients.

Ken's career shift required changing his major from political science to biochemistry. Ken enrolled in advanced college credit courses while enrolled in high school. As an honors undergraduate student, several of Ken's science honors courses were required courses for his biochemistry major. Ken enrolled in additional coursework beyond the minimum honors and major graduation requirements to ensure that his medical school academic preparation was sufficient. Ken immersed himself in his university's community culture by joining the Greek life community and by becoming actively involved in student government. Ken's student government involvement culminated in him becoming student body President.

Ken's parents were supportive of him changing his career aspirations, as they have consistently encouraged him to continuously challenge himself and to always do his best. This supportive perspective was evident during Ken's transition from high school to college. Ken received acceptance and a substantial scholarship from a prestigious Ivy league university; however, Ken's parents challenged him to select a university that would align with his career aspirations and community goals while being fiscally conscientious given his desire to pursue

advanced education beyond a bachelor's degree. This guidance led Ken to enroll in an HBCU. The HBCU community engagement and promotion of community over the individual were deciding factors within his university selection process. An additional benefit of being enrolled in his undergraduate university was acceptance in the honors college and acceptance in an early assurance medical program.

As the son of a practicing physician, Ken had access to his father's network of physicians for guidance, mentorship, and referrals. Ken, however, refused to access his father's network of physicians with the intention of gaining admission into medical school based solely upon his own academic and non-academic merit. Ken's undergraduate institution did not have a sustained history of directly transitioning pre-medical students into medical school. Ken's pre-medical advisor, who was also the university's pre-professional advisor, provided basic guidance but was unable to provide adequate support for the entire pre-med class and the entire pre-professional class. Ken found guidance from upper-class students equally ineffective as his understanding of the medical school application process extended beyond his upper-class mates. Ken recognized the lack of institutional support and experience could adversely influence his ability to directly transition into medical school. Additionally, Ken sought mentorship from current medical students that he made connections with from professional development conferences.

Ken committed a significant amount of time to researching the medical school application process and the Medical College Admission Test (MCAT). Ken described the overall medical school application process as inefficient and redundant, and the MCAT exam as a deterrent. Ken described the numerical score format of the MCAT exam as adversely impacting students' from being holistically considered for medical school admission as the cost of MCAT



preparation is prohibitive. Ken estimated that his MCAT preparation, which was restrained to the purchasing of MCAT books and practice exams, was approximately \$400. Ken acknowledged that his MCAT preparation cost was an outlier given that his classmates spent upwards of \$4,000 on MCAT preparation. Ken perceived the MCAT preparation cost as impractical and detrimental for students that come from lower socioeconomic backgrounds, given that students that do not participate in MCAT preparation courses, have lower MCAT exam score and are considered less competitive for medical school admission. Ken viewed the MCAT scoring format as biased and advocates for a pass/fail format as this would limit the inherent biased found within the exam scoring format.

Ken admired the institutional atmosphere at his undergraduate university. The staff, faculty, and administrators were supportive, inclusive, and understanding of his life experiences as a Black male. Ken described his undergraduate university as a community focused on instilling inclusivity, empowerment, and camaraderie. Ken described the faculty support and engagement at his undergraduate university as comparable to his medical school. Ken recognized a notable difference between undergraduate and medical school institutional cultures on cultural inclusivity and sensitivity on the administration level. Ken described his medical school commitment to cultural inclusivity and sensitivity as surface level and lacking meaningful cultural engagement. Ken attributed this lack of cultural inclusivity to administration leadership which practiced inadequate admission practices that were not holistic and failed to enroll a significant percentage of Black medical students. Ken's medical school replaced administration leadership within the admission department with a new Dean of Admissions with a more expansive viewpoint on medical school admission practices. The new Dean of Admissions, who

is also a practicing Black male physician, expanded admission practices which increased enrollment of Black medical students by 70% in one year and by 170% over two years. Ken attributes the notable difference in enrolment demographics to the new Dean of Admissions who implemented new admission strategies and policies aimed at increasing cultural diversity.

As student government President of his undergraduate HBCU, Ken served as a representative at budget board meetings. Ken recognized a notable difference in state-allocated funding between his HBCU and PWI institutions. Ken noted that state funding was not readily available for his HBCU for basic infrastructure services while PWI state institutions received considerable funding for non-essential construction projects. Ken perceived the funding disparities as representative of the boards' perception of the quality of education provided by his HBCU.

During the admission process, Ken recognized that several of his white classmates had preexisting peer mentor relationships with several upper classmates who were graduates from their undergraduate universities. These preexisting relationships extended beyond upper classmates and extended to administration leadership and to medical residents. Ken recalls classmates whose parents had a personal relationship with administration leadership being personally greeted by the Dean of Student Affairs and the Dean of the medical school during the admission interview process. Given Black students' limited opportunity to establish similar preexisting relationships, Ken viewed these relationships as unfairly benefiting specific students and biasing the admission process.

*Nick*

I went to a private school, I had a great education, but I was one of the few Black students in my class. And many of my classes, that I was taking, AP-level courses, I was the only Black student. And even in the premed club, I was the only Black student in the Club

Nick is the son of a physician and grew up in central Florida. Nick attended the same private college preparatory school for elementary, middle, and high school. Nick's college preparatory school offered the majority of AP courses that were provided by the parent company, College Board. Nick took full advantage of his institution's academic offering and enrolled in multiple AP courses throughout high school. Nick's academic achievements in high school resulted in him having a competitive college application and Nick received competitive offers of acceptance and scholarships from multiple institutions. Nick's desire to remain close to family and to minimize expenses were considerable factors within his college selection process. Nick enrolled in his undergraduate university with a notable number of college credits due to the successful completion of his advanced placement courses.

Nick received his undergraduate education from a large PWI located in the state of Florida. Geographic location to family and cost of attendance were notable factors in his decision to attend his predominately white medical school. Nick found his transition into college seamless due to the academic preparation that he received from completing multiple AP courses and his enrollment in the university's honors college. The honors college provided a small community of high-achieving students with similar academic accomplishments in the large university

environment. The honors college also offered smaller class sizes for non-science courses which allowed Nick to develop direct relationships with the faculty.

Similar faculty relationship development was difficult to attain in the larger non-honors science courses. Consequently, academic learning challenges emerged from the lack of relationship development in the larger non-honors science courses which required Nick to learn how to navigate independent educational resources to supplement his course instruction. Independent learning, personal responsibility, and a strong work ethic were noteworthy lessons that Nick applied during his undergraduate education. Nick valued the available resources and opportunities that were readily available at his large undergraduate university and he valued the community environment that was afforded to him by the honors college. However, Nick noted that the quality and availability of resources at one's undergraduate university are not sufficient to transition to medical school and that the largest contributor to success is the student. Nick stated that every student's personal circumstance may hinder their ability to effectively utilize university resources, but ultimately the academic success of the student is the responsibility for student success. Conversely, Nick perceives the responsibility of the university to ensure that opportunities and resources are readily accessible and visible for students with untraditional or challenging schedules.

As the son of a practicing physician, Nick was consciously aware of the possibility of becoming a physician himself. Nick did not take an active interest in a career as a physician until the end of high school when he began to engage the medical field to gain firsthand experience on the roles and responsibilities of physicians within various medical specialties. Nick gained his firsthand experience by joining his high school's pre-medical student organization and then by

joining the pre-medical student organization in college by shadowing physicians. Nick is aware of the beneficial position that he held as the son of a practicing physician and as a graduate of a private college preparatory school. Nick credits his early and consistent exposure to a career in medicine and the great college preparatory education that he received as contributing factors to his overall success. Nick's medical exposure and quality of education did not insulate him from being inundated with racial micro-aggressions from classmates attempting to dissuade him from becoming a physician due to his race. Nick views this form of micro-aggression as unique to minorities - specifically Black minorities - and credits his unique background for providing him with the fortitude to overcome these micro-aggressions. Nick recognizes that most black minorities do not have familial representation within the medical field to reinforce their belief in oneself and that these types of micro-aggressions can dissuade talented students from pursuing a career in medicine. Nick believes this is an area in which medical schools and undergraduate universities can have the greatest impact on medical student enrollment by engaging minority physicians within the local area to become actively involved in undergraduate medical student organizations.

As a graduate of a private college preparatory school Nick viewed his undergraduate university as a culturally diverse institution; however, the cultural diversity of the honors college did not reflect the diversity of the overall university. The honors college had limited black representation and mirrored the student composition of his college preparatory school. Nick was comfortable navigating the cultural student composition of his honors college due to the comparable cultural composition of his high school college preparatory school. Nick concedes that

students, specifically Black students, which are accustomed to a diverse student body, may have trouble integrating into the honors college homogenous student body.

Nick's medical school is the same university as his undergraduate university and mirrored the cultural composition of the undergraduate honors college. Cultural diversity was not a predominate factor in Nick's medical school selection; however, Nick was disappointed in the lack of cultural diversity within the student body. Nick's experience navigating a predominantly white student body prepared him to manage the cultural integration in medical school; however, this is an additional obstacle that his peer classmates do not have to manage. Despite the limited diversity within the student body, Nick's medical school is culturally inclusive and receptive to new diversity initiatives, and recruitment strategies.

Nick considered multiple factors when deciding which medical school to attend. Nick's strong familial relationship was a significant factor when considering location. Additionally, cost of attendance and scholarship funding were notable factors that Nick considered when selecting his medical school. Nick did consider HBCU medical schools; however, Nick wanted his first exposure to implicit bias and discrimination as a Black physician to occur during his medical education and not during residency. Therefore, institutional cultural diversity was not considered a significant factor as Nick applied to predominantly white institutions. In the absence of institutional cultural diversity, Nick valued institutional inclusivity, institutional pliability, and institutional positivity as factors within his medical school selection process. Nick values the institutional pliability of his medical school, as it has allowed for the implementation and development of diversity initiatives that may yield greater diversity within future medical student classes.

Nick defined the application process as stressful and cost-prohibitive for students. Nick's participation in his honors college permitted him the opportunity to enroll in the university's early assurance program that provides guaranteed admission into his institution's medical school pending successful completion of the program. The early assurance program mitigated the inherent stress found within the medical school admission process and allowed Nick to be more strategic with his medical school applications. Nick described his peers as applying to upward of 30 medical schools; however, due to his guaranteed acceptance, Nick restricted his medical school applications to only 12 medical schools. Nick described his medical school interview process as culturally stressful due to being one of the only Black applicants participating in interviews. The weight of peers questioning his qualifications and referencing him as an affirmation action applicant weighed heavily upon him.

Nick described the physician shadowing, research, and volunteer experience components of the medical school application process as one of the more difficult components to complete. Nick purported an environment in which a limited number of physicians have limited availability to engage undergraduate students within the shadowing process. Nick was able to conduct his physician shadowing by applying to a very restrictive physician shadowing program that only accepts a small percentage of premedical students. The physician shadowing program requires applicants to have a demonstrated history of academic excellence, leadership, and involvement. Nick credited his acceptance into the physician shadowing program for allowing him the opportunity to shadow multiple physicians across multiple disciplines. Without his participation in the physician shadowing program, Nick suspected that he would have continued to experience significant difficulty acquiring physician shadowing opportunities.

Nick experienced similar difficulty acquiring research experience. Nick purported that the issue with acquiring research opportunities as an undergraduate premedical student, stems from research faculty's desire to provide research opportunities to research graduate students and undergraduate students pursuing doctoral research programs. The volunteer component was easier to achieve than either the physician shadowing or the research components of the application. Nick credited his access to mass transit and access to a personal vehicle for his ability to participate in medical volunteer opportunities.

*Michael*

I think it was a little easier to get involved at my community college, and I also think that being in the honors program helped as well, just cause... you know, well, kind of competition being around other students that are also trying to get involved with something like that.

Michael grew up in Southeast Florida and was consistently enrolled in advanced courses in elementary school. Michael distinctly recalls displaying a strong aptitude for academics in the fifth grade which resulted in him enrolling in honors courses in the sixth grade. In eighth grade, Michael joined the IB program. The IB program offered a rigorous course curriculum and Michael enrolled in IB and AP courses throughout high school. Upon high school graduation, Michael attended a local state college and enrolled in the honors college. The honors college was pivotal in furthering his development both personally and academically. Upon graduating from state college, Michael transferred to an in-state university to complete his bachelor's degree requirement. Michael's participation in his state college's honors program permitted him to transfer to his in-state university's honors program.



Michael's continued participation in advanced rigorous courses and programs led to an increased sense of accomplishment and achievement. Michael stated that the rigor of his IB and AP courses contributed to his ability to successfully transition into college courses. Michael indicated that his consistent engagement and rapport with his academic peers contributed to his internal confidence and belief in his academic ability. Overall, Michael credited his AP and IB courses for preparing him to transition to college and for developing an environment that contributed to an increase in self-confidence.

Michael gave considerable credit to his community college for guiding him to pursue a career as a physician. As an athletic individual with a love for sports, Michael had an interest in the human body and was committed to a career within sports medicine. Michael enrolled in an interdisciplinary honors course at his community college which led him to pursue a career as a physician. Michael's enrollment in the interdisciplinary honors course allotted him with the latitude to explore various medical pathways and to make an educated career choice. Michael's community college honors program provided a small collaborative environment, which promoted student involvement in various clubs and honors societies. The clubs' faculty members were also course faculty members which provided Michael with the opportunity to develop deep lasting relationships with his faculty members. Michael completed a number of his science base courses through IB, AP, and his community college, prior to transferring to his university. Additionally, Michael found accessing volunteer opportunities and research opportunities easier at his community college in relation to his university.

Michael's relationships with his university faculty were not as impactful as his faculty relationships at his community college. Michael was a member of the university's honors

college; however, the university's honors college had notably larger class sizes which hindered peer relationship engagement and minimized community development. Additionally, Michael described his relationship with his university faculty members as "being a number on a roster," and although the faculty members were supportive, he was unable to establish a meaningful relationship. The larger university class sizes hindered Michael's ability to develop similar relationships with his university faculty as with his community college faculty. Michael perceived his university course work as preparation for the MCAT. Additionally, Michael enrolled into his university during Covid-19, which prevented him from fully accessing the resources, clubs and organizations that are normally associated with a university.

Michael described his community college as being welcoming and culturally inclusive, specifically for students with a Hispanic background. When discussing cultural inclusivity in relation to non-Hispanic cultures, Michael noted that Hispanic cultures did receive a greater emphasis on inclusivity than other most other cultures. Michael stated that there was space and opportunities for non-Hispanic cultures to be represented and included, but it was secondary to the greater Hispanic cultural representation. Michael noted that as an African American, he expected greater cultural initiatives designed to engage and support the campus community. When discussing the cultural inclusivity of his university, Michael described it as being passive and that cultural inclusivity opportunities were the responsibility of the student to seek out.

Michael described the application process as "taxing" and the "hardest thing I've ever had to do." Michael applied to medical school, while simultaneously studying for the MCAT exam, finishing his bachelor's degree requirements, participating in two separate research projects, volunteering in food drives, and balancing a scribing job. Michael was able to use his

scribing job to meet additional admission requirements, such as physician shadowing and medical exposure. Michael applied to 11 different medical schools and intended to apply for more; however, due to his restricted schedule, he was unable to apply prior to admission deadlines. The timing of his MCAT exam led to Michael taking a gap year instead of transitioning directly into medical school.

Michael received limited guidance and mentorship from his university as he approached the end of the medical school admission process. The guidance that Michael received came from a program director who provided him with admission and demographic statistics and assigned him with a local physician to shadow. Michael attributed the lack of sufficient faculty guidance to his inability to establish strong faculty relationships during Covid-19. Michael instead relied upon the guidance of an upper classman and peer mentor who had a similar educational background as himself. This upper classman provided him with MCAT preparation materials and assisted him with selecting the appropriate application essay prompt. Michael valued the peer mentorship that he received; however, Michael understands the importance of faculty and professional mentorship and feels that he would have benefited from that type of guidance.

There were two primary factors that Micheal considered when selecting his medical school. The principal factor was the cost of attendance. Michael indicated that he wanted to graduate from medical school with minimal debt. Michael expressed concern about acquiring debt while in medical school which could subsequently influence his selection of residency specialty. Michael stated that graduating medical school with significant debt may influence him to pursue a residency specialty that has a higher earning potential. A higher earning potential is not the primary factor that he wants to consider within the residency specialty selection process.

Michael's medical school selection aligned with his residency specialty goals due to a considerable scholarship and a lower cost of attendance. The secondary factor that Micheal considered within his medical school selection process was location. Micheal wanted to expand his experiences and decided to attend medical school located in Florida but outside of south Florida.

### Themes

The themes derived from the interview questions that were developed in alignment with the research sub questions to address the overarching research question that guides the study. The findings presented in narrative summation included tables and direct quotes retrieved directly from the interview transcriptions of the research participants. The inclusion of the direct quotes serves a dual purpose of ensuring that the participants voice is appropriately conveyed and to illustrate the connections between the participants experience and the corresponding themes.

As expected, the participants' stories vary and reflect each of their own individually lived experiences. The participants' stories shared common experiences which were significant and meaningful. Considering the study's overarching guiding question, these experiences were appropriately themed for the purpose of this study. The study yielded seven emerging themes that accurately reflected the participants shared lived experiences: Educational Cost, Honors College, Motivation, Support, Academic Excellence, Diversity and Inclusion, and AMCAS Application Process. These themes collectively reflect the experiences of the study participants.

### *Educational Cost*

Educational cost was an overarching theme that emerged from the study's data. The study participants all mentioned selecting both their undergraduate university and medical school in part due to the awarding of a significant scholarship. The study participants all indicated a desire to graduate from their undergraduate university with zero debt, with the expectation of incurring significant debt while attending medical school.

At first, I was thinking about maybe going to a PWI and now I am getting more scholarships at the HBCU, and my dad and I went there. So, I was like, okay, well I know I wanna go to medical school, let' save some money here so when I get there, I don't have to worry about having any student loans (Roger's Transcript, page 5)

Collectively based upon the participants individual interviews, the participants intentionally researched and applied to medical schools that were either close in proximity to family or had lower cost of attendance averages than competing medical schools. Additionally, one of the participants participated in a rural pre-medical program designed to increase the number of physicians practicing in rural communities. Upon completion of the program, the participant received a full tuition scholarship to a collaborating participating medical school. The participants spoke about the role that scholarships and low cost of attendance had in the enrollment of their medical school.

### *Honors College*

Honors college enrollment was a significant theme that emerged from the study's data. Five-out-of-six of the study participants participated in an undergraduate honors program. Admission and enrollment into an undergraduate honors program was a factor that all five

participants considered within the undergraduate university selection process. The importance of the honors college is reflected in two words: Connectivity and Opportunity

Faculty within the honors college, they were really nice. The honors advisor, Mr. Makias, he was very helpful. He was always honest. Which I appreciate it. Also like other things you know, undergrad I did was like through the honors college, they would have like you know these travels, medical travel things. Like I went to Panama for a public health thing. (Tony, page 7)

The participants that participated in the honors college indicated the benefits of the honors college with respect to small class sizes, exclusive research and volunteer opportunities, and leadership opportunities. Additionally, the small class sizes were conducive for faculty and peer relationship development. The honors colleges also presented their pre-medical students with exclusive opportunities that were unavailable to the general pre-medical study body, such as Early Assurance.

I did have the privilege of being in that BS-MD program, since I already had one school, I knew I was accepted to, I was able to kind of limit my total school list. I applied to 12 schools total. But that's not the norm because most students don't have that program and they have to apply to 30 or more, which is very expensive and unfortunate. (Nick, page 9)

Of the five participants that were enrolled in an honors college, four participated in an Early Assurance program which guaranteed them admission into a collaborating medical school.

All five of the participants that participated in the honors college indicated the importance of the role the honors college contributed to their success in transitioning to medical school.

### *Motivation*

Motivation is an additional overarching theme which the researcher unveiled through the data collection and analysis process. All the study participants indicated the importance of early exposure to medicine as an important motivating factor when deciding to pursue a career as a physician. Each participant's exposure to medicine occurred differently, but the consistent factor was early exposure. Two of the participants received early exposure from the prospective of a hospitalized family member and the subsequent recovery period. Two of the participants have a parent that works within the medical field as either a nurse or a medical assistant. The remaining two participants each have a parent who is a practicing physician and well-known within their respective medical specialties. Parental physicians were a common subtheme in the overarching theme.

It's hard to tell when I first became aware because my mother's a physician. So I kind of grew up being familiar with that field or that career. So from an early age, I kind of had an idea of what it was, and I considered that I could possibly do it just because my parent was a physician. (Nick, page 5)

All the participants indicated an innate desire to help people as motivating factors that contributed to their successful transition into medical school. The participants provided examples of altruistic endeavors as their motivating factors.

It really would feel good to me to understand that honestly, I can't save everybody, but putting a smile on someone's face, understanding that I can extend their life or make them feel better in that moment. It really carries me. (Roger, page 8)

The desire to help people exhibited itself in different formats. Several participants indicated that their desire to help people through the practice of medicine was inspired by their desire to eliminate cultural health care disparities and to help their communities.

### *Support*

Support was a significant overarching theme as it is comprised of a multitude of sub-themes: Faculty engagement and networking, geographic location to family, peer mentoring and networking, physician mentors' development, and availability of institutional support. Faculty engagement and networking were factors that were considered incredibly important by all study participants. All study participants spoke favorably on their faculty engagement and faculty relationship development at the undergraduate university. The two HBCU participants indicated maintaining positive experiences with all their faculty. Three of the participants indicated difficulty engaging with faculty outside of the honors college. Large class sizes and inflexible office hours were factors that contributed to their inability to establish relationships with non-honors college faculty. One study participant, who was an undergraduate student at a private Ivy League university and was not a member of his honors college, indicated that he developed a strong relationship with his sole Black faculty member, but overall felt that all faculty were accessible.

I did have one Black professor in my senior year, and I definitely felt much more connected, and just felt easier to talk to and reach out to him as opposed to my other professors, so I'd say it definitely has an impact, but at the same time, there are still teachers out there that do have your best interests at heart, regardless of the difference in cultures. (Peter, page 6)



Geographic location to family was important as 67% of participants indicated a desire to be near family for mental health, emotional support and emergencies.

Definitely, that was one of the big factors for me, by being able to see my family or just having the choice to see my family without it having to be such an expense and such an event to where it's like if you were across the country. (Peter, page 4)

Peer mentoring and networking were important contributing factors to successfully overcoming the barriers into medical school. Eighty-three percent of the participants commented on the importance of peer mentors and their respective reliance on peer mentors through the medical school application process. One participant indicated being unable to establish a peer mentor relationship due to pre-existing stigmas towards student athletes. All participants indicated, to a degree, the feeling of isolation and loneliness during the medical school application and interview process – this was the result of limited to peers with similar cultural backgrounds.

Representations also another thing because it just allows you to, I think, stay in touch with yourself and be able to express yourself and be able to express yourself. When you're around a bunch of people that are not similar to you, like obviously in my situation, when you're around a bunch of white people, you feel isolated in a way because you connect with them to a degree, at some level, but I feel like it's just not you being able to fully express yourself. (Peter, page 11)

Both participants that have physician parents elected to not use their parents' network of physician peers for mentoring or shadowing. Each participant indicated a desire to accomplish their medical school goal with little to no help from their physician parents.

So, I didn't really use resources from my parent. I kind of just wanted to find opportunities on my own, which was challenging, but I was still able to do it, luckily. (Nick, page 10)

All participants spoke about physician relationships and the importance of physician mentors to effectively navigate the medical school application process. All participants participated in physician shadowing; however, only 67% of the participants indicated being able to establish a mentor/mentee relationship.

### *Academic Excellence*

Academic excellence is an additional overarching theme derived from the analysis of the research data. The first subtheme associated with this overarching theme is the history of academic challenges. Each participant indicated an extensive history of challenging themselves academically and developing belief in themselves. Each participant indicated enrolling in advanced courses in elementary school and extending that trajectory throughout high school by enrolling in college-level coursework (i.e., AP, IB, Dual Enrollment). As a result, each participant enrolled into their respective undergraduate university with completed college credit. One participant indicated attending a predominately white private college preparatory school, in which he was often the sole Black student in class.

I went to a private school, I had a great education, but I was one of the few Black students in my class. And many of my classes, that I was taking, AP-level courses, I was the only Black student. And even in the premed club, I was the only Black student in the Club. (Nick, page 6)

Each participant indicated that their natural affinity towards academics coupled with their consistent enrollment in advanced courses contributed to their undergraduate academic

preparedness and allowed for ease in transition from high school to college and subsequently from college to medical school.

I do feel like that I essentially being in those courses did prepare me and propel me to where I'm at now. (Michael, page 3)

The AMCAS application permits students the opportunity to indicate their history of involvement and leadership. Accordingly, each participant perceived involvement and demonstrated leadership as successful factors to transitioning into medical school. Each participant completed a degree of involvement at each of their respective undergraduate universities to ensure that their medical application remain competitive. One participant played college football while simultaneously completing his pre-medical course requirements. One participant took advantage of the various honors exclusive medical mission trips. Two participants pursued various on-campus volunteer opportunities. The two HBCU participants were each elected to student body president and served their respective communities during their senior year.

I had held leadership positions throughout undergrad. Actually, in my senior year, I served as the student body president. So, I really had no choice but to kind of be acquainted with leadership. (Roger, 3)

According to the self-efficacy surveys completed prior to the initiation of this study, each participant had high degrees of self-efficacy. The study participants had an average 85% self-efficacy score on the student self-efficacy assessment. The following subthemes generated from the data contribute to the participants' high degree of self-efficacy: history of academic

challenges, HBCU culture (empowerment, confidence, pride), self-efficacy and self-determination.

The whole time it's like, really just gotta focus on yourself, understand that you are best you, nobody can be better. (Roger, page 6)

I took part in as many classes as I could, that would prepare me for my journey. And that really immersed me in the knowledge that I felt like I needed for medical school. (Ken, page 3)

It made me respect myself more, my people more and understand that like I said we are equally important. (Roger, page 5)

Each participant indicated having an extended history of successfully completing academic and personal challenges.

### *Diversity and Inclusion*

Diversity and Inclusion is an additional overarching theme that was developed from the analysis of the data. All participants attend an allopathic predominately white medical school. Each participant recognized that as practicing physicians they will be responsible for treating patients from diverse cultural backgrounds and that greater exposure to cultures and cultural inclusion in undergraduate and medical school are important considerations.

Different races, different cultures, they do different things, whether it's food, whether it is extracurricular activities, whatever the case maybe. So it gives you a chance to kind of grow some limbs. But also at the same time, I feel like I have a safe space as well because the community of African Americans at the school is actually growing as well. (Roger, page 7)

Each of the two participants that attended an HBCU indicated the important role that their HBCU had in the development of their self-respect, determination, and confidence. These

participants also indicated that the HBCU environment assisted in the development of cultural pride, while not excluding the importance of external cultures.

I went to an HBCU and it was very inclined and driven to uplift the community as far African Americans essentially, and just put your role to where you're competitive in the world at nature as it is today, but also at the same time understand that you are black embrace it because it's nothing that you can change, but you're just as important as everybody else in the world. (Roger, page 5)

When perceiving the importance of cultural inclusion within their medical school selection process, 33% of participants indicated that was a principal factor. The remaining participants indicated resignation with attending a predominately white medical school with minimal Black representation.

Speaking with current medical students, seeing how happy they were to be there, as well as seeing how friendly the faculty were, I thought it would be a good environment for me to get an education in and feel welcomed. I knew that coming in it might not be as diverse as I would've hoped, but I felt that since I was already used to it, it wouldn't be too much of an issue for me. (Nick, page 7)

All participants indicated that their undergraduate universities did provide a degree of cultural inclusion and support. Three-of-the-five participants that participated in their university's honors college indicated greater institutional inclusivity and support within their non-honors courses versus within their honors courses.

I would say for undergrad, the larger university is very diverse, which I liked, but I will say in the Honors College, it was similar to my high school experience. I was one of the few Black students in my classes. (Nick, page 6)

Conversely, although not a contributing success factor, institutional and peer microaggressions were factors discussed by each participant. Participant 5 (Nick) recalled a lack of institutional support when a peer in a high school premedical club made the following statement:

Oh, you wanna be a doctor, you can't do it because you are Black, and you'll scare the patients. (Nick, page 6)

Nick indicated that his exposure to Black physicians through his physician parent provided him with the necessary fortitude and determination to overcome the various microaggressions that he has had to endure. Nick is also acutely aware that most Black students do not have the same privilege of access to Black physicians as he has had.

#### *AMCAS Application Process*

The final overarching theme was the AMCAS Application Process. When discussing the effectiveness of the AMCAS application, 50% of the participants indicated that the application is ineffective. When incorporating the cost to submit a competitive application within the greater discussion of effectiveness, all participants indicated that the AMCAS application was either ineffective or cost prohibitive. The cost-prohibitive nature of the AMCAS application extended beyond that AMCAS preparation process. Participant 5 (Nick) participated in an Early Assurance program and received his acceptance into a medical school during his junior year. However, when applying to other medical schools during his senior year, Nick limited his applications due to the cost of interviewing.

I kind of limited my choices based on that too, based on the cost of interviewing. So yeah, I think that the finances affected the number schools I applied to as well as the location of the schools. (Michael, page 9)

Participants indicated utilizing third party resources, mentors, early assurance programs, and exceeding academic minimum course standards to gain admission into their respective

medical schools. The participants highlighted the role that socioeconomic status, physician parental networking, and racial bias have within the AMCAS application. Each study participant indicated that the cost to complete a competitive AMCAS application is cost prohibitive and benefits applicants from upper Socioeconomic status. The cost of MCAT preparation was discussed at length and the institutional cost (i.e., secondary application fee, interview related cost, opportunity cost, etc.) were discussed by each participant.

I feel like first off the MCAT is a very much deterrent to allowing any type of student to get into Medical school that's of color and say, test that is... And that's how I feel about pre-Med all the way through Medical school is like the people that have the most money are the people that do the best. I'm gonna be honest. Like if you have, I remember we had some new students that came in that are pre-Meds and they're a part of this program and they spent \$1,500 on each one for MCAT prep. And you had to apply and be chosen to do this program. And it just so happened that these students that wanna work in like underprivileged rural areas. So, it's nice to have those students. But when I heard that they were getting \$1,500 in MCAT prep, I was like, oh man, you know what, I could have done with \$1,500 in MCAT prep. (Ken citation)

Thirty-three percent of participants indicated that the MCAT is inherently biased against Black students and should be transitioned from a numeric assessment scale to a pass/fail assessment.

### Participants' Voice

The guiding research question for this study was: What are the successful shared characteristics of Black male students matriculating into medical school? This study answered two sub-research questions to assist in addressing the guiding research question. The researcher proposed 10 semi-formal interview questions to address the research sub-questions. The data yielded from each participant's semi-formal interviews yielded emerging themes that connected to the guiding study question and the associated study frameworks.

The following Table 7 exhibits the connection between the research sub-question and the interview questions. A detailed description of each interview question is listed in the appendix section.



*Table 7 Research Sub-Questions & Interview Question*

<b>Sub-Questions</b>	<b>Interview Question</b>
<p>1. How do structural and systematic systems of inequalities, as outlined in CRT, influence Black male medical students' experiences with medical school matriculation?</p>	<p>5, 6, 7, 8 ,10</p>
<p>2. How do Black male medical students perceive self-efficacy as a determinant factor within their matriculation into medical school?</p>	<p>1, 2,3,4, 9</p>

*Sub-Question 1-Critical Race Theory*

The following themes of Diversity & Inclusion, Support, Educational Cost, and AMCAS Application Process are core factors that relate to the Critical Race Theory for this specific sub-question. Critical Race Theory consists of five core principles: 1) racism is common, 2) interest convergence, 3) social construction, 4) differential racialization, and 5) legal storytelling (Delgado & Stefancic, 2001). The study participants’ experiences address two core principles of CRT, “Racism is Common” and “Interest Convergence”. Delgado (2001) describes the first principle of CRT, racism is common, as an acknowledgement that racism is ingrained into

society and reflected throughout structural and institutional systems in the form of laws, practices, and policies that perpetuate inequality and place minorities - specifically Black minorities - at a societal disadvantage. Institutional inclusivity, institutional diversity, and cultural empowerment emerged as core factors in the overarching theme of Diversity and Inclusion and were reflected in the experiences of the study participants. All study participants indicated relating to the first core principle of CRT (racism is common) as each study participant expressed experiencing either overt racism or microaggressions in the form of racial minimalization throughout their educational progression. Ken indicated experiencing structural racism within the interview process as fellow white interviewees would be graciously greeted due to preexisting personal relationships with medical school faculty, administration, and students.

That whole part of it is also very daunting because I remember specifically on my interview day I walked in and the Dean of the student, the Dean of the Medical school of admissions and the Dean of student affairs walked up to a student and said, Hey, your dad told me you were gonna be applying. We're so glad that you're applying here. We can't wait to see your interview. And it was like, oh, see, now that already seemed, and that person did get in. But it's like off rip that's one person that I have no chance of beating because they already had these like connections. And so when it came to the application, all of my friends told me like, oh yeah, I had these different people check my application. Like these Medical students, these residencies attendings had the Dean of student admissions do it. And so, you knew off rip that, like they had all these connections. And I felt like that was unfair because a lot of us that are African American don't have those

options and don't have those connections. So that does make the application that much harder. (Ken citation)

The study participants indicated the importance of institutional inclusivity and institutional diversity as effective methods of overcoming the institutional racial insensitivity that they experienced. Additionally, HBCU study participants credited cultural acceptance and institutional focus on cultural empowerment as approaches to effectively overcoming structural and institutional racism.

I would say that on the interview trail, I was one of two or three Black students also interviewing, or just the only one. So that always, I think, kind of affects students. I think at that point I was kind of used to it and expecting it. So, I tried not to let it affect me, but it does kind of make... It can kind of add some pressure 'cause other students will be looking at you as the only or one or two Black students. And there's always this stigma against affirmative action and people wonder why you're there. They wonder if you're qualified to be there. (Nick citation)

Many African American students don't have family or parents in the specialty or in the profession. So, it's hard for them to imagine themselves in that career. So I think that's another thing that universities and medical schools can do is help increase that visibility, as I had mentioned before, so that people know it is possible despite the color of their skin and what their background is, that they can still pursue this career. And they should, because it's important to increase representation of medicine so that you help address

these health disparities, help show the next generation that they can also shoot for their goals. (Nick citation)

The emerging themes of Educational Cost and AMCAS Application Process address the core principle of CRT: “Racism is Common.” Structural racism occurs within the educational pipeline to medical school and is evident in the emerging theme of Educational Cost. The study participants each indicated apprehension regarding their inability to afford either college or medical school. Specifically, 66% of study participants indicated that scholarship funding were significant considerations when selecting their undergraduate institution and eighty-three percent of study participants indicated that scholarship funding and affordability were core factors in selecting their medical school institution. Study participants indicated that the cost of undergraduate education and the cost of medical school were potential deterrents for Black students to apply and matriculate into medical school as the average Black student lacks the financial support to become a competitive applicant. One study participant indicated strongly considering a different career field in lieu of medicine due to the estimated debt burden. All study participants indicated that access to, and the awarding of, financial aid packages, scholarships, and affordable tuition were contributing factors that assisted with their matriculation into their respective medical schools.

Had I not gotten in, I would've just chosen a different avenue just in terms of the cost and the time aspects of it all. I think that's just like really overwhelming for a lot of people, it's like you're paying all this money and you're paying all this time, or it's like as opposed to something else, you could be putting yourself financially in a better position and in

terms of time, you'd be finished much sooner and be able to have that freedom to live your life during this period, but yeah, I definitely think cost is a huge factor for me and for a lot of other people. That's one of the main reasons I even chose this school, is because it was so much more like cost-effective compared to most other schools. I just didn't wanna be saddled with that much debt. (Peter citation)

No one ever likes to make finances a sole decision. And I wouldn't say that I did either, but she did outline that finances are kind of a big deal when considering a medical school with, as you know, I'm sure, some medical students usually have to take out a lot of loans. And she told me that the lesser the loans, the lesser that programs in the future, whether residency or when you're actually an attending, kind of have a hold over you because you're no longer just working just to pay the loans off. So, she brought that up. So one reason that I chose my medical school was because, it looked financially, more financially acceptable than the other schools at the time. (Michael citation)

The AMCAS Application Process was an emerging theme that was connected to the sub-question and core principle of Critical Race Theory. Study participants identified the following subthemes as contributors to the emerging theme of AMCAS Application process: ineffective application process, application cost, MCAT bias, socioeconomic status, and Black applicant specific stress. These subthemes exhibit tenants of institutional racism, as the AMCAS application process unfairly discriminates against minorities, specifically Black minorities from lower socioeconomic backgrounds. Study participants indicated that the AMCAS application

process was ineffective and cost prohibitive, as applicants are responsible for paying for multiple transcripts from high school, AP, IB, AICE, and undergraduate institutions. Additionally, study participants indicated that the multiple application fees (general and institutional) resulted in a financially conservative application strategy which limited the number of medical schools accessible to the study participants. Sixty-six percent of study participants indicated that the multiple application fees limited their ability to apply to more medical schools and restricted their medical school search to in-state public institutions. Fifty percent of the study participants indicated that they applied to about half the number of medical schools as their non-Black medical school classmates. While all study participants expressed apprehension over the cost of attending medical school, only 50% of the study participants indicated that the cost of MCAT preparation affected their medical school application process. The study participants that did not indicate MCAT preparation as a cost concern were all participants in an early assurance program. The study participants that expressed concern over MCAT preparation affordability indicated that the cost of MCAT preparation was cost prohibitive for students from lower socioeconomic backgrounds. Ken indicated that the cost of MCAT preparation limited him to a single test preparation book; however, comparable students with access to greater financial liquidity were able to purchase MCAT preparation courses. Michael indicated receiving his MCAT preparation material from a peer mentor as the cost was too expensive. Peter indicated that the lack of MCAT preparation courses resulted in lower MCAT performance which adversely impacts admission competitiveness and places students with financial liquidity in an advantageous position within the application process.

I mean, even preparing for the MCAT I think is a pretty costly endeavor, it depends if you wanna take a course, but in my opinion, that's your best strategy to... It's not guaranteed 'cause you obviously have to put in the work, but to increase your chances exponentially is to take one of those courses. The thing is though those courses cost like 600 to \$1,000 at least, so that's just another cost that factors into the whole application process because that is a big part of your application, your score, and so you obviously want to do well in that and so you want to invest into that, but some people might not have the ability to invest into those courses, and it's much harder to try to study it on your own, it's like a mentorship, it's like of course you could do it on your own but it's much more difficult compared to if you have a mentor, in this case, one of those third-party resources to help guide you and let you know what you need to do. (Peter citation)

I asked my friends that are in medical school and I'm like, like, how did y'all, you know, do your MCAT prep? And they were like, oh, well, I went to Florida for like a month and did my MCAT prep there. And it was like \$4,000. But I ended up with like this really great MCAT score. So, it was worth it. And so, you know, me and myself, I just bought some books, some practice tests and spent maybe like \$400 and tried to make it work. And so I felt, I understood off rip that that part of the applying to Medical school process was severely unhinged. And the idea of how you expect students to first of all, who don't have income, we don't have income. That's always been wild to me, is I don't have income to pay for these things. You expect students to come out of it. And most of them, their parents were paying for it. But most of the students that I was friends with in like in

undergraduate and even in Medical school that were African American, they didn't have those means to pay for those resources. And so that's also why I feel like for a lot of them, it meant so much more when they got in, because the fact that you could do it with less means a lot, but it's also like, why should I have to do all of this? So that was the number one thing that I feel like, I feel like that's the number one thing that keeps a lot of students out of Medical school that shouldn't is that MCAT score. I personally believe that the MCAT should be pass fail. And if you pass the test by a certain score, you're fine. And if you fail it, then you know, it is what it is. (Ken citation)

The second principle of Critical Race Theory, interest convergence, is when minorities, specifically Black minorities, receive equality when their interests align or converge with interests of white people (Delgado, 2001). The subthemes of Faculty engagement and Networking, Peer mentoring and networking, and Physician mentoring emerged as core foundational themes of the overarching theme of Support. These subthemes address the second principle of CRT. The study participants all indicated inadequate faculty engagement within their premedical hard science courses. Additionally, each HBCU study participant, in addition to the Ivy league study participant, indicated inadequate premedical academic advisement. The study participants that participated in an honors college at a PWI all indicated receiving adequate faculty engagement, premedical academic advisement, and medical school application preparation within their honors college. The interest convergence principle occurs within the PWI honors college as study participants indicate that white students were the predominate racial demographic of each of their respective honors programs.



The study participants each expressed the importance of peer mentorship; however, the percentage of study participants that relied heavily upon peer mentorship was only 33%. Equally, only 33% of study participants indicated having a physician mentor prior to matriculation into medical school. However, of the study participants that did not indicate have a physician mentor prior to matriculation into medical school, 50% of these participants had a parent that is a practicing physician. The study participants that established a physician mentorship relationship prior to medical school matriculation participated in an early assurance program.

My state's not very supportive of our school, especially in the pre-med aspect versus like the PWIs that were in our vicinity. They had millions of dollars of funding. We might have had like a couple tens of thousands to take care of it. So that was its own thing. And our... My pre-med mentor, advisor, he was a pre-professional advisor. So, he was in charge of advising for law, for dental, for medical, for pharmacy. So it wasn't like a set person for medical. So that's why a lot of it was self-taught as well because, A, you had to find the time to meet with him and B, if you did, he might not always have the answer 'cause he wasn't always up-to-date 'cause he was so worried about everything else. 'Cause he... It was literally three people that worked in that office and that was it for all of those specialties that you wanted to do or like professional programs that you wanted to do.

(Ken citation)

The one person that I think of when they come to mind, he was another student. He was just a year above me, but he had already went through the entire process, so he was helping me out. I don't know if he had to quickly prepared me, and I don't really think it

was his job to, but he definitely gave me a lot of tips, a lot of resources, or at least ideas of different resources that I should reference to prepare for the entire process of studying, applying. He actually gave me a set of books MCAT studying books to use, and then he helped look over some, what are the words? Some essay prompts I had as well. And, also he served, I think he served as a pretty nice example of what I should be trying to do during my time as an undergrad. And, he was an honors program as well. So, he definitely helped. I think he definitely, what he did, I think was give me an example or rather show me a model of what a student who aspiring to be a medical student should do. (Michael citation)

All study participants identified the importance of peer mentorship and physician mentorship as successful factors within the medical school matriculation process. The interest convergence principle occurs within the early assurance program which is limited to honors college students who are predominately demographically white.

#### *Sub-Question 1 Summary*

Overall, the experiences of the study participants yielded emerging themes (i.e., Support, AMCAS Application Process, Educational Cost, and Diversity and Inclusion) that address the role that structural and institutional racism has had in the development of their educational experiences. The experiences of the study participants connected to the framework of Critical Race Theory and successful practices of the study participants contributed to their success in overcoming the barriers of entry into medical school.

### *Sub-Question 2-Self-Efficacy*

The following sub-theme of history of academic challenges emerged as a core factor in the overarching theme of Academic Excellence. Academic Excellence relates to Self-Efficacy for this specific sub-question. Bandura (1977) described that Self-Efficacy can be developed through the repeat mastery of one's life experience. The participants in this study each demonstrated an extensive history of consistent academic excellence within advanced academically challenging courses. The extended success of overcoming and excelling academic challenges developed and strengthened the self-efficacy of the study participants. The sub-theme of academic preparedness, which is a contributing theme to the overarching theme of Academic Excellence, contributed to participant's self-efficacy, as the participants each indicated the feeling of being academically prepared and the ease of their transition into their respective undergraduate universities.

I remember there was something called like "The IB Program", but it was still relatively new to my area. So I think there was only two or three classes, I don't even think there was a graduating class yet. So yeah, my local pediatrician she talked about how it was an excellent program and she recommended it for me, if I wanted to go into medicine. So there's only one high school in my area that offered that. So yea, I did the pre-IB first two years and then did the IB, and that was definitely a bit more difficult and stuff, but I think it was pretty beneficial because it's definitely like a larger workload than most of my peers stuff. (Tony citation)

The overarching theme of the Honors College, which is comprised of small class sizes and early assurance programs, relates to this specific sub-question and the framework of self-efficacy. According to Bandura (1977), social modeling is a considerable component to self-efficacy. Social modeling is when an individual perceives a group of similar individuals successfully completing a similar task. The result of social modeling is the individual then believes that they should be able to successfully complete the task. The small class sizes that are common within an honors college environment serve as a similar model to social modeling. Students transition from pre-determined honors course resembling a cohort model which allows for the development of consistent peer relationships and establishing an environment in which academic challenges are fostered and exceeded. Early assurance programs, which are early medical school acceptance programs beginning in either the sophomore year or junior of the student's undergraduate education, are connected to the framework of self-efficacy. Early assurance programs requires students to maintain an exceptionally high grade point average, an average or above average MCAT score, completion of all premedical course requirements prior to acceptance into the program, completion of a predetermined number of physician shadowing and volunteer hours, and completion of a medical interview process. Early assurance programs are uniquely challenging and are ideal for students with high self-efficacy. According to Schunk and Zimmermann (1995), students with high self-efficacy pursue opportunities that are complex and challenging. The study's data supports existing literature as 80% of the participants that were enrolled in an honors college also participated in some version of an Early assurance program.

I actually went through two programs and got early assurance. So I knew I had my spot at that specific school. When I applied, when I, in my sophomore year, so all I had to do

was get my MCAT and keep my grades up and I would've had a spot there. And so that was more of a safety net for me because, I wasn't sure where I wanted to go for medical school, but being able to have that safety net and be like, okay, I have a spot at this school in case something goes wrong or in case I'm having an issue. And so that was very helpful. (Ken citation)

Early exposure to the field of medicine was a subtheme of the overarching theme of Motivation and is connected with the Self-Efficacy Theory framework. Two key components of Self-Efficacy Theory as defined by Bandura (1994) are social modeling and social persuasion. Social modeling, as previously described, is when an individual's self-efficacy is enhanced due to perceiving the success of oneself as the same as the success of a homogeneous group of individuals. Social persuasion is defined as social affirmation that leads to increased self-efficacy. The subtheme of early exposure to the field of medicine is related to social modeling and social persuasion, as participants stressed the importance of early physician mentorship, enduring significant medical events, and physician familial connections. Participants described experiencing social modeling early within their educational development as participants indicated that their consistent exposure to the field of medicine through physician mentorship and physician familial connections contributed to their belief in themselves. Participants described experiencing social persuasion early within their educational development as participants indicated consistent enrollment in advanced course work and continued enrollment in honors programs established an environment of expected success and contributed to growth within their self-efficacy.

It's hard to tell when I first became aware because my mother's a physician. So I kind of grew up being familiar with that field or that career. So from an early age, I kind of had an idea of what it was, and I considered that I could possibly do it just because my parent was a physician. But I think towards the end of high school, leading into undergrad, I kind of wanted to see if it would be the right field or career for me. So that was when I was really trying to get an exposure to the field, see what it's about, see what kind of specialty I would be interested in, really just see what medicine really is like firsthand. (Nick citation)

#### *Sub-Question 2 Summary*

The experiences of the study participants, in relation to the role of self-efficacy within the educational development and subsequent matriculation into medical school, yielded the following emerging themes: Academic Excellence, Motivation, and Honors College. The experiences of the study participants yielded a multitude of subthemes that connected to the framework of Self-Efficacy Theory, which resulted in the development of concepts that were contributing factors to the success of the study participants to overcome the barriers to entry into medical school.

#### Summary

This chapter introduced the data analysis process guiding the study. This chapter provided a detailed profile of each study participant and a detailed description of the coding and theming process. This chapter yielded seven emerging themes and described how the interview

questions were connected to each sub-question. The next chapter discusses the study's findings, implications for future research and recommendations.

## CHAPTER FIVE: DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

This study focused on the stories and experiences of Black male students that have successfully matriculated into medical school. Existing literature has focused on Black male students through the prism of barriers to entry, inequality, isolation, and cultural integration (Fleming, 2012; Harper & Quaye, 2007). There is minimal literature from a post-positive perspective surrounding Black male students matriculating into medical school. This absence of research highlights the gap in the literature and the importance of understanding the experiences and perspectives of this population. This phenomenological qualitative study collected the first-hand experiences and stories of six Black male students that have successfully matriculated into medical school. The in-depth interviews provided a saturation of data which yielded seven themes reflective of the experiences of the study participants. Through the framework of Self-Efficacy Theory and Critical Race Theory, this study analyzed the data collected through in-depth interviews and sought to understand the lived experiences of the study participants. The frameworks were essential in understanding the study participants' perspectives and to addressing the research question guiding the study.

1. Research Question: What are the shared lived experiences of Black male medical students matriculating into medical school, through the lens of Self-Efficacy Theory and Critical Race Theory (CRT)?
  - a. Sub-question #1: How do Black male medical students perceive self-efficacy as a determinant factor within their matriculation into medical school?



- b. Sub-question #2: How do structural and systematic systems of inequalities, as outlined in CRT, influence Black male medical students' experience with medical school matriculation?

This study found that participants experienced exposure to medicine, educational excellence, and mentorship in early childhood (K-8). This study also found that participants received advanced academic preparation within secondary school, exceptional undergraduate academic preparation through an honors college or Ivy league institution, and matriculated into medical schools that provided a financial, inclusive, and familial infrastructure. The lived experiences resulted in an average Student Self-Efficacy (SSE) score of 85% with the lowest student self-efficacy score of an 80%. The participants' performance on the SSE illustrates a high degree of self-efficacy among Black medical students. The study participants' experiences yielded the following emerging themes: (a) Educational cost, (b) Honors college, (c) Motivation, (d) Support, (e) Academic Excellence, (f) Diversity and Inclusion, and (g) AMCAS Application Process. This chapter discusses the emerging themes of the study through the lens of the frameworks of the study. This chapter outlines implications and recommendations for future researchers and practitioners that seek to understand and to expand on the success of Black male medical students matriculating into medical school.

### Discussion

Previous literature focused on the negative experiences and various barriers to entry influencing Black male students within the educational pipeline. The barriers to entry are the result of structural and institutional discrimination, which begins early within the educational

pipeline and continues into secondary education, post-secondary education, and graduate education (Kohli and Quartz, 2014; Darling-Hammond, 2001; Delgado et al., 2001). The existing literature has principally focused on Black students throughout the K-12 education system, post-secondary education system (i.e., undergraduate education), and minimal research on graduate education. The literature illustrates how barriers to entry have adversely affected the Black male student population and reduced the number of undergraduate and graduate Black male students. The literature identifies the importance of mentorship and visible cultural representation as cornerstones of success within the Black student population to overcome barriers to entry within the educational pipeline (Harper & Quaye, 2007). Finally, the literature specifies the relevance of familial support and early exposure to post-secondary education as contributing factors to the success of Black male students. (Squire & Mobley, 2015).

The existing literature's minimal focus on Black students in medical school is a continuation of research that focuses on the negative experiences of Black students within the educational pipeline. The importance of this study is to focus on the post-positive factors that have contributed to the success of Black male medical students to matriculate into medical school. Harper (2009) accurately addressed the importance of learning from Black male students that have defied racist stereotypes by excelling academically beyond the limitations that society has placed on them. Cumulatively, demographic minority representation has continuously grown within the medical school population. Specifically, among gender representation, the percentage of women in medical school has grown from 29% in 1980 to 56% in 2022 (AAMC 2022).

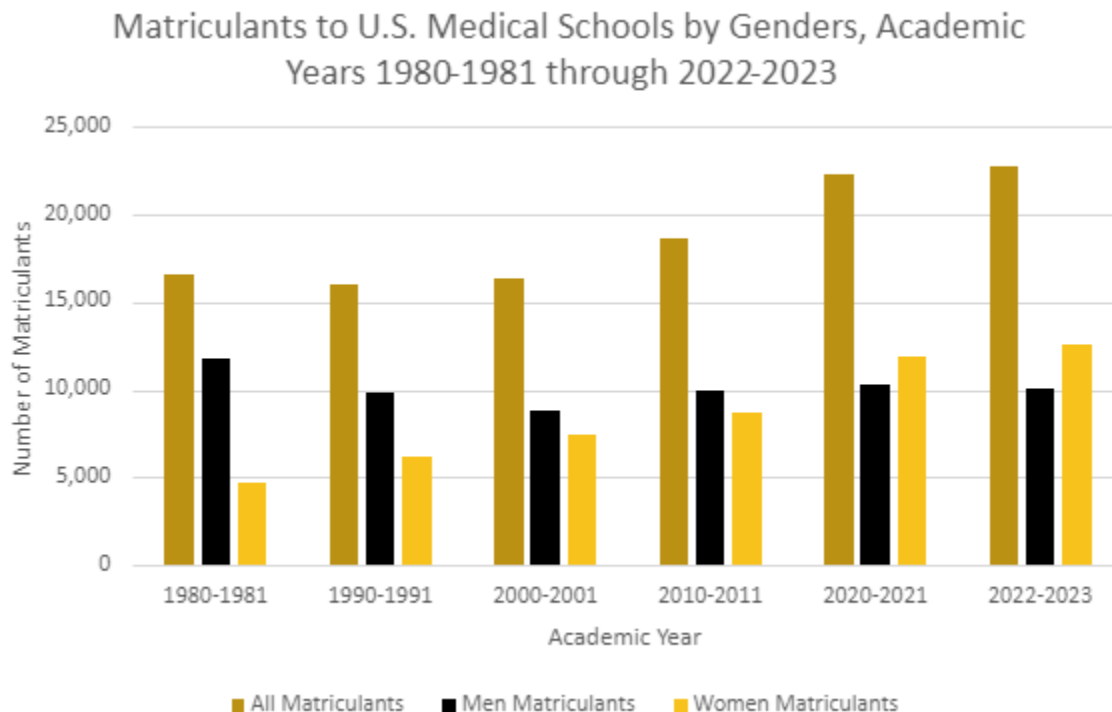


Figure 2: Medical school Matriculation by Gender. AAMC, 2022

The lack of enrollment of Black male students is evident when compared to male students from various ethnic backgrounds. This study was approached through a phenomenological lens and focused on the rich stories of Black male medical students, which have successfully transitioned overcome the barriers to entry into medical school.

The ensuing discussion focuses on the frameworks of the study in relation to the study findings. This discussion provides insight into the rich, lived experiences of the study participants' stories.

### *Critical Race Theory*

The purpose of this study was to focus on the post-positive characteristics of Black medical students that have successfully matriculated into medical school through the lens of both

Self-Efficacy Theory and CRT. Through the lens of Critical Race Theory, it was necessary to acknowledge the biases and barriers to entry that the study participants experienced throughout the educational pipeline. The leading characteristics of CRT, as defined by Delgado and Stefancic (2001) are: 1) racism is common, 2) interest convergence, 3) social constructions, 4) differential racialization, and, 5) legal storytelling. This study summarized the characteristics of CRT as: racial inequities intertwined within the structure of all aspects of American society, including throughout the educational pipeline (Parker & Lynn, 2002).

The findings of this study highlight the perseverance of the study participants overcoming the conventional racism within the educational pipeline. The study participants that attended a PWI for their undergraduate education discussed the role that institutional cultural support and inclusivity had within their personal and academic development. The participants discussed the importance of cultural connectivity, representation, and mentorship. The participants highlighted the importance of connecting with professors, student organizations, and physicians that have similar cultural backgrounds. The study participants considered these factors as important when selecting their respective medical schools. The study participants that attended a PWI and participated in an honors college indicated that their honors professors, regardless of cultural background, were supportive and accessible.

The participants that attended a PWI discussed the normalcy of being the only Black male student or only Black student in class. Nick specifically stated that throughout his K-12 and undergraduate education, he was accustomed to being the only Black male student. These study participants expressed the importance of finding their community through participation in their honors college or participation on the football team. Peter had difficulty establishing a

community connection outside of football. The lack of community connection with non-student athletes, staff, or faculty left Peter feeling isolated and unable to receive effective academic guidance. The participants that attended a PWI and an honors college defined their community as consisting of other students with similar educational aspirations. Participants that attended an HBCU for their undergraduate education specifically discussed the value of cultural empowerment and engagement. These students described how their undergraduate institutions received significantly less funding and resources than their PWI counterparts. Despite the lack of funding and resources, these study participants discussed the emphasis that their HBCU placed on cultural empowerment and engagement. The study participants' experiences are reflective of Tinto (1987) and Astin's (1985) respective retention theories in which supportive environments, student engagement, and student integration contribute to improved student retention.

The study participants all expressed concerns pertaining to affordability and familial support. These factors were evident within their undergraduate and medical school selection process. The study participants indicated a desire to minimize undergraduate debt to ensure that they enroll into medical school with minimal debt. Each study participant received competitive undergraduate scholarships. The cost to apply to medical school and the preceding cost to prepare to apply to medical school was a considerable burden for Peter and Ken. Both Peter and Ken expressed their inability to afford expensive MCAT exam preparation material and felt that they would have performed better on the MCAT exam if the exam preparation was affordable. Each study participant expressed that the cost of MCAT preparation disproportionately places students from lower socioeconomic backgrounds at a severe disadvantage when compared to other students from upper socioeconomic statuses. The participants subsequently connected

lower socioeconomic status with minorities, specifically Black minorities. The participants that received acceptance through an early assurance program were less concerned about MCAT preparation cost or application cost; however, the cost of attendance of medical school was a considerable factor for all participants. Each study participant received scholarship funding to attend medical school; however, a primary factor within their medical school selection process was familial support. This finding was consistent with the literature by Squire & Mobley (2015), which found the importance of familial support, familial engagement and professional mentorship in the transition of Black male students into four-year universities.

### *Self-Efficacy Theory*

Self-Efficacy Theory, as outlined by Bandura & Adams (1977) is described as individuals with a propensity to high degrees of intrinsic self-value, a high sense of accomplishment, and an innate ability to manage stress. Moreover, individuals that maintain high degrees of self-efficacy tend to exhibit elevated levels of persistence and an accomplished history of personal achievement. Self-efficacy has been considered a prevailing attribute in undergraduate underrepresented minority student degree achievement (Morales 2014).

A common factor among the study participants was the normality of being the only Black male student or the only Black student in their advanced academic courses throughout K-12. This description of normality continued for the study participants that attended PWI institutions. The literature discusses the adverse influence that isolation can have on student performance (Harris & Linder, 2018). The studying findings found that the participants persevered beyond the racial challenges and barriers and excelled academically. This consistent academic foundation of accomplishment further strengthened the self-efficacy of the study participants. Among the study

participants that attended an HBCU, each study participant indicated the importance that the HBCU had in strengthening their belief in themselves and instilling cultural pride.

The importance of self-efficacy was evident among all study participants as study participants indicated maintaining a high degree of self-efficacy or belief in oneself. The emerging themes of Academic Excellence, Honors Colleges, and Support (familial and academic) contributed to the factors that assisted in the development and establishment of self-efficacy. As outlined by Bandura (1994), self-efficacy is developed by exhibiting a mastery of experiences, social modeling, social persuasion, and stress reduction. The evolving development and strengthening of the participants' self-efficacy are mainly centered on three components of self-efficacy: mastery of experiences, social modeling, and stress reduction. Mastery of experiences was a pronounced component of the study participants' self-efficacy as the study participants established a history of mastering academic requirements beginning in elementary school and continuing throughout their undergraduate education. The participants indicated an early propensity to excel on standardized exams and maintained exceptional achievement within their individual academic courses.

The social modeling component of self-efficacy was reflected in the physician and professional mentorship and parental guidance from parents with advanced degrees. The study participants communicated the confidence and assurance that they had in their academic coursework and their chosen career path reflected early mentorship and parental guidance. In support of social modeling as a method of strengthening self-efficacy, Nick discussed how being the son of a physician strengthened his resolve to become a physician despite being confronted by high school classmates that believed Black male physicians would scare patients. Nick

directly credited his physician parent as evidence that his ethnicity was not a determinant factor in becoming a physician. Nick also acknowledged that most Black males do not have a family member that is a physician and that a similar encounter could adversely influence a student's confidence and belief in oneself.

The four study participants that received acceptance into an honors college or an early assurance program noted the value that these programs served in strengthening their self-efficacy by reducing stress.. The resources and academic support provided by the honors colleges provided the study participants with confidence that they were adequately prepared for the medical school application process. Study participants' participation in early assurance programs, which requires adherence to strict medical school admission standards, reduced stress and strengthened self-efficacy by ensuring acceptance into a medical school. The study participants indicated that their guaranteed acceptance into medical school reduced their stress and increased their confidence during the medical school application process and permitted them to be conservative with the number of medical school applications submitted. Overwhelmingly, the components of self-efficacy were reflected in the rich in-depth stories of the study participants.

### *Intersection of Frameworks*

Through the lens of the of Self-Efficacy Theory and Critical Race Theory (CRT), this phenomenological study has illuminated the importance of the in-depth experiences of the Black male medical students that have matriculated into medical school. The framework of CRT guided the analysis of the study participants' experiences. These experiences consistently recognized the inherit inequities throughout the educational pipeline. Notably, the study



participants discussed the inherent bias and racial inequities that they experienced throughout the medical school application process; specifically, the bias and inequities that are within the MCAT preparation process, networking process, interview process, and lack of sufficient Black physician mentorship. The participants discussed the discriminatory impact of the MCAT exam, the pre-application industry networking, and the Black male isolation in the interview process.

The framework of self-efficacy was relevant to the study participants as they displayed high self-efficacy scores on the SSE scale. The individual components that construct the theory of self-efficacy are found within the experiences of the study participants and emerged as a consistent theme within the study's data. These components of self-efficacy empowered the study participants to overcome the inherent bias and racial inequities that are systematic within the educational pipeline and apparent within the medical school application process. Through years of demonstrated academic challenges, physician mentorship, familial support, and supportive educational environments, the study participants garnered high degrees of self-efficacy and were able to successfully transition into medical school.

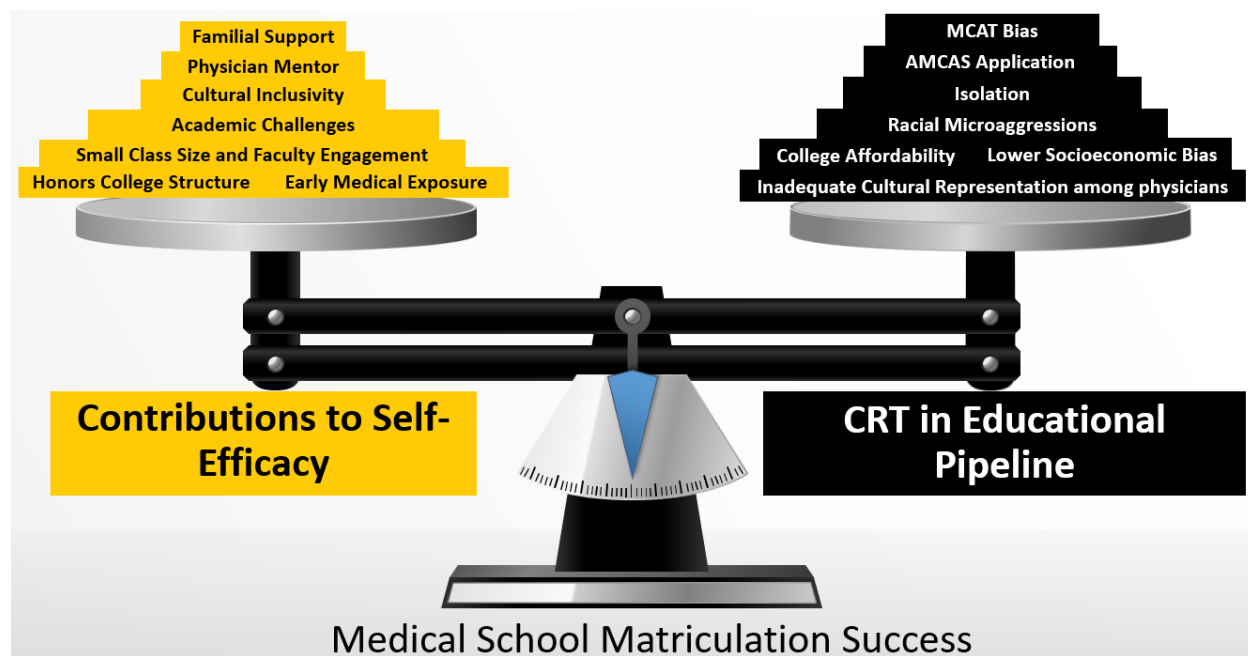


Figure 3: Factors Influencing Medical School Matriculation Among Black Males

### Recommendations

#### *Recommendations: Higher Education Practitioners*

Higher Education practitioners working with Black male premedical students may find this study beneficial within the development of support initiative. A consistent theme within the study’s data was professional advisement. Study participants that participated in an honors college indicated having a faculty member or specific staff member solely focused on medical school advisement. Conversely, the study participants that did not participate in an honors college, did not have access to a designated professional advisor and received minimal academic advising. The study participants without a professional advisor missed deadlines, did not participate in early assurance programs and did not apply to a comparable number of medical schools as their counterparts.

Higher education practitioners can further assist this population of students by ensuring that cultural representation is present among guest speakers and by ensuring that students receive access to culturally inclusive medical clubs and student organizations. Modeling is an essential component within the development of self-efficacy. Incorporating guest speakers with a similar cultural background as this population of students can strengthen student self-efficacy which can lead to students overcoming the barriers to entry found within the educational pipeline (Muppala, & Prakash, 2020). Additionally, ensuring that this population of students receive access to culturally inclusive medical clubs and student organizations is vital in ensuring that they feel supported and safe to engage and express themselves in a culturally empowering environment.

Conclusively, it is critical for higher education practitioners to ensure that Black male premedical students are supported during their undergraduate education. The experiences and challenges of Black male students applying to medical school are unique and tailored support should be allocated to ensure that this population of students can successfully transition to medical school. Future researchers should expound upon these recommendations.

#### *Recommendations: Higher Education Institutions*

This study can provide insight into how to improve matriculation rates for students enrolling into medical school. An emerging overarching theme of the study was the Honors College. Key benefits of the emerging theme Honors College identified by the study participants were small class sizes, greater faculty engagement, faculty relationship development, professional advisement, and access to early assurance programs. Higher education institutions should model their approach to this population of students similarly to their approach to an honors college. The development of a program that is aimed at improving the racial minority

outcomes in the medical school matriculation process can directly impact this population of students. Additionally, increasing the enrollment of Black male students in early assurance programs ensures increased medical school matriculation for this population of students.

In addition to modeling the honors college academic support structures, higher education institutions could develop a four-plus-one undergraduate to graduate bridge program designed for students that have a demonstrated history of academic excellence within the hard sciences and indicates an interest in pursuing a medical school. Connecting Pell grant recipients or first-generation recipients as eligibility requirements can ensure greater participation of Black students. The bridge program faculty should be comprised of both medical- and research-based faculty, thereby ensuring a medical research academic foundation. Additionally, this type of program should include a comprehensive course that mirrors a traditional MCAT preparation course. In addition to earning a master's degree within the hard sciences, the implementation of this type of program would ensure that lower socioeconomic students receive adequate MCAT preparation and increase student visibility. These two factors would improve the academic competitiveness of Black male students within the medical school application process.

Higher education institutions should develop physician mentoring connection programs and MCAT preparation programs beginning in the first year of college. An emphasis on connecting Black male students with Black physician mentors early within their academic careers can lead to improved self-efficacy through the process of modeling. A consistent concern of the study participants was inequitable access to MCAT preparation material. Establishing an MCAT preparation program within the first year of college can minimize the inequity within the

MCAT preparation process and increase student self-efficacy through the process of mastery of experiences.

Overall, higher education institutions will need to play a significant role in the development of more Black male physicians through affirming their commitment to ensuring the success of Black male pre-medical students as they transition into medical school. Ensuring greater access for Black male students to matriculate into honors programs - or by providing greater access to resources which are traditionally restricted to honors students - can yield positive results in the enrollment of Black male students into medical school. Additionally, the development of educational bridge programs and physician mentoring programs can have an essential role in the success of Black male students matriculating into medical school.

*Recommendations: Black Male Students*

This study provided a rare perspective on the contributing factors that lead to Black male students matriculating into medical school. The study participants experienced similar challenges and accomplishments. As previously discussed, the study participants attributed early exposure to medicine and a natural affinity towards academics as key factors that contributed to their successful matriculation into medical school. It is recommended that Black male students seek out physician mentorship and peer mentorship opportunities within the first year of their undergraduate education and, if possible, prior to undergraduate enrollment. Additionally, Black male students should seek out honors programs or institutions that provide similar opportunities and resources, such as honors programs, to improve their ability to be competitive within the medical admission process.

Study participants expressed degrees of isolation or marginalization and expressed this feeling as being normal. The study participants countered this barrier by emphasizing the importance of cultural inclusivity and cultural representation among faculty and staff. It is recommended that Black male pre-medical students select institutions that have a demonstrated history of cultural inclusivity and support structures that are designed to maximize their competitiveness within the medical school application process. Additionally, regardless of institutional type (i.e., HBCU, PWI, HIS), Black male students should develop peer mentoring relationships with upper-class premedical students or with medical students early within their undergraduate education. Establishing a peer mentoring relationship can assist the student with connecting to their institution and assist the student with developing their self-efficacy.

#### Implications for Future Research

This study has yielded several opportunities for future research. First, this study had a small sample population that was limited to two medical schools. Future research that expands the sample population size to include multiple medical schools of various sizes, geographic locations, and mission statements would provide comprehensive and generalizable research findings.

Second, future research should consider the role honors colleges have in recruiting and enrolling Black male pre-medical students. The study demonstrated that Black male students that participated in an honors program were better prepared than their non-honors counterparts. Reviewing the methodologies utilized to recruit Black premedical students into honors colleges

can lead to further understanding the role that the honors college has in the medical application process.

Third, future research should consider the role that socioeconomic and parental education attainment has on Black male medical students. According to the study findings, 67% of the study participants come from households that have a parent or guardian that has earned a minimum of bachelor's degree. The AAMC (2023), reported a similar finding, in which 67.3% of medical students have a parent or guardian that has earned a minimum of bachelor's degree. This reflects a possible connection between parental degree attainment and medical school matriculation. Future research should focus on the role that parental degree attainment has on the matriculation of Black male medical students.

Fourth, future research should delve deeper into the cultural differences of male medical students that fall under the umbrella term "Black." An in-depth study researching the differences in experiences among African American, Caribbean, African and West Indian males could yield data that can assist with the development of effective methodologies to address the lack of growth within the Black male medical student population.

Finally, a comparative study focusing on the differences between Black male medical students and Black female medical students could yield important data on the differences and similarities of Black medical students matriculating into medical school. Examining the difference in experiences of these two student populations can provide greater insight into the growing gender gap in matriculation.

### Limitations

There are a several limitations to this study. First, as an employee of a medical school, the researcher had a previously established relationship with several of the study participants. These relationships were tangential but the existing familiarity with the study participants may have contributed to the study participants' desire to participate in the study and their willingness to divulge intimate information. This existing familiarity with some of the study participants required the researcher to further utilize bracketing strategies (Moustakas, 1994) to avoid injecting bias into the study findings.

A second limitation of the study was the inherent inaccuracies associated with phenomenological research. Phenomenological research relies heavily upon the perspective and recollection of the study participants. Further interpretation of the data by the researcher can lead to inaccuracies or misinterpretations of the data due to the researcher's inherent biases and preconceived ideals. Bracketing strategies, as outlined by Moustakas (1994), were implemented to minimize researcher bias; however, it is probable that a degree of bias seeped into the study findings.

Lastly, this phenomenological study was originally designed to reflect a sample population of 8-10 study participants. The study was conducted with 6 study participants due to the difficulty of recruiting this small, unique population of students. Achieving a sufficient sample population required adopting a snowballing sampling procedure in lieu of a purposeful sampling procedure. Similar to other phenomenological studies, due to sample population size and scope of the study, the study findings are not generalizable beyond the study parameters. However, the study findings may still be beneficial and relevant to similar populations.



### Researcher's Reflections

As a higher education professional, with over eleven years of undergraduate recruitment experiences and five years of medical school recruitment experience, the researcher has personally experienced the ongoing challenges of matriculating underrepresented student populations, specifically within the Black male student population. The challenges associated with recruiting and enrolling Black male students have been well documented and discussed. Rarely do discussions acknowledge the successes of Black male students, specifically Black male students matriculating into medical school. The researcher elected to pursue this study with the knowledge of the importance of listening to - and providing a voice to - the successful stories of Black male students.

The researcher's professional experience and comprehension of existing research did not adequately prepare the researcher for the difficulties of recruiting a significant sample population to conduct the study. As a novice, the researcher failed to anticipate the degree of difficulty in recruiting this population. A multitude of communication with other medical schools, student organizations, and accrediting bodies yielded no study participants. Eventually, the parameters of the study were extended and a snowballing sampling procedure was implemented. Each study participant expressed enthusiasm and appreciation for the purpose of the study. The researcher found the participants' individual stories inspirational and engaging. The researcher was pleased to have the opportunity to conduct this study and to capture the lived experiences of the study participants.

### Conclusion

This study provided a voice to a population of students that needed greater representation. The study yielded seven emerging themes which guided the researcher's recommendations to improve the Black male medical student population. The study outlined limitations and provided additional implications for future researchers. The researcher concludes that a greater understanding of this population of students may lead to increases in the Black male student medical school population and subsequent increases in the Black male physician population.

## **APPENDIX A: INTERVIEW PROTOCOL**

## INTERVIEW PROTOCOL

Institution: [Pseudonym]

Interviewee: [Pseudonym]

Interviewer: Cedric Brown, Ed.D. Candidate in the Department of Educational Leadership and Higher Education in the College of Community Innovation and Education at the University of Central Florida

### Interview Introduction Script

Hi. Thank you for meeting with me virtually and for agreeing to participate in this study. My name is Cedric Brown, and I am a Doctoral student at the University of Central Florida. I am conducting a study in partial fulfillment of the requirements for the degree of Doctor of Education in Educational Leadership. The purpose of this qualitative study is to develop a better understanding of the successful characteristics of Black male medical students matriculating into medical schools located in the southern United States, despite existing structural and systemic inequities. Through a purposeful sampling process, I have identified you as an individual that meets following criteria:

- Self-Identified Black male
- Successful acceptance and matriculation into medical school
- Current first-year medical student

I have scheduled our semi-structured interview to exceed no more than one hour. There are 10-15 interview questions; however, the semi-structured interview format permits the flexibility for additional follow-up questions. This interview is being conducted virtually by zoom, which allows for the video recording of the interview. With your consent this interview will be recorded and stored on a secure One Drive account, which is provided by the University of Central Florida. An additional audio recording of the semi-structured interview will be created and utilized as a back-up, in the unlikely event that video recording is damaged, corrupted or inoperative. Access to the video recording and audio recording will be restricted to the researcher and the faculty advisor. The video recording and audio recording will be discarded in accordance with the policies established by the University of Central Florida. The video recording and audio recording will be used to ensure accurate representation of your responses to the semi-structured interview questions and subsequent follow-up questions. The participant may stop the interview at any point during the interview.

Pseudonyms will be utilized throughout the writing and publishing of the study, to ensure anonymity and to protect the identity of the study participants. The Explanation of Research form outlines the study, confidentiality, and ethical considerations related to the study. Please review the Explanation of Research form and consent to your continued participation in the study (allow sufficient time for the participant to review the form and to propose questions). This is voluntary study, and you may end or discontinue your participation in the study at any point in time. Please let me know if you need to take a break, so that the recording may be paused accordingly. With your permission and without any additional questions, I will begin the recording and initiate the interview.

[Interview Questions: See Appendix C]

### Conclusion of Interview:

Thank you for your participation and for sharing your experiences. If you have any questions or concerns should arise, please do not hesitate to contact me.

## **APPENDIX B: DEMOGRPHIC SURVEY**

## DEMOGRPAHIC SURVEY

1. Which race/ethnicity do you self-identify?
2. Which gender do you self-identify?
3. Are you currently enrolled in an allopathic medical school?
4. What is your academic class standing (e.g., M1, M2, M3, M4)?
5. Is your medical school a predominately white or historically black medical school (HBCU)?
6. Did you receive your bachelor's degree or advanced degree (e.g., Masters, professional degree, etc.) from a predominately white or from historically black university or college?
7. Did you receive college credit while in high school? If so, was the college credit within a Science Technology, Education and Math (STEM) academic curriculum?
8. Did you attend a community college or two-year state college after high school graduation and prior to earning your bachelor's degree or advanced degree?
9. While completing your bachelor's degree, were you involved in Greek life organizations and/or academic medical student organizations?
10. While completing your bachelor's degree or advanced degree, where you classified as in-state or out-of-state for tuition purposes?
11. How would you define your sexual orientation?
  - a. Prefer not to answer.
  - b. Heterosexual
  - c. Gay/Lesbian

- d. Bisexual
  - e. Asexual
  - f. Queer
  - g. Questioning
  - h. Self-defined
12. While completing your bachelor's degree or advanced degree, did you live in on-campus housing?
13. While completing your bachelor's degree or advanced degree, were you employed? If so, indicate full time or part time.
14. How would you define your family household income?
- a. Lower income (\$1000-\$24,002)
  - b. Lower-middle class (\$24,003-\$45,600)
  - c. Middle class (\$45,601- \$74,869)
  - d. Upper-middle class (\$74,870-\$121,018)
  - e. Upper Class (Greater than \$121,019)
15. Do you have any dependents, or do you serve as primary caretaker?
16. Do you identify as a military veteran, military spouse or child of a military veteran?
17. Do your parents or parental guardians have a bachelor's degree or advanced degree? If so, please indicate which parent and degree attainment level.
18. Please define which housing environment most accurately depicts your childhood?
- a. Suburb Single-family home
  - b. Urban Single-family home

- c. Rural single-family home
  - d. Suburb multi-family home (e.g., townhome, apartments, condos, etc.)
  - e. Urban multi-family home (e.g., townhome, apartments, condos, etc.)
  - f. Rural multi-family home (e.g., townhome, apartments, condos, etc.)
19. Were you raised in a single generational or multigenerational household?
20. Which of the following responses most accurately reflects your background?
- a. Parents/parental guardians and I were born in the U.S.
  - b. I was born in the U.S., but my parent(s)/parental guardian(s) were born outside of the U.S.
  - c. I was born outside the U.S. but became a naturalized citizen
  - d. I was born outside the U.S., but I am a permanent resident
  - e. I was born outside of the U.S., and I hold an Asylee status
  - f. I prefer not to answer.



## **APPENDIX C: STUDENT SELF EFFICACY SCALE**

## STUDENT SELF EFFICACY SCALE

1. I am convinced that I am able to successfully learn all relevant subject content even if it is difficult.
2. I know that I can maintain a positive attitude toward this course even when tensions arise
3. When I try really hard, I am able to learn even the most difficult content.
4. I am convinced that, as time goes by, I will continue to become more and more capable of learning the content of this course.
5. Even if I get distracted in class, I am confident that I can continue to learn well
6. I am confident in my ability to learn, even if I am having a bad day
7. If I try hard enough, I can obtain the academic goals I desire
8. I am convinced that I can develop creative ways to cope with the stress that may occur while taking this course.
9. I know that I can stay motivated to participate in the course
10. I know that I can finish the assigned projects and earn the grade I want, even when others think I can't.

Response Format: 1-point (not at all true), 2-point (hardly true), 3-point (moderately true), 4-point (exactly true)

## **APPENDIX D: SEMI-STRUCTURED INTERVIEW QUESTIONS**

## SEMI-STRUCTURED INTERVIEW QUESTIONS

1. Please describe your educational pathway to medical school starting from k-12.
2. Please describe the role that your high school had on your educational development.
3. Do you feel that your undergraduate institution prepared you to transition into medical school? Why or why not?
4. How would you describe the importance of your relationship with faculty?
5. Can you describe the culturally inclusiveness of your undergraduate institution?
6. How would you describe the effectiveness or inefficiency of medical school application process?
7. Did you participate in physician shadowing while pursuing your bachelor's degree or advanced degree? Please describe your physician shadowing experiences.
8. While pursuing your bachelor's degree or advanced degree, were you able to participate in volunteer shadowing experiences?
9. Do you have a defining moment that has led you to pursue a career a medical physician?
10. What were the deciding factors in your choice of which medical schools to apply to and why you elected to matriculate into your medical your school?

**APPENDIX E: DIRECTOR/DEAN OF STUDENT AFFAIRS DIVERSITY  
AND INCLUSION STUDY INTRODUCTION EMAIL**

DIRECTOR/DEAN OF STUDENT AFFAIRS DIVERSITY AND INCLUSION STUDY

INTRODUCTION EMAIL

Dear Dean/Director

My name is Cedric Brown, University of Central Florida Doctoral Candidate, and I am conducting a study to increase our understanding of the successful characteristics of Black male medical students matriculating into medical school. As you may be aware, physician representation within the Black population is not adequately represented. The objective of this study is to better comprehend the characteristics of Black male students that have successfully matriculated into medical school. To ensure that this study appropriately represents the experiences of Black male students matriculating into medical school, this study will principally focus on Black male medical students within their M1 year. Please forward this e-mail and the email attachments to students that meet the aforementioned criteria or please provide contact information for these students, and I will contact them directly. Thank you for your assistance and if you have questions pertaining to the objective and design of the study, please do not hesitate to contact me at (407) 908-9193 or [cedric.brown@ucf.edu](mailto:cedric.brown@ucf.edu).

Sincerely,

Cedric Brown

Doctoral Candidate

University of Central Florida

College of Community Innovation and Education

**APPENDIX F: INITIAL RESEARCH PARTICIPATION EMAIL**

## INITIAL RESEARCH PARTICIPATION EMAIL

Dear Study Participant

My name is Cedric Brown, University of Central Florida Doctoral Candidate, and I am conducting a study to increase our understanding of the successful characteristics of Black male medical students matriculating into medical school. As you may be aware, there is a deficit of qualified Black male medical students and Black male physicians. The objective of this study is to better comprehend of the characteristics of Black males that have successfully matriculated into medical school. As a first-year medical student that identifies as being a Black male you are in an ideal position to provide firsthand knowledge of your own unique experiences.

The study will consist of a 1-hr semi-formal 1-on-1 virtual interview. This study is designed to capture your personal thoughts, experiences and perspectives transitioning into your first year of your medical education. Each study participant will receive an assigned pseudonym and no personal identifying information will be revealed in the data analysis and research write up.

This study does not offer compensation; however, your participation is invaluable, and the study findings could lead to a greater understanding of the successful characteristics of Black male medical students matriculating into medical school.

If you are open to participating in this study, please respond to this e-mail with the completed demographic survey and SSE questionnaire and I will respond to schedule an appropriate date and time to conduct the initial 1-on-1 virtual interview.

Thank you!

Cedric Brown



Doctoral Candidate

University of Central Florida

College of Community Innovation and Education

## **APPENDIX G: EXPLANATION OF RESEARCH FORM**

## EXPLANATION OF RESEARCH FORM

Title of Project: THE SUCCESSFUL CHARACTERISTICS THAT CONTRIBUTE TO BLACK MALE STUDENTS MATRICULATING INTO MEDICAL SCHOOL

Principal Investigator: Cedric Brown

Faculty Supervisor: Dr. RoSusan (chair). Dr. Micheal Preston (co-chair)

You are being invited to take part in a study. Whether you take part is up to you.

The purpose of this study is to reflect upon the characteristics of Black male medical students that have successfully transitioned into medical school. As a participant of this study, you are expected to complete a demographic and student self-efficacy questionnaire. Additionally, you will participate in one virtual 1-on-1 semi-structured interview and one virtual focus group.

The demographic survey and the student self-efficacy questionnaire should take no more than 15-20 minutes to complete. The 1-on-1 interviews and the focus groups are not anticipated to exceed more than 1-hour per session. The virtual software (e.g. Zoom) permits audio and video recording. The audio and video recording will be utilized strictly for the purpose of ensuring that the characterization of experiences by the study participants are accurately represented. The audio and video recording, as well as identifiable private information outlined in the demographic survey, will only be reviewed during the data analysis process; however, pseudonyms will be utilized during the study write-up. The audio and video recording will be deleted five years after the completion of the study, in accordance with the policies outlined by the University of Central Florida. Your participation in this study is voluntary and if you do not want to be recorded, then you are free to withdraw your consent and discontinue participation in this study at any time without prejudice or penalty. Your decision to participate or not participate

in this study will in no way affect your relationship with UCF, including continued enrollment, grades, employment or your relationship with the individuals who may have an interest in this study. You must be 18 years of age or older to take part in this study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints: Cedric Brown, Doctoral Candidate, Educational Leadership & Higher Education, College of Community Innovations and Education, (407) 908-9193 or Dr. Bartee, Faculty Chair, Educational Leadership & Higher Education at (407) 823-2432 or by email at [cedric.brown@ucf.edu](mailto:cedric.brown@ucf.edu).

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email [irb@ucf.edu](mailto:irb@ucf.edu).

## **APPENDIX H: UCF IRB LETTER**



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board  
FWA00000351  
IRB00001138, IRB00012110  
Office of Research  
12201 Research Parkway  
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

January 28, 2022

Dear Cedric Brown:

On 1/28/2022, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Category 2(ii)
Title:	THE SUCCESSFUL CHARACTERISTICS THAT CONTRIBUTE TO BLACK MALE STUDENTS MATRICULATING INTO MEDICAL SCHOOL
Investigator:	Cedric Brown
IRB ID:	STUDY00003837
Funding:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none"> <li>• Cedric Brown (HRP 251 Form; January 2022).pdf, Category: Faculty Research Approval;</li> <li>• Cedric Brown (HRP-254-FORM)- Explanation of Research.pdf, Category: Consent Form;</li> <li>• Cedric Brown (HRP-255-FORM) - Request for Exemption.docx, Category: IRB Protocol;</li> <li>• Cedric Brown- Director Dean of Student Affairs and Diversity and Inclusion Offices Research Introduction E-mail.docx, Category: Recruitment Materials;</li> <li>• Cedric Brown- Initial Research Participation E-mail.docx, Category: Recruitment Materials;</li> <li>• Cedric Brown-Demographic Survey.docx, Category: Survey / Questionnaire;</li> <li>• Cedric Brown-Focus Group Interview Protocol.pdf, Category: Debriefing Form;</li> <li>• Cedric Brown-Interview Protocol.pdf, Category: Debriefing Form;</li> <li>• Cedric Brown-Semi-Structred Interview Questions.docx, Category: Interview / Focus Questions;</li> <li>• Cedric Brown-Student Self-Efficacy Questionnaire.docx, Category: Survey / Questionnaire</li> </ul>

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or [irb@ucf.edu](mailto:irb@ucf.edu). Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Katie Kilgore  
Designated Reviewer

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