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## The Influences On And Experiences Of Underrepresented Minority Females In One Southeastern United States Medical School

Brianne Holmes  
*University of New England*

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THE INFLUENCES ON AND EXPERIENCES OF UNDERREPRESENTED MINORITY  
FEMALES IN ONE SOUTHEASTERN UNITED STATES MEDICAL SCHOOL

By

Brianne Holmes

B.A (Mansfield University of Pennsylvania) 2003

M.A. (Mansfield University of Pennsylvania) 2015

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THE INFLUENCES ON AND EXPERIENCES OF UNDERREPRESENTED MINORITY  
FEMALES IN ONE SOUTHEASTERN UNITED STATES MEDICAL SCHOOL

ABSTRACT

Representation in enrollment of African American female and Latina students is inconsistent with the demographic makeup across the United States. Exploring the experiences of current and past students at one southeastern medical school assisted in determining a possible cause for that underrepresentation. Two questions guided this study: (1) How do underrepresented minority (URM) females describe their decision to pursue medical education? (2) How did cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education? This study employed an Interpretative Phenomenological Analysis methodology with a Critical Race Feminism framework to gather the stories of female medical students from those URM backgrounds. Significant findings include a strong support system within an academically intense family, a strong maternal role-model, financial constraints, a need for more science, technology, engineering, and math programs during formative education, and a desire for community within academia. These findings also suggest a need for reconsideration of intersectionality and anti-essentialism within pipeline programs and the approach that medical schools take to recruiting. Incorporating those changes will ultimately increase proportionate representation of minority females within US medical schools.

*Keywords:* underrepresented minority, anti-essentialism, intersectionality, academic medicine, diversity

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This dissertation was presented by

Brianne Holmes

It was presented on

March 25<sup>th</sup>, 2021

and approved by:

Ella Benson, EdD, Lead Advisor

University of New England

Ashwini Wagle, EdD, Secondary Advisor

University of New England

Daniel Marlowe, PhD, Affiliate Committee Member

Campbell University

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“The new dawn blooms as we free it. For there is always light, if only we’re brave enough to see it. If only we’re brave enough to be it” -Amanda Gorman, 2021

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## CHAPTER ONE: INTRODUCTION

The lack of underrepresented minority (URM) women in academia and medicine are well-researched topics. Most notably, there continues to be a seemingly insurmountable disparity between the Latina and African American female populations of the United States, and their representation in medicine (Association of American Medical Colleges, 2020b). Statistics show steady increases for most other minority populations in medicine, in closer proportion to their national population, but not for African Americans and Latinas (American Association of Colleges of Osteopathic Medicine, 2018). Racial and ethnic disparities persist in the United States healthcare system. This leads to poorer patient outcomes and higher mortality rates among underrepresented minorities, even though the greater public health outcomes have improved (Hsu, Bryant, Hayes-Bautista, Partlow, & Hayes-Bautista, 2018). Reasons for that include, but are not limited to, healthcare and the practice of medicine being viewed differently from one culture to the next (Byington & Lee, 2015; Halperin, 2015; US Center for Disease Control and Prevention, 2020), and URM populations seeking providers that “look like them” (Halperin, 2015). Underserved and underrepresented populations in lower socio-economic geographic areas tend to perceive healthcare as a financial strain or luxury (Byington & Lee, 2015; Cantor, Miles, Baker, & Barker, 1996; Fletcher, 2016; Molina et al., 2019), and there are typically fewer physicians available to them, in those areas (Semega, Fontenot, & Kollar, 2017; US Center for Disease Control and Prevention, 2020).

The practice of medicine, like human culture and society, is transforming and advancing every day (Conroy et al., 2018; Gottlieb, 2015). Current researchers throughout the country are attempting to move humankind toward a healthier and more vivacious future while appreciating, including, and treating a changing demographic and economy (Gottlieb, 2015; Hsu, Bryant,

Hayes-Bautista, Partlow, & Hayes-Bautista, 2018). However, a gap remains between the populations that need better healthcare and the providers available to help them (Association of American Medical Colleges, 2020a; Brown, Liu, & Scheffler, 2009; Byington & Lee, 2015; Halperin, 2015; Lett, Murdock, Orji, Aysola, & Sebro, 2019). If that gap is not bridged by increasing the number of providers with like backgrounds, then health outcomes, mortality, and economic indicators for those populations risk never being improved (US Center for Disease Control and Prevention, 2020).

### **Underrepresented Minority Females in Medical School**

Over the last half-century, the number of women enrolled in osteopathic medical schools in the United States has gone from just 4% in 1968 to almost 49% in 2019 (American Association of Colleges of Osteopathic Medicine, 2018). The vast majority of those admissions, however, continues to be claimed by white, Asian, and Middle Eastern women (American Association of Colleges of Osteopathic Medicine, 2018). While diversity initiatives have attempted to increase URM student enrollment, the resulting increases remain minimal in some regions of the country (Boatright et al., 2018; Brown, Liu, & Scheffler, 2009; Byington & Lee, 2015). Throughout the United States, URM females continue to be among the lowest percentage of enrollees in medical schools (Association of American Medical Colleges, 2018).

Regardless of a multitude of social and community programs meant to increase enrollment in medical school (Boatright et al., 2018), bridging the gap between the changing ethnic and racial demographics of the US and the number of enrolled URM medical students has proven a challenging barrier, with most US medical schools having a sometimes severe underrepresentation of female African Americans and Latina students (Brown, Liu, & Scheffler, 2009; Campbell, Rodriguez, Beitsch, & Saunders, 2014; Cantor, Miles, Baker, & Barker, 1996).



The experiences then, of each individual, whether cultural, social, economic, psychological, or gendered, that shape their life choices and academic outcomes differently, must be considered.

### **This Osteopathic Medical School**

Southern Medical College (SMC) (pseudonym) is a young osteopathic medical school in the southeastern United States that admits approximately 160 to 170 students each year and graduates roughly 140 to 150 physicians each year (American Association of Colleges of Osteopathic Medicine, 2019b). The foundation of osteopathy is the belief that people are more than the sum of their ailments, parts, or experiences, and should therefore be treated in mind, body, and spirit (American Osteopathic Association, 2020b). Medical schools have a far more competitive nature than undergraduate schools and are very particular about their student enrollment selections and criteria. Like many other medical schools, SMC has a marked underrepresentation of minority female students (American Association of Colleges of Osteopathic Medicine, 2019a). Lett, Murdock, Orji, Aysola, and Sebro (2019) found that even after nationwide initiative requirements were set into place nearly a decade ago, there is still an overall 70% underrepresentation of African American or Latin applicants to medical school. The explanation for the disparity then must be considered through a wider lens; one aspect to consider are the first-hand experiences of URM females.

### **Statement of the Problem**

The problem that this study examined is the underrepresentation of minority females in medical school and the lack of understanding of the students' experiences and perceptions. It is well established that physicians tend to enter practice in geographic proximity to where they trained (Association of American Medical Colleges, 2018). Likewise, patients tend to seek physicians of their same sex, race, or creed (Cantor, Miles, Baker, & Barker, 1996; Lett,

Murdock, Orji, Aysola, & Sebro, 2019). In 2017 the United States Census Bureau reported that close to 70% of the population of SMC's home state identified as Caucasian, and approximately 31% of that population identified as African American or Latino (U.S. Census Bureau, 2017). Therefore, approximately 15.5% of the population of the area surrounding SMC are African American women or Latinas. The county and region surrounding SMC are also considered medically underserved, with those populations considered more likely to receive a higher percentage of uncompensated care (i.e., absorbed by the hospital, paid for by taxpayers, Medicaid, or Medicare) (Merchant & Omary, 2010). As of 2017, nearly 77% of the state's counties have Health Professional Shortage Area (HPSA) designations, with a state poverty rate of 17.2% (by household income)--the 12<sup>th</sup> highest in the country (Semega, Fontenot, & Kollar, 2017).

The American Association of Colleges of Osteopathic Medicine (2019a) reported that SMC averages around 4% of the student body identifying as African American or Latino American, in any given year since 2013, far lower than the approximately 15.5% of representation in the state. Importantly, within the medical community, Asian and Middle Eastern populations are not counted as underrepresented minorities, as their enrollment in medical school is proportionate to their national and state demographics (American Association of Colleges of Osteopathic Medicine, 2019a; Association of American Medical Colleges, 2020b). The gap of underrepresentation is wide, but that does not mean progress is not being made, it is, albeit very slowly, and with ebbs and flows.

The problem that underrepresentation in the medical school creates is that while the school leadership intends to improve primary care in rural and medically underserved areas, a vital piece of that puzzle is missing: diverse representation among physicians. Exploration of the

problem is crucial for SMC to increase its diversity and better serve the whole community. The diversity of each state has a direct impact on the diversity of academic physicians within the state. Therefore, a more diverse state population should naturally have equally diverse medical school enrollment (Campbell, Rodriguez, Beitsch, & Saunders, 2014; Page, Castillo-Page, & Wright, 2011). However, that has not been the case for the representation of URM females. Representation of minority women among medical school students, and subsequent physicians, is far less than the local demographic and is a reality that carries true across the country (Lett, Murdock, Orji, Aysola, & Sebro, 2019; Saha, 2014).

To supply medically underserved (most often, rural) areas of the southeastern United States with adequate physician representation, the problem of the shortage of female physicians of African American and Latin origin must be addressed. A study conducted by Brown, Liu, and Scheffler (2009) found that between 1990 and 2010, there was some growth in enrollment for Black and Hispanic students, and the expectation was that those physicians would settle in the geographic regions where they are most needed and represented. After another decade, it was discovered that the increases had not continued (Lett, Murdock, Orji, Aysola, & Sebro, 2019). Understanding the stories of the students who were accepted and/or completed medical school will help SMC, and potentially all medical academia, to progress toward a more diverse student population and medical community.

### **Research Questions**

To gain an understanding of some of the factors that have may have influenced current and former URM female students to undertake medical education, two research questions guided this study:

(1) How do URM females describe their decision to pursue medical education?

(2) How do cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?

The outcomes of this study may ultimately help SMC and similar medical colleges delve further into why fewer African American women and Latinas are applying to medical school. This research examined the individual stories of the participants, and where their life stories meet and diverge. The study looked at the cultural, societal, or familial influences or expectations that led the participants to move forward with medical education. A qualitative study was conducted with currently accepted and/or recently graduated URM female medical students to determine how they understand and describe the experiences and influences that led them to pursue medicine and their successful enrollment at SMC. Medical schools can only begin truly addressing medically underserved areas when they address underrepresented populations within their walls.

### **Conceptual Framework**

The conceptual framework for this research is a catalyst that drives the motivation, data collection, analysis, and interpretation of the study. Three specific elements make up the conceptual framework: personal interest, topical research, and theoretical framework (Ravitch and Riggan, 2017). Personal interest and goals play a small part in the creation of the study and include the researcher's identity, positionality, and social location. Additionally, the researcher's institutional position at a medical school has created awareness of the situation, and an available avenue or location for the study.

### **Topical Research**

Topical research on the underrepresentation of minority women in medicine is becoming more abundant as initiatives continue to be instated, but with little lasting effect (Association of

American Medical Colleges, 2018; Lett, Murdock, Orji, Aysola, & Sebro, 2019). The topical research covers several aspects of the research questions, but does not speak to the influences and experiences of URM medical students, and are often in generalizations. There is abundant information on the incentive or bridge programs available for minority students. There are reports from multiple education agencies and government departments that offer statistics and figures about the lack of URM females in medicine. There are even narratives and qualitative studies that examine the role that URM females play within their communities, how they view education, and how they view medicine. What is lacking, however, is a synthesis and analysis of that influence, experience, and the ultimate choice to pursue medicine.

### **Theoretical Framework**

The theoretical framework for this study was based upon Critical Race Feminism (CRF). The CRF framework was applied in this study and allowed the participants' experiences to be viewed through two lenses. The participants will discuss their self-perception and the way they believe they are perceived. Their experiences in their families, communities, or education before entering medical school was discussed through a lens of race and feminism--as a person of color, and a woman. The CRF was first identified by Richard Delgado (1995) and Wing (1997) as a theoretical framework closely related to Critical Race Theory (CRT). Instead of looking only at the ways race affects experiences, the CRF allows an additional or closer focus on the gender aspects of those experiences. Both the CRF and the CRT were created in the legal world, as a means of placing a lens of race and race/gender on matters of marginalization and inequality with the ultimate goal of social justice. Broader application of the CRF in research has begun to explore the ways the URM females perceive their roles in their personal lives, society, and cultures. Furthering the depth of this theory and identifying it as a tool for research were Berry

(2009) and Pratt-Clark (2010). Later, Childers-McKee and Hytten (2015) applied CRF as a tool for education reform. By using CRF theoretical framework for this study, the experiences and influences both socially and personally were studied, and the findings can inform regional and school leaders, who will gain a better understanding of their potential role in increasing diversity of the medical school, thus improving the healthcare of the entire region.

### **Assumptions, Limitations, Scope**

Assumptions of this study are typical of any qualitative research, including some logistical and some behavioral. Firstly, there is a significant amount of time that must be acknowledged and committed to by both researcher and participant. Up to three interviews were expected per participant. Also, there were space requirements and potential social distancing requirements that may have affected the data collection process, which added even more time to the duration of the study. Secondly, it is assumed that participants were honest and open with their explanation of experience and that the researcher sought to exclude bias during data analysis. Finally, and possibly the most significant potential limitation of the study was difficulty in recruiting current medical students to partake in a study when they have only recently returned to clinical practice, following months of COVID-19 induced exclusion from clinical settings. While the population of the entire medical community informed the background of the study and literature review, the scope and purpose of this particular research is on the southeastern United States, which is the area immediately surrounding the SMC campus.

### **Rationale and Significance**

The rationale for this study lies in the future demographic of the United States and the role that each medical school plays in producing physicians to meet the needs of that changing demographic. Studies have shown that regardless of their socio-economic status,

underrepresented minority students continue to face discrimination, negative stereotyping, and exclusions that have run rampant throughout U.S. history (Saha, 2014). At the rate that humans are currently reproducing, by 2050, nearly 50% of the U.S. will identify as non-white, or persons of color. Therefore, the assumption is that those likely to receive uncompensated care will receive care primarily from minority physicians. It is the responsibility of SMC and other medical colleges to increase the enrollment of minority physicians--specifically females (Merchant & Omary, 2010). Exploring this phenomenon now can ultimately lead to improved access to healthcare throughout the URM community.

### **Definition of Terms**

Some definitions tend to have ontological, epistemological, or even regional differences and inferences. For the purpose of this study, the following definitions have been employed:

**Culture-** The customs, arts, social institutions, and achievements of a particular nation, people, or other social groups that have developed over their history, and within which customs members are raised (Schaes, 2017).

**Demographic-** Relating to the makeup of populations (Schaes, 2017).

**Ethnicity-** The fact or state of belonging to a social group that has a common national or cultural tradition (Schaes, 2017).

**Medically Underserved Area-** An area or population can be federally designated as a Medically Underserved Area (MUA) by the Health Resources and Services Agency if the area has too few primary care providers to meet the population needs; high infant mortality; high poverty; or a high elderly population (Health Resources and Services Administration, 2020).

**Osteopathy-** In medical credentialing, there are two different philosophies- Allopathy and Osteopathy. While they are of equal standard, allopathy results in an M.D., and Osteopathy

results in a D.O. degree. Osteopathy is a practice of medicine that considers and treats the entire person, mind, body, and spirit, and employs manual manipulation therapy as a part of that whole person approach (American Osteopathic Association, 2020a).

**Underrepresented Minority (URM)**- Underrepresented Minority in medicine means those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population. The Association of American Medical Colleges (2020) applies this term specifically to African American, Hispanic, Native American, and Hawaiian populations in the United States (Association of American Medical Colleges, 2020). For the purpose of this study, URM refers exclusively to African American and Latina populations.

### **Conclusion**

The problem of underrepresentation of women of color in the U.S. healthcare system has long been recognized (Association of American Medical Colleges, 2020; Lett, Murdock, Orji, Aysola, & Sebro, 2019; Saha, 2014; US Center for Disease Control and Prevention, 2020). However, while women as a gender have advanced in medicine, and the number of female physicians in the U.S. has increased, the African American female and Latina populations have not, and alternately, have fallen far below their state population percentages (U.S. Department of Health and Human Services, 2013; Lett, Murdock, Orji, Aysola, & Sebro, 2019). In the region surrounding SMC, minority populations make up almost one-third of the overall population (U.S. Census Bureau, 2017). Yet the enrollment at SMC is no more than two percent women of color (American Association of Colleges of Osteopathic Medicine, 2019a).

As data continue to be collected regarding numbers and demographics, there must be additional research to determine the role that the African American and Hispanic experiences play in the success of students entering medical school. Data collected between the late 1960s



and 2019 has repeatedly shown that patients tend to seek medical care from physicians of their same ethnicity, making the need for that representation even more urgent (Brown, Liu, & Scheffler, 2009; Cantor, Miles, Baker, & Barker, 1996; Merchant & Omary, 2010). Data collected for the southeastern United States shows that female African American and Latina physicians are not entering or staying in rural medicine, and the physicians that do stay in those areas are serving large populations of low-income patients. Because of the lack of African American women and Latinas in primary care roles, many individuals will avoid seeking out healthcare in those rural areas (Campbell, Rodriguez, Beitsch, & Saunders, 2014; Saha, 2014). Without steps taken to understand the reasons for the lack of increase of these particular student populations, rural healthcare will not improve and uncompensated care will continue to worsen, further straining the state and national economies. The population of women of color has continued to grow, but the enrollment in medical school has not. The following chapter will give additional insight into the available literature that may aid in forming an understanding of how the problem of representation is currently being approached, and how some cultural and societal influences may explain the discrepancies. Subsequent chapters will describe the methodology that will be employed, the data that will be collected, and the outcomes of the study.

## CHAPTER TWO: LITERATURE REVIEW

Underrepresented minority (URM) females continue to be among the lowest percentage of enrollees in medical schools in the United States, a problem that has persisted since the 1960s when records of ethnicity, gender, and race began being retained (Association of American Medical Colleges, 2018; American Association of Colleges of Osteopathic Medicine, 2018). Beginning in the 1960s, researchers have determined that the reason representation is a problem is more than just a desire on the part of the underrepresented populations wishing to be included (Cervia & Biancheri, 2017; Geller, Bonaquisti, Barber, & Yaekel, 2017; Halperin, 2015). In the medical community, statistics have shown that minorities tend to seek out the care of physicians with similar backgrounds or ethnicities (Saha, 2014; Halperin, 2015, Nakae, 2014). Unfortunately, URM populations have experienced systematic social and psychological barriers that have yet to be adequately overcome (Quaye & Harper, 2014; Merchant & Omary, 2010; Geller, Bonaquisti, Barber, & Yaekel, 2017). Those systematic and social barriers are ever-present for URM females, specifically African American women and Latinas (Flores, 2018; Quaye & Harper, 2014).

### Study Topic

Related topics that have been addressed in research include gender and race roles within cultures and American society, sexism, ethnicity, cultural differences in perception of medicine, URM females in academia, and pay gaps, among others. This literature review will explore the currently available research in an attempt to identify gaps in the understanding of what social and psychological experiences may influence URM females' enrollment in medical school, which continues to be among the lowest of all populations (Association of American Medical Colleges, 2018). Subsequent research will examine the personal experiences of URM females currently or

recently in medical school. More specifically, while the research has covered the aforementioned topics, the experiences of URM female medical students prior to acceptance into medical school in the United States have not been adequately documented.

### **Context**

Students entering medical school are fortunate to have a clear path set for them by generations that have gone before. However, for women, entering medicine has historically presented a set of challenges different from their male counterparts, making that path far less clear (Cervia & Biancheri, 2017; Nakae, 2014; Pololi et al., 2013). In only the past five decades, enrollment and acceptance of women in American medicine and medical schools have increased exponentially, nearing perfect balance to the male to female enrollee ratio (Jena, Olenski, & Blumenthal, 2016). That clear path, however, remains complicated for URM females (Flores, 2018; Pololi et al., 2013; Saha, 2014). There are multiple possible explanations for the lack of URM females in medical schools which may include established gender and race roles and expectations in American society (Halperin, 2015; Quaye & Harper, 2014; Camacho, Zangaro, & White, 2017; Campbell, Rodriguez, Beitsch, & Saunders, 2014).

### **Significance**

The fruits of that research have been successful in creating initiatives that attempt to close the gap between local population demographics and representation in healthcare (Cervia & Biancheri, 2017). As the demographic population of the United States continuously changes and becomes more diverse, so does the need for physicians that look like their patients (Halperin, 2015; Byington & Lee, 2015). The United States Census Bureau reported in 2018 that the ethnic and racial demographic of the United States is changing more rapidly than previously predicted (U.S. Census Bureau, 2018). They have found that the number of children of URM populations

has steadily increased over just the past decade, and within 40 years, white children will officially be outnumbered. That predicted increase needs to be met with an increase of physicians of those ethnicities and races (Quaye & Harper, 2014; Saha, 2014).

### **Problem Statement**

In the United States, URM populations make up approximately one-third of the total population (U.S. Census Bureau, 2018), yet enrollment of URM females in Southern Medical College (SMC) hovers around 2%, every year (American Association of Colleges of Osteopathic Medicine, 2019a). This disproportion has consequences that ultimately can affect not only the surrounding area but the entire United States. The intended contribution of this study is to explore the experiences of the population in question: the URM females that enter medical schools in the United States. The problem that this study examined is the underrepresentation of minority females in medical school and the lack of understanding of the students' experiences and perceptions. The supporting literature will tell only part of the story, leaving gaps in understanding of the underrepresentation from the perspective of the URM females. Statistics alone cannot tell the story adequately enough to produce initiatives or address the root cause of underrepresentation.

### **Organization**

The literature presented in this topical review will explore both quantitative and qualitative studies. The review will cover the growing numbers of statistics and quantitative studies focused on the progress of women in academic medicine. Qualitative studies include societal or familial expectations of the URM females, both in family and academic settings. The effects of gender and race in science and medicine are also be explored. Next, the literature will examine women's roles in medical schools. Finally, several mixed methods studies explore the

topic of underrepresented minorities and medical school representation, both student and faculty. The current forward movement in this area of research will open the door for attracting and retaining URM females in medicine. However, without allowing their voices to be heard first-hand, a full understanding of their experience cannot be accomplished.

### **Review of the Literature**

The importance of representation in American society of its various cultures is recognized but is still continuously investigated because little impact has been made, and in most regions and industries, the country remains far from equity of representation (Clayeux, 2014; Gillborn, 2015; Matsudo, Lawrence, Delgado, & Crenshaw, 1993). One aspect or reason for the lack of URM females in medical schools is the established gender and race roles in American society (Boatright et al., 2018; Bun Lam, Stanik, & McHale, 2017; Halperin, May, 2015). In only the past five decades, enrollment and acceptance of women in American medicine and medical schools have increased exponentially, nearing balance in male to female enrollee ratio (Jena, Olenski, & Blumenthal, 2016). Males do however continue to outnumber females (Association of American Medical Colleges, 2018). That progress only occurred after the importance of balance and representation was established, and initiatives were introduced to increase the number of women enrolling in medical schools. Several themes and trends have finally begun to emerge during the research of only the past decade that speak to the wide scope of the issue. Research shows that there are multiple reasons for the shortage of females from underrepresented minorities (URM), in United States medical schools (Campbell, Rodriguez, Beitsch, & Saunders, 2014; Geller, Bonaquisti, Barber, & Yaekel, May, 2017; Pololi et al., 2013; Siller, Tauber, Komlenac, & Hochleitner, 2017). This literature review will address some of those reasons.

## **Women in Medicine**

Women in many US industries have struggled to gain acceptance and break through the proverbial glass ceiling. Statistics have shown that equal respect and credibility in the eyes of not only their male counterparts but also society in general, is still an issue that is reflected most tangibly via a pay gap. Jena, Olenski, and Blumenthal (2016) found that among 10,241 academic physicians, female physicians had lower mean unadjusted salaries than male physicians by nearly \$20,000 (p. 1301). Once specialty, rank, and institution were adjusted for, no other explanation for the pay gap could be deduced, aside from sex or gender. This is especially difficult to overcome for women of color, or URM females (Quaye & Harper, 2014).

### **Societal Expectations of the Sexes**

The question of why gender remains an issue in a civilized, first-world country, lies in the reality of persistence. Cervia and Biancheri (2017) found that “the effects of socially constructed gender-based roles and the gender-based system utilized in social institutions seem to indicate the presences of one-directional processes that mutually support each other” (p. 223). In other words, they found that the expectations of women as mother, nurturer, home-maker, etc., is considered mutually exclusive to that of professional and career pursuer. Whether a female is doing both is irrelevant, as each institution is regarded by society as one that requires complete loyalty and dedication. When that separation is eliminated, their study showed that women were regarded as less talented or effective--unless she could adopt a ‘male-like pattern of behavior’ and become a ‘juggler’, to attempt to balance both loads. Unfortunately, the study concluded that women that successfully juggle, ultimately burn-out more quickly, and eventually leave the scientific professions (Cervia & Biancheri, 2017, p. 225).

At the academic physician level, Wijesekera, Kim, Moore, Sorenson, and Ross (2019) reviewed medical school to residency gender-match trends. They found that female medical students were more likely to be inducted by their peers into honor societies that promoted empathy and patient-centered care (p. 567), and less likely to be inducted into societies based upon clerkship scores and evaluations. Being a member of an honor society increased students' match outcomes and career options. While the numbers show small levels of diversity, the disparity of women of color being inducted into those honor societies is reflective still, of the low numbers of URM medical school students. Between those two studies, what comes to light is an expectation of women to conform to a male-aligned behavior pattern, both personally and professionally, even though they are more likely to be successful when associated with an empathy- and care-oriented internal group. Influences appear then to be applied by both external and internal influences on women in science and medicine.

### **Gender and Race in Medicine**

The lack of URM females in medicine cannot be addressed without first establishing that there is a relationship between race, gender bias, and expectation. The issue is not simply that of gender roles. Race and sexism together can create a perfect storm to effectively deter potential enrollees in medicine and academic medicine (Quaye & Harper, 2014; Geller, Bonaquisti, Barber, & Yaekel, May, 2017; Byington & Lee, 2015). Building upon research conducted by Glick and Fiske (1996), and Sidanius and Pratto (1999), recent studies by McMahon and Kahn (2018) examined the effects and role of race when examining the relationship between sexes. Their findings showed that white males perceive a threat from URM females based upon recent current events or news items to which they are exposed. While there are equal parts positive and negative stories, the white males tended to focus and base judgment upon negative stories. This

creates a potential unconscious bias that causes the white men to be more protective of white women, and conversely, more biased against URM females. In other words, there is an established relationship between white men's perceptions of threat based upon race and gendered roles and expectations, that are then eventually projected onto URM females. What direct effect the perception of white men may have on URM females' medical school enrollment remains to be investigated.

The mistreatment of medical students is self-reported in a study by Siller, Tauber, Komlenac, and Hochleitner (2017). They investigated the mistreatment of medical students based upon gender differences (and similarities) broken down by varying groups of perpetrators. They found that the types of mistreatment can differ by gender, indicating that the effects of the mistreatment of female and male students should be studied using a gender perspective. Their study identified the mistreatment of students as everything from physical assault, to sexual assault, to public humiliation, and everything in between. Most notably, their findings suggest that women experienced more, but were less likely to report, mistreatment because of greater perceived risk based upon the hierarchical power structures and the fear of being hindered in their careers (Siller, Tauber, Komlenac, & Hochleitner, 2017).

### ***Underrepresented Minority Females' Self-Expectations***

What role then, do family, culture, and society play in expectations that students place upon themselves? Elsaesser, Heath, Kim, and Bouris (2018) point out that not all Hispanic or Latino families have the same expectations, and the familial academic and social support that adolescent students receive may be based upon the family's country of origin, and some students may rely heavily on teacher support for academic inspiration. Burgess, Locke, and Thomas (1963) however, determined that many Latino families have an ingrained support system they



called “familism” that influences many major life and gender role decisions, including economic and academic. Adams, Coltrane, and Parke (2007) found that while familism does not refer specifically to gender roles in the family, there do exist specific behavioral expectations for the females, including sacrifices for the men and family. Toyokawa and Toyokawa (2019) determined that this cultural value also offers emotional and tangible support between family and community members. Jolicoeur and Madden (2002) found that among Hispanic families, females are expected to carry the responsibility of the role of caregiver, especially for their elderly family members. More importantly, they found, if the family has newly arrived in the United States, the females are expected more so than the men to care for the family, in addition to holding full- or part-time jobs outside the home (Jolicoeur & Madden, T., 2002; Molina et al., 2019).

Flores (2018) found that the gender roles within a Latinx household played some part in their career choices. The study found that immigrant families tend to lack trust in the communities where they settle, and project that concern onto their daughters, in some cases deterring them from pursuing medicine. Alternately, while gender roles in the home may vary with longer-established African American families, Pietri, Johnson, and Ozgumus (2018) found that black women seek trust and identity (including gender) safe cues when determining their career paths. Taken together, what becomes clear is the perception of some social cues and gender roles determine much of the URM females’ perception of their experiences and intentions.

Williams, Banerjee, Lozada-Smith, Lambouths, and Rowley (2017) and Bun Lam, Stanik, and McHale (2017) determined that sense of familial responsibility and influence being predetermined by gender does not carry as much weight as the influence of parents and teachers in the education of African American students. For African Americans, the race of teachers and

community may be a dominant factor in the influence to seek higher education, in addition to being second-generation or later Americans (George Mwangi, Daoud, N., English, & Griffin, 2017).

Takahashi, Nin, Akano, Hasuike, Iijima, and Suzuki (2017) determined that, while social and familial influence plays a part, gender plays a significant role in what medical students specifically, expect for their lives, and the trajectory of their careers. For example, females must consider the implications of childbearing upon their career development, while the males showed less concern, in the expectation that their wives would stay home to tend to children. In addition to societal, race, and gender expectations, the females in the study were also concerned that leaving their work to give birth would seriously derail their careers. They are justified in their concern. Addressing this concern directly, Flores (2018) conducted interviews with Latina women in medicine to determine what cultural nuances may be at play and to show the effects of not only society but familial and parental messages on gendered career choices. She found that although Latina physicians are entering a non-traditional career according to their familial expectations, they are in many ways still culturally rooted to gendered scripts in their families of origin, despite gaining structural access to higher education and the professional workplace.

Cultural and familial gendered expectations also feed the fear and hesitation that women may feel when entering what they consider a traditionally male industry. Research regarding the perceptions of threat, racism, gendered roles and expectations, play an equal part in the possible deterrence of URM women entering medicine (Alwazzan & Rees, 2016; McMahon & Kahn, 2018). The experiences of African American and Latina medical students' decision to pursue medicine can be influenced by both familial and social drivers, but the above research shows that there is no general rule for how much each element influences a student's decision.

### *Women in Medical Schools*

The intention to calibrate the learning environment and to create an equal plane for all races and sex of medical students opens the issue of gender-based career trajectory as an influencer. Understanding the lived experiences of women in academic medicine is essential to understanding whether a perceived discriminatory environment affects career choice and trajectory. Han, Kim, Kim, Cho, and Chae (2018) weighed the vulnerability of gender discrimination against the success of female physicians. Participants in this qualitative study using a grounded theory approach reported a vicious cycle of a lack of social networking and mentorship while the females struggled to balance work and home life. More importantly, however, they reported fear of asking for help. The authors concluded that cultural changes at the individual, organizational, and national levels must be instituted to further promote women physicians' career development in academic medicine. Alwazzan and Rees (2016) conducted individual interviews with 25 female medical educators from 5 medical schools. The analysis showed that their career progression was influenced by gender inequalities (related to being passed over for leadership positions), gender stereotypes (related to sharing leadership responsibilities), and gendered specialties (as related to male-dominated specialties). Their findings suggest that there must be a conscious investment in female academic physician careers through faculty development initiatives and equality and diversity policies to close the gender gap.

Can policies and initiatives alone close the gap? Doubleday and Lee (2016) determined that even once settled into academic medicine, other elements remain, such as societal gender expectations and biases. In their study, health professions students' perceptions of instructor age and gender directly impacted faculty evaluations. Failure of an instructor to meet gender or age-

based expectations translated to lower scores or negative comments on evaluations. This study shows a direct correlation to societal gender-related biases and female academic physician career progress. Fortunately, the numbers of women in medical schools with faculty appointments continue to grow, regardless, due to the aforementioned initiatives and pipelines (Camacho, Zangaro, & White, 2017; Geller, Bonaquisti, Barber, & Yaekel, 2017). The vast majority of that female enrollee population, however, has been white women.

### **Underrepresented Minorities and Medical School Faculty**

A great deal of attention has been paid recently to addressing representation disparities in academic medicine moving forward. Initiatives are being undertaken at universities and colleges across the United States (Byington & Lee, 2015; Geller, Bonaquisti, Barber, & Yaekel, 2017). The focus of several of the studies has been on first addressing how the schools could be feeding the problem, or conversely, offering better support. Byington and Lee (2015) found that the right institutional support can assist in the success of URM students in academic medical settings. The first step toward offering support, however, is admitting a problem exists. Tangible evidence of inequality exists in certain areas, that often remain taboo, such as discussion of appointment, promotion, tenure, and pay. Fisher, Rodriguez, and Campbell (2017) conducted a review of tenure for Black, Latino, Native American, or female faculty in academic medicine from two decades of articles published. They found that tenure was associated with leadership and higher salaries, but that URMs comprised the lowest percentage of tenured faculty, while white men continue to hold the highest, most powerful positions.

Overcoming the obstacles of racism, isolation, clinical promotion, and mentorship disparities is what Rodriguez, Campbell, and Pololi (2015) called the minority tax. Resilience and tenacity in the face of those barriers are key to success for URM faculty members. The same

can be said for URM students. Wijesekera, Kim, Moore, Sorenson, and Ross (2019) explored racial and gender disparities in medical school honor society inductions. They were seeking to determine the origins of the racial and gender disparities of the physician workforce, with limited data regarding the potential causes. Their retrospective cohort study examined residency applications and match outcomes as compared to inductions into honor societies. They found that black students were 66% less likely to be inducted into honor societies than their white counterparts.

Campbell, Rodriguez, Beitsch, and Saunders (2014) determined minority students indeed face racism, lack of advisement and support, low institutional expectations, and financial difficulties during medical school. One of those expectations is that URM physicians will be interested in treating patients of underserved populations. Garcia, Kuo, Arangua, and Perez-Stable (2018) discussed the expectations of society for URM physicians. They argue that even when URM students are through medical school, they are expected to work with their respective minority populations, but that is not a fair expectation. In their study, however, although URM students did report they were nearly twice as likely to work with underrepresented minorities (which pays far less than choosing a specialty) no matter the financial burden they had incurred during medical school, the researchers argued that those students should not be pushed in that direction. Michalec, Martimianakis, Tilburt, and Hafferty (2017) argued that it is unjust to expect location-specific, language-specific, or population-specific service from students with underrepresented minority or low-income backgrounds. A student from a URM should not be expected to always practice within that population. Both studies determined that there are several factors associated with medical school graduates' intention to work with or to not work with underserved

populations. Unfortunately, the number of URM students in medical school must increase before those expectations will or will not become a reality.

### **URM Women as Medical School Faculty**

The number of underrepresented minority students in medical schools overall has increased, but the Latina and African American women are not represented among the ranks of medical school students, or physicians, in an equal proportion to that of the population of the United States (Geller, Bonaquisti, Barber, & Yaekel, May, 2017). Very recently, there has been debate regarding the realistic need for representation for Hispanic and African American women in healthcare. Several studies and arguments have emerged in the past decades, attempting to prove the necessity of sex and gender, as well as ethnic representation, in healthcare settings (Cervia & Biancheri, 2017; Mitchell, 2011).

Research has shown a significant disparity in the representation of underrepresented minorities (URM) in medicine, and especially in academic medicine. URM females lag far behind in overall representation. Andriole and Jeffe (2016) conducted a national cohort study of full-time faculty appointments in MD/Ph.D. programs and reported greater diversity over just twenty years. They report that in 1995 more than 75% of participants in MD/Ph.D. programs were white, and by 2015 that number had dropped to 61%. However, URM graduates were far less likely than white graduates to have obtained full-time faculty appointments in academic medicine (p. 6). In their study, gender was not independently associated with the likelihood of full-time faculty appointment for MD/Ph.D. program graduates, where URM status was more significantly indicated. Therefore, while the demographic of faculty in MD/Ph.D. programs has grown more diverse, there has not been a corresponding increase of diversity among the faculty members.

### **An Evolving Research Methodology**

Research methods throughout this body of literature have included various methods to collect data. Quantitative methods have included the gathering of historical and existing data from medical schools and federal, state, and local records--each presenting statistics that speak to the numerical facts. By first studying the historical and present statistics, researchers have definitively identified that there is no simple answer to the problem. Nakae (2014) found that URM students have a disproportionate lack of access to undergraduate level components (i.e., the right courses and advising) adequate for entering medicine. When they are finding the path to medicine, they are met with commonly gendered specialties, further narrowing their options (Association of American Medical Colleges, 2018). Continuing to review the disparity in numbers has proven an ineffective means of addressing the problem. Higgins, Hwang, Richard, Chapman, Laporte, Both, and Deville (2016) investigated the underrepresentation of women and minorities in the United States interventional radiology (IR) academic physician workforce and found that for over 20 years there was no significant increase in female or black representation as IR fellows or faculty. Xierali and Nivet (2018) researched the racial and ethnic composition and distribution of Primary Care physicians and found that there are not only significant differences among primary care specialties in terms of geographic distribution, but there also remains a significant difference among primary care specialties in terms of diversity.

Diversity and representation numbers appear to be improving across the board, however, the numbers do not tell the whole story. Research now turns to societal, cultural, and familial influences, for answers. Qualitative studies of experiences are gaining ground and credibility, and giving a human face to the research, collected through interviews and self-reporting on surveys and questionnaires.

Understanding the educational outcomes of those life influences is where the theory utilizes all methodologies. Mitchell (2011) noted that URM students were academically capable of persistence in the face of rigorous sciences work, but tended to switch away from science, technology, engineering, and math (STEM) programs. An aspect that she found the need to address is the retention of URM students in STEM programs, which are the most common majors that feed into medical school programs. Her conclusions were backed by research by Toven-Lindsey, Levis-Fitzgerald, Barber, and Hasson, (2015) and Hurtado, Eagan, and Chang (2010), that found in 2009 URM students were just as likely to enter undergraduate STEM majors. After 5 years, however, the average completion rate for white and Asian-American students was 37.5%, while African-American or Hispanic students' average completion was 22.1% and 18.4% respectively.

Many of these studies include similar questions, methodology, and findings, though they may not share the same purpose and intent. Some research has focused very intensely on sex- and gender-role aspects, while other studies focused on the ethnic or race aspects. In many cases, the researchers used quantitative measures to simply prove the existence of a problem. Often the intent is to prove that representation is vital for more than just the involved ethnicity or race, because of bigger societal or economic implications. Qualitative studies were then used to gather experiences of women in healthcare or medical schools, to determine the culture inside that school, in an attempt to improve culture and address disparities related to gender roles and differences.

### **Current Forward Movement**

As a result of the existing literature and research, there have been many initiatives put into place across the United States, and even abroad, in an attempt to better integrate women into



medicine, especially women from underrepresented minorities. Statistics show the lack of representation, and qualitative data has shown the experiences of women once in medical school. Aside from familial expectations, the research has failed to capture the specific reactions and experiences along the path URM women have taken prior to entering medical school

### **Attracting and Retaining Underrepresented Minorities**

Current initiatives are intent on understanding and increasing persistence in undergraduate science majors, and studying the outcomes. By creating programs that offer to support URM undergraduates and graduates, schools are finding ways to increase their retention numbers through academic and sometimes emotional support. Toven-Lindsey, Levis-Fitzgerald, Barber, and Hasson (2015) investigated one model for institutional support of underrepresented students. Programs like the Program for Excellence in Education Research in the Sciences (PEERS) at the University of California at Los Angeles serve as one model for universities interested in and committed to improving the persistence of underrepresented science majors and closing the achievement gap for undergraduate students. The PEERS program showed positive results and can serve as a guide for how to begin diversifying admission, enrollment and retention in all levels of higher education. Program administrators worked closely with first-year URM students via seminars, academic counseling, research seminars, collaborative-learning workshops, and they incorporated active encouragement, academic preparation, and peer group motivation to encourage persistence and raise the retention numbers of URM students in STEM programs. Likewise, at the professional level, Gotian, Raymore, Rhooms, Liberman, and Andersen (2017) found gateway programs had positive effects in preparing URM students for MD-PhD programs.

### *Addressing the Need for Diversity*

The contributions of the current research specifically observing experiences of URM female students are multifold. The subsequent resulting literature has become a keystone supporting further investigation of the various influences on their experiences. That literature has had an impact on social studies, as well as on the population in question. Statistics show that underrepresented minorities are seeking medical care by individuals with whom they identify (Ramirez & Franklin, 2019; Shantharam, Tran, McGee, & Thavaseelan, 2019). Halperin (2015), analyzed the topics chosen by medical school students and broke down the results by gender. After writing biographical papers on important figures in the medical field, it was determined that female students most commonly identified female subjects as most inspiring, just as patients tend to seek medical care from physicians with whom they identify. He concluded that gender is an important predictive factor in selecting role models, and race/ethnicity also played a part.

Geller, Bonaquisti, Barber, and Yaekel (2017) sought to increase racially and ethnically underrepresented women in medical school through innovative programs. Their solution was a scholarship program developed and implemented by the Institute for Women's Health and Leadership at Drexel University College of Medicine. This innovative model served a dual function--both to honor a woman of exceptional leadership and humanitarian accomplishments, and to support the recruitment and retention of talented URM women in medical school.

The increase of women earning college degrees in the United States is beginning to overtake the number of men earning degrees, in what Quaye and Harper (2014) refer to as a 'female advantage'. Quaye and Harper (2014) also argued that women of color, however, continue to be held back in education and society because of racial and gender discrimination against them. They suggest that schools must find ways to thoughtfully engage women of color

during their undergraduate program in order to retain enrollment. Furthermore, they argue that the future of research and initiatives for URM women cannot simply rely upon statistics and generalized ideals of the cultures from which specific women of color are coming, because the individual experiences are being discounted and overlooked.

### **Conceptual Framework**

Clarity in identifying the conceptual framework of this research is vital to the motivation, execution, and interpretation of the study. The definition of conceptual framework is stated by Ravitch and Riggan (2017) as “an argument about why the topic one wishes to study matters, and why the means proposed to study it are appropriate and rigorous” (p. 5). Several aspects are at play to fully formulate the conceptual framework. Ravitch and Riggan (2017) suggest a focus on three key areas: personal interest, topical research, and theoretical framework. Those three areas of the study are drawn upon to build the conceptual framework but at differing levels. After weighing all of those elements, there is clear justification for more research on the reason for the low attendance numbers of underrepresented minority (URM) females in this southeastern United States medical school. For the purpose of this study, African American and Latina women are the focus of the term URM.

The elements of personal interests and goals include identity and positionality, social location, institutional position, and life experience. Those elements have driven the undertaking of this research topic. The topical research on the underrepresentation of minority women in medicine is abundant, but there is a gap when looking at specific regional effects. The research that has been previously conducted gives the reader and researcher an understanding of several influences on URM female academic decisions and life choices. Finally, the theoretical framework is the lens through which the problem is viewed.

The disparity in the number of URM female students is vast. The topical research surrounding URM females in medicine is becoming more abundant but has not been focused within the southeastern region of the United States. Whether reviewing government data reports, health information statistics, or scholarly articles and studies, the discussions on this topic piqued the researcher's interest. A clear picture is painted when referring to the hard data collected by the Association of American Medical Colleges (2018). In their most recent report, the ratio of women to men in medical school shows vast improvement over the last several decades- but the majority of that demographic is white women. Research questions begin to take shape immediately. The questions that were borne of these realizations have become the research questions that drive this study: (1) How do URM females describe their decision to pursue medical education? (2) How did cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?

In addition to the data and statistics gathered, the topical research has covered several aspects of those research questions in generalizations. The topical interest of this study is the enrollment of URM females at a medical school that happens to be located only 30 miles from an historically black college (HBC). That may create expectations of a much higher enrollment of African American women at the closest medical school but this is not the case. The question of where those students are going is less important than creating an understanding of why. Camacho, Zangaro, and White (2017) detailed the multitude of government initiatives aimed at increasing the demographic of the healthcare workforce and the output of scholarships for URM students. They found that the greatest barrier to ongoing retention and success was student preparedness. Research has subsequently been conducted to determine the reason for the lack of

adequate recruitment and retention. Factors such as economic status, gender, race, and ethnicity can be counted as reasons, but individual student experiences have garnered far less attention.

### **Theoretical Framework**

The theoretical framework for this study is based upon Critical Race Feminism (CRF) theory. The CRF is a combination of Critical Race Theory (CRT) and Feminist Theory. Yosso, Smith, Ceja, and Solorzano (2009) explained that CRT seeks to account for the role that race and persistence of racism play in American society. The two components (race and gender) are equal and interlinked for the participants. Berry (2010) explained that “Critical Race Feminism is explicit about the significance of multi-dimensionality and intersectionality of identity” (p. 152). This dual focus allow the researcher to analyze how the URM females believe society views them by applying the critical race lens (Matsudo, Lawrence, Delgado, & Crenshaw, 1993), and a feminist lens (Aker, 1990) which explores the way the URM females perceive their own experiences as part of gendered roles. The combination of the two theories has produced a single theory that Childers-McKee and Hytten (2015) explain “draws upon both CRT and feminism in exploring social phenomena from the perspective of people doubly marginalized by race and gender” (p.395) in their personal lives, society, and cultures.

It is through that combined lens of gender, race, and ethnicity that African American and Latina women’s experiences are viewed in this study. Citing empirical research, Yosso, Smith, et al. (2009) assert that “racism intersects with forms of subordination based on gender, class, sexuality, language, culture, immigrant status, phenotype, accent, and surname” (p. 4).

In a review of the literature, Clayeux (2014) noted that current feminist theories are directly linked to gender role expectations, but that “prevailing notions of gender ... failed to provide many alternatives for the understanding of power relations and inequalities” (p. 38).

Thomas and Ehrkamp (2013) explained that applying a feminist lens “Insinuates a confrontation of patriarchal power and asks how differently ordered institutions, material and natural resource allocation, symbolic meanings, and cultural practices might lead to less disparity and suffering” (p. 57). Though Aker (1990) posited that feminist theory should be applied to organizational analysis to identify how organizations and gender work together (p. 140). Gilborn (2015) explained the importance of understanding the critical race framework in educational settings because “Despite the assumptions that are schooled into us, social identities and inequalities are socially constructed and enforced” (p. 283). An intersection of race and gender is created, and the influence of experiences directly related to each of those elements of the URM female creates a part of her self-perception and guides her academic choices.

### **Conclusion**

The literature and conceptual framework presented in this chapter form a complete justification for the subsequent research. The literature looked first at women in medicine, studies on societal expectations of the sexes in science and medicine, and the effects of gender and race in medicine. Then the literature examined women’s roles in medical schools. Finally, the topic of underrepresented minorities and medical school faculty, underrepresented minority women in medicine, and the evolving research methodologies in practice was examined. The current forward movement in this area of research will open the door for attracting and retaining URM in medicine.

A focused look at the statistics regarding women in science and medicine exposes the realities of underrepresentation for minority females (Cervia & Biancheri, 2017; Association of American Medical Colleges, 2018; Geller, Bonaquisti, Barber, & Yaekel, 2017; Pololi et al., 2013). Research surrounding this phenomenon has uncovered a strong relationship between

gender expectations and subsequent social treatment during medical school, as well as some cultural expectations (Cervia & Biancheri, 2017; Saha, 2014). Female physicians are still minding a gender gap in salary and are evaluated more stringently as faculty members in academia (Ramirez & Franklin, 2019; Rodriguez, Campbell, & Pololi, 2015; Wijesekera, Kim, Moore, Sorenson, & Ross, April 2019).

Unfortunately, the weakness in this area of research is that it does not focus on the whole picture to a degree that will create adequate initiatives at present. When their experiences and influences, both socially and personally, are studied, specific to this geographical region and this medical school setting, the region and school can get a better picture of how to begin the process of diversifying the student population. What is missing is not the research on statistics, but on the actual experiences of underrepresented minority women entering the field of medicine, or even academic medicine. Additionally, with a country as vast as the United States, it may be wise to consider the regional effects of the students' origins. The experience of a student from the southern United States may differ entirely from that of a student from New England. Only through a feminist and critical race lens will the experiences of the participants be adequately captured.

The next steps for researcher were to investigate more carefully what were the perceived roadblocks for the URM women entering medicine in particular regions of the United States. The first step will be a better understanding of cultural expectations surrounding the field of medicine or academia. If there is a lack of URM female physicians, there is a lack of URM female academic physicians. A lack of URM female academic physicians perpetuates the stalling of URM female representation. The collective research has therefore uncovered its weakness: a vicious cycle.

Women in healthcare has been researched so thoroughly that improvements have been made (Association of American Medical Colleges, 2018). There is currently a closer balance between male and female medical school enrollees (Association of American Medical Colleges, 2018). The next steps are uncovering means to diversify programs, attract and retain URM populations, especially females. The findings from this research will lead to a better understanding of the experiences of students in programs that have or have not installed diversity initiatives or action plans. It is imperative to dissect those experiences at less than the very wide-angle view because numbers and statistics can only tell half of the story.



### CHAPTER THREE: METHODOLOGY

Underrepresented minority (URM) females have consistently experienced systematic social and psychological barriers throughout history that have yet to be adequately overcome (Flores, 2018; Geller, Bonaquisti, Barber, & Yaekel, 2017; Merchant & Omary, 2010; Quaye & Harper, 2014), regardless of the growth and changing population demographics of the United States (U.S. Census Bureau, 2018). There is an emerging social and economic need for better representation of minorities, especially African American and Latina females, in medicine in the United States (Byington & Lee, 2015; Halperin, 2015; Quaye & Harper, 2014; Saha, 2014). Research has shown that familial, social, and cultural responsibility and influences do carry weight in the life decisions and academic choices of second-generation or later URM students, though there is no set standard for how much influence each has (George Mwangi, Daoud, N., English, & Griffin, 2017). Extensive research has had some success in guiding inclusion initiatives over the past decades (Cervia & Biancheri, 2017; Quaye & Harper, 2014), but initiatives do not speak to the experiences and influences that lead a URM female to this medical school.

In Chapter 3, research methods and design are presented, as well as the role of the researcher. Procedures and instruments are explained, which will help identify the selection of participants, and collection and analysis of data. While historical and systematic implications lend some explanation for the lack of representation of URM females in medical schools, including established cultural gender and social race roles and expectations in American society (Camacho, Zangaro, & White, 2017; Campbell, Rodriguez, Beitsch, & Saunders, 2014; Halperin, 2015; Quaye & Harper, 2014), first-person experiences fill remaining gaps by offering a subjective perspective. Understanding the ways those social and psychological experiences have

influenced the path and perceptions of current URM female medical students will assist in creating better medical education programs and improving initiative outcomes in the long-run.

### **Purpose and Research Questions**

The purpose of the phenomenological process always begins with the subject's awareness of the world (Shank, 2006). The purpose of this Interpretative Phenomenological Analysis (IPA) was to explore the influences of lived experiences of the African American female and Latina students at one southeastern osteopathic medical school and their perceptions of themselves within those experiences. Specifically, the phenomenon examined was ultimately what led URM females to the decision to attend medical school. The IPA study design differs from other phenomenological studies because IPA is intentionally interpretative. The researcher is tasked with interpreting the interpretations of the participants. Phenomenological research questions do not ask about opinions, perceptions, perspectives, instead, they focus on lived experiences (Peoples, 2020). Smith, Flowers, and Larkin (2012) determined that "Human beings can be conceived of as being 'thrown into' a world of objects, relationships, and languages... being in the world is always perspectival" (p. 18). The use of IPA with a Hermeneutic ideology thus explored participant perceptions both from an interpretive and an objective lens through the use of interviews meant to answer the following questions:

1. How do URM females describe their decision to pursue medical education?
2. How do cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?

### **Design**

This study offered insight into the critical awareness of what has positively or negatively influenced the female URM students' decisions and offers guidance for future policies that will

speak to the URM female experience. Because of the increasing access to media and world events, it becomes difficult not to have exposure and some understanding of the historical oppressions of both African American and Latina students. Depicting the essence or basic structure of the lived experience is the task of the phenomenologist (Merriam, 2009). All phenomenology has its roots in the philosophy of Edmund Husserl, whose principal theme is awareness through intentional consciousness. The fundamental property of consciousness is intentionality. In contrast to Husserlian philosophy, which employs methods of setting bias aside, Martin Heidegger believed there was room for a phenomenological approach that accepts an impossibility of completely bracketing bias, and instead invites a new understanding through the researcher's inevitable lens. Heidegger created the Hermeneutic phenomenological approach where understanding only becomes apparent during a circular, or spiral, analysis of the data (Peoples, 2020). Alternately, IPA uses sense-making of the shared experience with detailed story-telling, thoughts, and feelings. Employing IPA, which is built upon the foundation of Hermeneutic phenomenology, will help uncover information that addresses the problem of the lack of URM females in medical school. The researcher sought to make sense of the participant, who is trying to make sense of the phenomena they experienced. In this study, the sense-making is of participants' choice to enroll in medical school. For these reasons, employing IPA using a Hermeneutic ideological approach was the most logical way to conduct this study.

### **Site Information & Population**

The Southern Medical College (pseudonym) is based in a geographically remote setting, in a demographically diverse town. The parent school has historically been accepting of students with varying academic proficiencies. As a typical medical school, the student body is small, consisting of four years of students enrolling roughly 160-170 students a year, and graduating

approximately 140-150 students each year (American Association of Colleges of Osteopathic Medicine, 2019b). Because of its age, SMC has currently only enrolled a total population of approximately 1,300 students from its first year to the present. Of that number, the total population of female African American or Latina students is only around 2 percent, which is roughly only 22 total students (American Association of Colleges of Osteopathic Medicine, 2019a). Still, in its first ten years, the medical school is finding its place among local, regional, and medical communities. However, female minority students remain underrepresented. The population and sample for this study were African American and Latina female students, that are currently or are have previously attended this medical school.

### **Sampling Method**

To determine the sample participants for this study, the researcher used a purposive non-probability sample. Purposive non-probability sampling means participants were purposefully chosen according to preselected criteria relevant to the research site and questions (Creswell, 2015). The sample for this study was small in proportion to the total population size. The researcher enrolled eight, of an approximate total population of 22 students, chosen according to the response of invitation and meeting necessary criteria. While more than eight students responded, the eight that ultimately participated were the only ones that met all criteria. This sample size was chosen due to the extensive amount of detailed data required for full and thorough IPA analysis. IPA methodology focuses more on the quality of the data and analysis than on quantity (Flowers, Smith, & Larkin, 2009). The criteria for the sample were that they were at least second-generation American citizens (or later) and that they identify as female African American or Latina.

After written approval was obtained from the dean of the medical school, and exemptions had been given from the site Institutional Review Board (IRB) as well as the UNE IRB, an email invitation was sent to all students in the school, and on the publicly accessible list of alumni. Per the site agreement with the medical school, the recruitment email came from the Dean of Research, and the Executive Director of Alumni Relations and included a description of the purpose and process of the study (see Appendix A--Participant Email). The email also delineated the criteria for participating, a brief explanation of informed consent, and details on data collection and analysis (including potential scheduling). Interested parties replied to a secure email account specifically created for communications between participants and the researcher of this study. A schedule of first-round interviews was decided upon, via email, between the researcher and the participants.

### **Instrumentation & Data Collection Procedures**

The main instrumentation used to collect data for this study was semi-structured interviews consisting of no more than 10 pre-planned questions per interview (see Appendix B-Interview Questions). The use of semi-structured interviews allowed the researcher to address the focus of the research questions while allowing the participant the freedom to include additional potentially relevant explanations (Merriam, 2009). The intent of the interviews was to collect rich, detailed information from the participants to construct a sophisticated understanding of the complex phenomenon of the factors that influence URM students' decision to attend medical school. Additionally, the researcher used notes and journaling as a method to uncover and report potential bias. Keeping notes and a journal during the research process was necessary because while the researcher is capturing data regarding a lived experience of the participant, it inevitably invokes interpretations on the researcher's part (Smith et al., 2009). Journaling

allowed the researcher to report their current understanding of the phenomenon, and observe as personal understandings evolved or changed. The final instrument was the assistance of a peer reviewer currently working in the areas of diversity or behavioral health, in higher education.

Before the actual study, pilot tests of interview questions were conducted with two survey respondents, who were not included the study, to test the efficacy and thoroughness of interview questions to obtain adequate data and uncover potential themes (Creswell, 2015). Upon final determination of interview questions, initial interviews were planned as the remaining sample participants were identified. Due to current restrictions on in-person meetings, all interviews took place via Zoom and lasted approximately 60 minutes. Follow-up questions and member checking were conducted via email.

Recordings of the interviews were captured locally, by the researcher (who is also the interviewer) on two forms of audio/visual recording devices: a password-protected iPod (for sound), and a password-protected computer. Complete audio/visual files were then transferred to a password-protected thumb drive. Notes were taken during interviews, by-hand, and also on the computer that was recording the session. Upon completion of each interview, transcripts of the interview were created by hand using computer audio playback and local dictation. Initial coding was conducted after each interview to begin filtering potential themes, and to develop additional questions during subsequent interviews. Transcripts of each interview were sent to participants as part of the process of member checking for participant approval, and to ensure an accurate representation of their experience. All participants responded with positive feedback about the transcripts.

Smith, Flowers, and Larkin (2009) suggest following a set of basic steps that are intended to examine the sum of the parts in addition to the individual parts of documented experiences.

The first step of the process was to conduct interviews and transcribe the audio files. During transcription, unnecessary or meaningless words were eliminated; some long pauses were left in the transcript, and some non-words remain, where relevant to convey uncertainty or emotion.

### **Data Analysis**

After reviewing, reading, and rereading the transcript of each interview, specific aspects or traits of the experience relevant to the phenomenon were noted. Coding was conducted on each transcript in three cycles (Saldana, 2016). The first cycle included initial (open) and In Vivo coding, and transcripts then were broken into the three domains of education, family, and community. Due to the speed and scheduling of interviews, most transcripts underwent first cycle coding before the next interview took place. When all interviews were completed, second cycle coding began and included Emotion, Process, and Value coding. The final cycle of coding included Concept and Descriptive codes and assisted in the development of categories, themes, concepts, and theoretical organization (Saldana, 2016).

### ***IPA Data Analysis***

After transcribing the interview, the steps of IPA as outlined by Smith, Flowers, and Larkin (2012) were followed. The steps are meant to be a starting point or a set of guidelines for analysis, but can be completed out of order, or repetitively. The steps are meant to elicit engagement and analyze data, from both the researcher and the participant.

**Reading and Rereading.** During this phase, the researcher actively engaged with the content by listening to the recording of the interview while transcribing and then listened again to ensure that all details were captured correctly.

**Initial Noting.** This phase included examining semantic content and language, and taking notes about all aspects of the data. Anything that jumped out at the researcher as descriptive,

linguistic, or conceptual was noted. This also was a good time to note repetitive language, to ensure understanding of participant meaning.

**Developing Emergent Themes.** The intention of this phase was to reduce the number of details by combining notes into more focused themes.

**Searching for Connections Across Emergent Themes.** This phase involved looking for patterns and themes among the notes and code them. The use of abstraction (identifying patterns between emergent themes), subsumption, contextualization, and numeration in this phase allowed early themes to be identified, and in some cases linked. This was where themes that ultimately subsisted throughout the study emerged. Polarization and possible functions of message and theme were also noted.

**Moving to the Next Case.** Repeat all steps above.

**Looking for Patterns Across Cases.** (Smith, Flowers, & Larkin, 2012).

All steps above were followed, and then the next interview was analyzed in the same way. These themes were then reported through situated and general narratives. The narratives gave the researcher the opportunity to connect and interpret the cumulated stories as they related to the interview questions. After multiple interviews were collected and highlighted, additional themes were uncovered. Ultimately, the generated narrative from the combined experiences is used to explain the general experience of the phenomenon.

### **Limitations of the Research Design**

Limitations proved to be complex and had to be considered carefully throughout the study. To determine in advance what the study could and could not capture, the researcher focused on the intention of the study and the research questions. This study has captured the influence of internal and external experiences of URM females that have entered medical school



at one southeastern United States medical school. While some limitations are discussed below, one delimitation is that this study is focused on URM female students who have enrolled in medical school in the southeastern United States, when the ultimate goal of the study is to contribute to the body of knowledge regarding the lack of enrollment of URM females. The paradox lies in studying the students that did enroll at this school, to better understand the students that did not, which limits transferability. Likely, not all factors contributing to the lack of enrollment will not be addressed in this study.

A limitation of this study also is the use of the convenience sample population that is readily available to the researcher, as opposed to the larger nationwide population. As the study speaks to the specific state and region of the school, the representation numbers inevitably will vary across the country. There is a level of relatability in the gender role aspect of the study, as the researcher is female, which risks causing researcher bias. However, that is the only aspect that is relatable, as the researcher is neither of African American or Latina descent, and neither aspired to nor attended medical school. Heidegger's ideology surrounding Hermeneutic phenomenology relates to the overlapping and shared nature of our world and experiences, which he calls intersubjectivity (Moustakas, 1994). That inevitable overlap of gender offers only more motivation and interest by the researcher in the research topic.

### **Credibility and Transferability**

Moustakas (1994) notes that "Interpretation unmask[s] what is hidden behind the objective phenomena" (p. 10). For that reason, the use of Hermeneutic phenomenological design was chosen to understand the experiences of the students that did enroll still speaks to a larger reality and contributes to the overall body of understanding. This research focused on a particular phenomenon at a single university, though the outcomes may, in some ways, speak to greater

social systems. Credibility is the accuracy and the trustworthiness of the findings (Creswell, 2015), and transferability is the measure of how the findings of this study can be applied to other populations or studies. This study will have transferability primarily to the future population of URM medical students, but the expectation is that there will be some transferability beyond one institution, as the examination of individuals' sense-making of their own experiences may be relevant to others in similar settings.

### **Member Checking**

Member checking was an ongoing part of the participants' role in the study. At the outset of the study, participants were asked to supply an email address to which they were comfortable receiving transcripts of their interviews. If they had chosen not to give an email address to the researcher, they would have been offered printed copies; all participants supplied an email address. The researcher asked each participant to review the interview transcript for accuracy. They were also given the option of an additional member-checking interview if they wished to make corrections. None of the participants requested corrections. Because qualitative research makes the researcher both data collector and analyzer, member checking offers an additional layer of protection from researcher bias (Birt, Scott, Cavers, Campbell, & Walter, 2016). Member-checking was completed at the end of the coding-phase, to ensure that the participant and researcher had the same interpretation of the researcher-generated codes.

### **Validity**

Validity is about the truth of the experience as described by the research subjects. Merriam (2009) said that "Just as there will be multiple accounts of eyewitnesses to a crime, so too, there will be multiple constructions of how people have experienced a particular phenomenon" (p. 214). A limitation of this study is the risk of interpretation through the eyes of

the researcher. To ensure validity in this study, the researcher had a peer reviewer that has conducted research and is currently working in the areas of behavioral health in higher education. Additional measures to ensure validity were in interview question review, transcript reviews, and collection of rich descriptions. The purpose of the transcript review was to ensure that the story in print correctly portrays the experience as told by the participant. The researcher then coded and themed transcripts, to then be compared with other participants. Member-checking also ensures the validity of the interpretations (Saldana, 2016).

### **Confirmability**

The Hermeneutic approach to phenomenology is explicit that the process of completely eliminating researcher bias is arduous, but possible. Confirmability is the degree to which the data can be confirmed by others (Trochim, 2020). To ensure confirmability, the researcher practiced journaling and checking throughout the study, as well as seeking out possible contradictions within the collected data.

### **Ethical Issues in the Study**

In addition to creating a trusting environment and rapport, the researcher holds great responsibility to ensure no harm to the research participants. “Informed consent is the keystone of ethical conduct in qualitative research” (Shank, 2006, p.118). All participants were given detailed descriptions of the study along with an informed consent form. The informed consent included (a) the intention of the study; (b) the methodology; (c) potential topics of interview questions; (d) measures to protect identities; (e) the storage and eventual destruction of the data; (f) the amount of time expected for completion of the study; (g) the frequency or expected number of interviews; and (h) the minimum amount of time it would take to complete interviews.

Participants knew and verbally accepted being recorded, and those data were stored in a lock secured location for the duration of the study, and for the time allowed or recommended by the IRB. While adverse effects are unlikely, participants were informed of their option to opt-out of the interview, or opt-out of answering any questions for that, or any other reason, at any time during the research study. Participants received electronic copies of their informed consent forms that detailed the above information.

### ***Researcher Role***

The role of the researcher in this study was as an observer, interviewer, and interview instrument. As a current staff member at the school where the study participants are or were formerly students, the researcher works with the faculty and staff only. The sample population for this study has no direct supervisory connection to the researcher. The researcher holds neither academic nor employment authority over any of the participants, and the participants hold no authority over the researcher.

### **Conflict of Interest**

There is no conflict of interest between the researcher and the research, nor the researcher and the participants. While the research participants are students at the school where the researcher is employed, the two roles do not cross in any authoritative manner. The researcher works only in a faculty and staff administrative support role.

### **Conclusion and Summary**

This study may offer insight to better understanding the reasons behind URM female students' enrollment in medical school. Raising awareness of this critical issue could potentially guide future decisions of URM female students. The purpose and scope of this Interpretative Phenomenological Analysis were to examine the influences of lived experiences of the URM

female students at one southeastern osteopathic medical school. This chapter discussed the method of research, the design, the participants, and their specific setting. Concerns around validity and limitation of the study were addressed, and resolutions to those challenges were offered.

The IPA methodology calls for the researcher to approach the data as a whole; to use the details of experience to uncover the phenomenon at its roots, and help the participants make sense of their world. The only means of capturing the truest essence of the influential experiences of the URM females prior to their entrance is to examine both how they see themselves, and how they believe they are seen; what they expect from themselves, and what they believe the world expects from them. Until our society and culture are able to understand how URM females make sense of the experiences, the ongoing stall of URM females in medicine will continue.

## CHAPTER 4: DATA COLLECTION RESULTS

It is widely accepted that there is a lack of racial and ethnic diversity among United States medical school student and faculty populations (Association of American Medical Colleges, 2020b). This interpretative phenomenological analysis was conducted specifically to give a voice to underrepresented minority students that have chosen to attend medical school. This study aimed to interpret the stories that participants identified as relevant experiences that influenced their education decision. The intention of this study is to inform future guidelines and considerations regarding medical school admissions and programs.

### Review of Methodology

During the fall of 2020, recruitment emails were disseminated to current and former students of one southeastern medical school. In the late fall of 2020, interviews were conducted, via Zoom, with eight women that voluntarily responded to the recruitment email. They each explained how or why they identified as underrepresented minority females. While there were additional respondents to the recruitment email, these eight women were chosen based upon their compatibility with the participant criteria--most notably, they were second-generation (or later) Americans.

The two target groups recruited were females of African American or Latin American descent. There was no particular ancestral region, state, or country of origin specified or desired. It was neither required nor intentional--but certainly appreciated, that exactly four African American women, and four Latin American women, responded to, qualified for, and participated in the study (see Table 1). The primary instrumentation used to collect data for this study was semi-structured interviews. Each interview consisted of no more than 10 pre-planned questions per interview, and the tone remained conversational with varying amounts of probing questions,

depending on the respondents' reactions. The length of each interview and, in some cases, follow-up interviews varied from 30 to 60 minutes, based on the availability of each participant.

**Table 1**

**Participants' Demographics**

Participant	Age	Race or Ethnicity	Years of Medical School	Region(s) of origin in the US
URMF 1	Mid- 20s	Latina	3.5	Mid-Atlantic/Southeast
URMF 2	Late 20s	African American	3.5	Mid-Atlantic/Southeast
URMF 3	Mid 20s	African American	>1	Southeast
URMF 4	Mid 20s	Latina	3.5	Northeast/Southeast
URMF 5	Early 30s	Latina	4	Southeast
URMF 6	Mid 20s	African American	>1	Mid-Atlantic/Southeast
URMF 7	Mid 30s	Latina	4	West
URMF 8	Mid 20s	African American	3.5	Mid-Atlantic/Southeast

**Member Checking**

Interviews were recorded on Zoom, and a personal iPod, and stored locally on the researcher's home computer. Recordings were transcribed, de-identified, and each participant was given an identity code--URMF 1 through URMF 8. Transcripts were also reviewed and edited where necessary for typographical errors and relevance. Each participant received their transcript via secure, encrypted email, for review.

Journaling and relistening to the interviews helped the researcher note which aspects of the experiences each participant spoke of most frequently, for the longest period of time, or most passionately. Coding was conducted on each transcript, and themes began to emerge.

Participants were sent an email listing the codes and themes that were emerging, to allow any corrections, clarifications, or omissions that they may desire or request. While there was some discussion and request for clarity, ultimately none of the participants requested any change or retraction of their transcript, codes, or themes beyond what the researcher had already done to preserve privacy.

### **Analysis Method**

Each transcript was listened to and read multiple times to ensure accuracy and familiarity of experience, concept, and meaning. Multiple steps were included during the coding and creation of themes in following the Interpretative Phenomenological Analysis guidelines. Initial noting, as described above was assistive with journaling, and the two steps often spoke to each other through the examination of semantic content and language and taking notes. Anything that could be described as descriptive, linguistic, conceptual, or repetitive was noted.

During interviews, respondents were asked a series of questions in a similar order. This subsequently facilitated holistic coding by breaking each participant transcript into three domains: Family, Education, and Community. Codes and themes began to emerge early on, during the open coding phase and continued to be identified with each subsequent round. Once all relevant excerpts were broken into the three domains, additional coding was conducted for in vivo, emotion, process, and value codes. A final round of coding was conducted to identify straightforward descriptions, and alternately, overarching concepts. Themes and connections began to appear, and commonalities and polarities were noted. The themes were then situated into general narratives to create accounts of the participant experiences.



## **Research Questions**

The theoretical framework applied to this study is Critical Race Feminism (CRF) theory, which is an intentional and unapologetic combination of Critical Race Theory (CRT) and Feminist Theory. For the purposes of this study, race and gender were equally weighed and interlinked for the participants. The intention during interviews and analysis was to uncover commonalities and differences of how the URM females believe society views them and the way they perceive their own experiences. Uncovering a participant's personal feeling of connection to the phenomenon being described is important to be able to examine responses both objectively and specifically. The research questions that served to guide this process are:

1. How do URM females describe their decision to pursue medical education?
2. How do cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?

## **Participant Experiences**

This Interpretative Phenomenological Analysis is elucidated through the lens of Critical Race Feminism (CRF). This relatively young theory was created because of the insufficiency of each original theory to speak to the combined female and race aspects of the experiences of women of color. Applying this framework to the research allows a more focused approach to answering the research questions. Berry (2010) explained the way that data are meant to be viewed through the CRF lens: "Critical race feminism addresses the complexities of race and gender with notions of multidimensionality" (p. 2).

The aspects of power, oppression, and conflict which are borrowed from feminist theory become central in CRF. From Critical Race Theory, CRF borrows antiessentialism and intersectionality, normalization and ordinariness of race and racism, and counterstorytelling.

However, there are two specific aspects of CRF that shape the reporting of data and subsequent analysis: Antiessentialism is the refutation that each woman has a similar and relatable experience. Counterstorytelling equates to telling the story of often marginalized persons, to analyze and challenge the perspective of stories of those in power. Alternately, the very nature of phenomenological analysis is to interpret stories, commonalities, and differences. Thus, it becomes necessary to ensure each participant is given their turn to be acknowledged and heard, as an individual, with a unique experience.

The participants in this study came from varying levels of medical school completion, spanning from two that were just beginning, to two that had already graduated. They each offered their stories, and while all three domains (education, family, and community) were discussed, participants were given the freedom to focus longest or most in-depth on whichever topic they chose. Their stories varied in homelife, academic experiences, and cultural or community expectations. While the similarities and differences of their experiences will be discussed later on, the excerpts and explanations below give insight into the individuality, traits, unique ideas, and feelings expressed by participants.

### **Participant URMF 1**

One of the most inspiring stories that came from this study, is that of URMF 1. Though she did have a large extended family, she was raised as an only child in the home, by her single mother, who had grown up in poverty, had no education past elementary school, and spoke very little English. Throughout her childhood, in an area or time before translators were made readily available, URMF 1 learned English in her first few years of school, then began translating her own pediatric appointments, and eventually her mother's appointments as well. She describes this as her first exposure to medicine and being a helper. Later, as her academics progressed, she

discovered a natural interest and aptitude in the sciences and wished there were more programs available to her. She credits the guidance counselors and teachers at her public school for recognizing her ability, supporting her ambition, and placing her in advanced courses. On what felt like a turning point in her educational trajectory she said “We kind of knew from middle school... so I knew I wanted to go to college at that point, I didn’t want to just graduate high school, so I tried to do the best that I could”. She described the area she was raised as diverse, and naturally had a desire for community during her primary and secondary education. Those relationships were sometimes difficult to establish though, as she found herself one of the lone Latinas in her advanced courses.

The only negative experiences she was able to recall were the frustrations of not knowing medical terms as a child translating doctor’s appointments, and the lack of diversity and community during high school, and her subsequent undergraduate studies. Without that community, she felt unsupported as a Latina. She explains that she plans to complete medical school and try to land in a demographically diverse community similar to her own, to help those people that are underrepresented, and be a small part of closing the gap on the systemic healthcare disparities.

### **Participant URMF 2**

The second interview was with URMF 2. She was raised in a two-parent household with one younger sibling. The age gap between them allowed her to help nurture that younger sibling in more of a caregiver way, especially when their father became ill. In her family, education was not an option, but an expectation. Her mother, who was among the first African American students to integrate into previously segregated schools, taught URMF 2 to push through any

obstacles, and that she could be a wife and mother, as well as a doctor--that they're not mutually exclusive.

While the pressure to succeed is sometimes very heavy, she expressed an outweighing desire to be a part of the solution to the social issues that create inequalities in healthcare outcomes between the races and ethnicities in the United States. She explained, "You can't see change for the better, for everybody, until you have physicians that are representative of the population". She credits her parents for their financial, academic, and emotional support as a particular reason she was able to attend medical school. While she had a natural ability with the sciences, she explained the entry process into medical school as daunting and often discouraging. She has been mentored and inspired by women of color in the medical school setting, and wishes to be that inspiration someday for future students of color in medicine.

### **Participant URMF 3**

Having experience with cultures outside of the United States has had a great influence on URMF 3, which was evident by the way she described her childhood. She spoke at length about her close family, she is the youngest of six (blended family) siblings and grew up in a two-parent household. She also discussed her distant family living abroad, who she visited and even stayed with for a part of her childhood. She explained that having experienced other cultures at a young age, brought to light the disparities she sees in our society as well healthcare systems in the United States. While she did not particularly like school when she was younger, she explained that she always knew she wanted to be a doctor, and would do the hard work required to get there.

She described experiences of racism, sexism, and micro-aggressions over the years. The support from her parents, and the mentorship and guidance from her siblings, helped her stay the

course and find comfort and beauty in her own skin. On overcoming her lifetime of societal obstacles, she said

I feel so much pride because we have so many odds against us, and I feel like, just look at us, we're out here doing our thing, we're educated and we really are pushing for progress... that's how I feel about being a black woman, it's freaking phenomenal and I wouldn't be anything else.

She described her journey to, and completion of medical school, as delayed gratification. Her ultimate goal is to be a part of breaking the proverbial glass ceiling, inspiring the next generations of underrepresented minority females.

#### **Participant URMF 4**

As the elder of two children living with a single mother, URMF 4 considers herself fortunate to have seen two sides of the socio-economic systems in the United States. Her mother, to whom she has always been especially close, struggled financially for many years, and URMF 4 and her brother struggled along with her. Her parents married when her mother was still a teenager, and divorced within a few years. She credits her mother for instilling in URMF 4 that she must not allow herself to rely on anyone for her happiness or livelihood. Her father, whom she visited on weekends, had a more stable, middle-class income, and has been able to help with the cost of entrance to medical school, and instilling a personal sense of responsibility for budget and finance. Throughout her childhood and adolescent years both of her parents supported her academically, with the expectation that regardless of the degree, she would go to college.

She explained that if she is going to work this hard for a career in healthcare, she would shoot for the highest level she could. Though she is among the softest-spoken participants in this study, URMF 4 speaks with passion and fortitude about her desire to help her Latin community.

She places a great deal of pressure upon herself to take care of others, as well as responsibility for her family and community, “I want to be the dependable one that brings everyone together in a way”. Now in her final year of medical school, URMF 4 has a clear idea of what she would like to do when she graduates. Inspired in part by her many academic and volunteer experiences, including work at a low-income clinic, she plans to give back to her community, and help as much as she can to restore their faith and trust in healthcare.

### **Participant URMF 5**

Recognizing the role that siblings play in the family dynamic was an important part of URMF 5’s childhood. She is the youngest of six siblings of a blended family and is the only of her siblings to grow up in a two-parent home. Because of that fortunate stability, she feels a responsibility, and expectation, to be an exemplary child. She was treated differently by each parent: Her mother recognized URMF 5 was a talented and gifted student and could contribute to the world. For that reason, her mother was also strict and would accept only the best grades and behavior. Her father treated her much more softly, “like the biggest treasure of his life”, while he set an example of a very strong work ethic. Between the two parents, URMF 5 felt supported, challenged, and capable.

### **Participant URMF 6**

Growing up, URMF 6 was, she explained, always among people, especially children, that needed help, sympathy, even love. After her parents’ divorce, she and her brother were raised primarily by their single mom, who worked as a sort of liaison between schools and the law, trying to help at-risk kids get back on a good track. They also housed foster-kids and volunteered for community events, and URMF 6 saw the difficulties and hardships that people within her community were facing. She described the many ways that her now single mother cared for

people to whom she had no blood connection or responsibility, within their community, even as they struggled financially. The selflessness she sees in her mother, she explained, had a huge impact on her growth and self-awareness: “It taught me how to be a lot more compassionate because you never know what someone is dealing with or what they've gone through, to have them react to certain things; or how they approach certain situations”.

Her mother had been adopted as a baby, and URMF 6 did not grow up exceptionally close to her extended family until later in life, when she met her biological grandparents. She described the struggles her grandparents and parents had overcome during segregation and subsequent integration, as an example of resilience and perseverance. In school, sciences were of particular interest, and she ultimately excelled in those classes. She explained that her mother recognized her natural talents. Her mother pushed her when it came to academic achievement so that URMF 6 would have an easier life than she had. Ultimately, URMF 6 says that she hopes to help her mother someday enjoy retirement, as well as close the gap on healthcare disparities within her community.

### **Participant URMF 7**

As a Latina in an urban area with strict, devout Catholic parents, URMF 7 described herself as a family-oriented happy bookworm with a strong passion for the arts and a natural draw toward sciences. She found emotional support from her family--especially her brothers and grandmother, accountability from her faith, a drive to focus and succeed from her parents, academic self-discipline from her mother, and education support from guidance counselors. Her self-described independence, liberalism, and feminism came mostly from within, though her mother indoctrinated a sense of “No one's going to help you. You help yourself, yeah? So that's always the mentality I've had”. Remaining focused on her family and schoolwork, as opposed to

friends or activities, framed much of her adolescence. Because she could not spend much time away from her academics, she found joy, and even fun, in learning, which eventually equaled various career options. She credits her faith, education, and family for her inquisitive, even charismatic, view of the world.

Her family experienced the very typical American middle-class experience, where parents often must work opposite shifts to avoid the exorbitant costs of childcare. After her then-teenaged brother was attacked in a hate crime for being Latino, URMF 7 observed her mother navigating the healthcare system. Like many families, they had lost their health-insurance when one parent was laid-off. They faced difficulty and obstacles, but her mother successfully ensured that URMF 7 and her siblings received adequate healthcare. She ultimately hopes to travel internationally, and practice where she is needed, when travel is again permitted. For the time being, she intends to focus on family or emergency medicine, with the awareness that marginalized populations often use those resources as primary care.

### **Participant URMF 8**

Following two generations of educated women, URMF 8 may have been an only child, but still had strong examples of success due to education. She describes herself as always having been a caregiver, which was evident at a very young age when she began caring for animals and pets. She affectionately explained that she has always had a dog. She knew early in life that she had it within herself to become a doctor, and moved through her primary and secondary education with that in mind.

Having grown up in a small, albeit non-diverse area, it wasn't until her undergraduate years that she experienced overt hate and racism when supremacist groups came to her college campus. What for some may have been a terrifying experience, URMF 8 found strength in her



African American community during that time. Upon completing medical school and her residency, URMF 8 will serve for four years in underserved communities. She clarified her reasoning: “For me, it has always been about giving back and wanting to make a difference, especially for those that look like me, other minorities”.

### **Themes and Subthemes**

The two groups that have participated in this study: African American females, and Latin American females, described many of the same experiences, and many differing experiences. As interviews continued, it became clear that there was some division of themes between the two groups of participant demographics. Thus, some of the following themes and subthemes apply to only one group. Themes and subthemes may explore commonalities as well as differences and will be broken down between the three overarching domains of family, education, and community. Under the domain of family are the themes of support and maternal connection. Within the domain of community are the themes of definition and implications with a subtheme of family as community, and expectations with a subtheme of being a bridge. Finally, education is broken into the themes of guidance, exposure to healthcare as a career, and mentorship and community in education. Finally, themes unique to each group that showed particular relevance will be discussed.

### **Family**

#### **Support**

Participants described various forms of support that they felt from their families throughout their journeys to medical school. Among the greatest attributes of that support was emotional. Not one participant alluded to an immediate family member that made them feel less than fully capable. Each participant happened to be either the youngest, oldest, or only-child of

their families. They each described a connection within the family dynamic, URMF 4 noted that “All three of us are pretty close because we all like struggled together”. The connections were created by shared experiences and feelings of love and loyalty onto which the participants were able to lean when needed.

In every case, however, there was a clear familial expectation of proficiency in academics set by both their mother and in some cases their father, because the participants’ abilities had been recognized and acknowledged. This point was spelled out clearly in such cases as URMF 5, whose mother told her “you’ve been given this set of skills and these talents, and this is what the world needs, and you are expected to do this”. It was made clear to them by their families that regardless of their socio-economic status, they could, or more succinctly--would be, whatever they chose to be, but they had to work their hardest. In some cases, once their academic abilities were identified, several of the participants were pushed by their parents with an intensity that felt unbalanced compared with the perceived lesser academic pressure placed upon the male siblings of their families.

Financial support varied between families, with most families falling into middle or lower socio-economic statuses and a few that fell into a higher income bracket. None of the women interviewed has a physician in their immediate family, though a couple of the parents do have terminal degrees. Family dynamics thus included structure and discipline both in behavior and academics, directly created by the parents. Every participant also had early exposure to either education, healthcare, or caregiving, as a result of one or both of their parents’ or grandparents’ career choices.

## **Maternal Connections**

In every interview, participants described a profound connection with the women in their families, especially their mothers, and in some cases their grandmothers. They all described the inevitable ups and downs of their maternal relationships, but URMF 3 described her closeness to her mother as “Very close--I think she’s one of my soul mates”. Those relationships were not without typical parent and child struggles that ultimately smoothed over, as URMF 5 described “she was wise enough to know what type of mother she had to be during certain times of my life”. Whereas URMF 6 wants her mother to hang her eventual diploma in her house “I want you to look at this every day and say that you know that you’re the reason why I was able to do this”.

Whether they had a single parent or two-parent household, whether their mothers were educated or not, employed or a stay-at-home mom, these participants all described a trusting, strong, and respectful relationship between mother and daughter. The support from their mothers extended beyond just caregiving, with each participant describing a self-confidence and self-awareness they developed by following their mothers’ often selfless examples. They explained the way they were inspired by their mothers, and how self-confidence turned into self-reliance and independence. Whether URMF 5 emulating her mother’s “rebellious spirit”, or URMF 4 recognizing that she could not rely on a man to take care of her. In most cases when expectations of at least high school or college graduation were clear, the URMF women in this study made the personal choice to exceed or supersede those expectations.

## **Community**

### **Definition and Implications**

As interviews progressed, it quickly became apparent that the two URMF groups had some similar but also different definitions of community. All of the African American

participants responded that they primarily feel a part of the African American community. The Latina participants all identified primarily as a member of their family within their Latin and then Hispanic communities. All participants explained that throughout their lives, whether in school, career choices, living arrangements, even classroom seating, each of them felt most comfortable to “be themselves” when they were among members of that community. However, all of the participants described situations (school, volunteering, advanced placement courses, home location, etc.) where they were one of very few, if not the only, person of color. They were all acutely aware of that difference, especially those that faced microaggressions from others, based upon their race, sex, or ethnicity.

Three of the four African American participants indicated that in general they feel supported, encouraged, and respected by their African American community, especially as it became apparent that they were advancing toward their academic and career goals. Two participants, however, did express some disappointment in the amount and type of support from within that community. One described feelings of isolation and rejection from some members of her community based on her experiences of what she identified as colorism, which is prejudice or discrimination against individuals with a lighter or darker skin tone from within the same race or ethnicity. She described the ways that she had learned “to be my own community”. Similarly, one Latina participant indicated that because of her appearance, she feels that she often had different experiences than other women within her community, and because of that, feels a bit less of a connection to the Latina community. She explained that she identifies equally with American culture and the Latina community.

### *Family as Community*

All participants also identified their families as a part of their primary community. For the Latina participants, however; their community identity was more anchored to their families. Three of the four Latina participants mentioned the concept of machismo that is often attributed to Latin cultures, and the ways it can be perceived as sexism. They also explained that the idea of traditional gender roles with which their parents were raised, and subsequently raised them, was not a barrier to their success as a Latina student. The close ties to family and cultural traditions kept them close to their parents, siblings, cousins, aunts and uncles, and grandparents. So close, that some members of the family feel that once they have graduated, it is the responsibility of the child to remain at or near home, to help with finances. That feeling of responsibility to stick close to your family, and ensure everyone is taken care of, URMF 4 described as also “an immigrant thing”. That ingrained loyalty to family did not deter the Latina participants from choosing an education or career that would take over a decade to obtain. On the other hand, URMF 1 explained that “familial responsibility could be going to college... graduating with a better job to take care of your family, and kind of setting a precedent for your siblings”.

### **Expectations**

Responses were mixed on what the participants felt their community expected of them, and what they expected of themselves. URMF 3 described two separate expectations within her African American community, “I think there is a community that doesn’t expect anything from me, and I think there is a community that does...think how I think, that... we can improve our community, and I think that they expect for me to play my role in that”. At times, the support and expectations of the community did not align with the rigors of preparing for medical school. URMF 2 described moments of academic struggle, including disparaging comments from faculty

at her undergrad about abandoning her mission to attend medical school “It was a weird dichotomy between my family and community” because they never expected her to not succeed.

As URMF 4 stated regarding the expectation for and from her community, “I feel that I’m expected to be that bridge and explain everything they don’t understand... there’s a lot of trust issues, and not wanting to do something as simple as ‘...I’m not going to get my flu shot, because I just don’t believe in that’. I think it’s a mistrust of healthcare in general”. In that same vein, URMF 1 explained “I don’t think there was an expectation from the Latino community because... there wasn’t really somebody to kind of set the path for that... that’s something that I put on myself... to make a path for others to follow”. In almost every case, participants explained that they have chosen this path, and the expectation and pressure they place upon themselves outweighs any from their family or community. While the reasons varied, all participants discussed a wish to serve their African American and Latin communities.

### ***Being a Bridge***

During adolescence, their opportunity to choose their schools or geographic locations were extremely limited. For many of the participants, independence did not fully manifest until they left home to begin their undergraduate education. All of them capitalized on the opportunity, and expressed appreciation for the opportunity to, as URMF 7 stated “flex my independent muscles”. For some, it gave insight into the realities that their communities were experiencing. The disparities and systemic inequalities that minority populations face in healthcare came into clear view. Whether volunteering to work with low-income patients or simply seeing the lack of resources for URM populations, all the participants discovered within themselves, a desire to help.

For some, it was a matter of wishing to increase the presence and representation of URM female physicians, as a means of inspiring the next generations. For others, the desire is to assist where there are language, cultural, and especially trust barriers. All participants mentioned the lack of trust that is inherent and well-earned within their community. Citing the abuses and negligence that African American, minority, and immigrant populations have suffered throughout the history of healthcare, participants expressed a desire to close the gap between what has always been, and what can be.

## **Education**

### **Guidance and Support**

Seven out of eight participants indicated that they remember wanting to be a doctor since at least elementary school. The remaining participant reported deciding to pursue medicine during her undergraduate years. All participants described positive interactions with their pediatricians and physicians who in some cases encouraged them to pursue medicine. Guidance during primary and secondary school was a topic that all the participants described positively, though in many cases, the preparation was not as thorough as they wished it was. In addition to their families recognizing their talent, so too did their teachers and in some cases, guidance counselors.

For some participants, it was their parents who stressed the importance of excelling in academics and were themselves employed in a school or related setting. Others relied upon the assistance, knowledge, and guidance from school faculty and staff. Six out of eight of the participants changed schools at least once and as many as four times between kindergarten and high school. Their parents moved them to find a curriculum that best challenged them. They all reported excelling and enjoying science, technology, engineering, and math (STEM) based

courses, but several also described a draw toward the arts and other areas that require critical thinking.

### **Exposure to Healthcare as Career**

The early exposure to healthcare careers that participants described was equally varied. Three participants described medical traumas, injuries, or illnesses of family members that piqued an interest in healthcare at a young age. For URMF 1, her first exposure to healthcare was while translating her own pediatric check-ups. In other cases, the participants' parents work directly in healthcare, but none as a physician. One was a catheterization lab manager, another in accounts and billing, and another a custodian, all at hospitals. It was during high school that four of the participants took part in programs meant to encourage careers in healthcare, typically at nearby colleges. One participant attended a course during undergrad that outlined the steps to take to get to medical school. Four participants completed a master's degree after their undergrad degrees, to ensure their science courses and scores were on par with medical school requirements.

Not every experience was as positive as the rest though, as URMF 3 recounted an internship at a local hospital. When asked what she would like to do, she would reply that she wanted to be a doctor. "I would have white men say to me 'Why don't you just become a nurse?', that's kind of odd... why are you asking me that?". She interpreted this as prejudice. Later, the black women nurses would say to her "you need to do this, do not get distracted". She explained that when she inevitably has moments of exhaustion, she remembers their words "I can do this, and I need little black girls to see, you can do this too". Inspiration also came from the experiences of family and community members for URMF 6 who described her grandmother's wish to go into the medical field but was unable to because of financial strain and



racial division in her southern state at that time. She explained that, before integration, it was not accepted or considered normal for African American females to go anywhere but an historically black college or university (HBCU), so while her grandmother did go to college, they did not have a medical school.

### **Mentorship and Community in Education**

The need for mentorship during formative education was expressed by all the participants, especially when discussing their preparation for medical school. While their educational paths all eventually included the necessary coursework and scores, the lack of a sense of community, lack of a mentor, and guidance toward medical school in most cases traveled together. The steps required for medical school admissions are extremely financially straining, and all participants expressed a need for a mentor from their own community, that they trust, from whom to seek guidance on how to finance, and what steps to take. “It’s hard to break that glass ceiling because you don’t have mentorship or direction” as URMF 6 pointed out. However, URMF 3 explained that she never met an African American female physician until she was a junior in college. Similarly, URMF 2 explained that the academic steps toward medical school were not laid out clearly until she was in her master’s degree program. In that case, the recruiting faculty was an African American woman who worked with her to ensure she was on the right track.

In some cases, participants sought mentorship from students that had come before them. This occurred at various stages from elementary school through college. Four of the eight participants used the term “people that look like me” when they spoke of seeking a feeling of community in life and education. On the lack of community during her undergrad years, URMF 1 described the only real negative experience she had as being one of only four people in her

school of Hispanic descent, stating, “I didn’t feel like I was supported as a Latina”. Alternately, URMF 2 says she did not attend an HBCU for her undergrad, because at that time there was more of a stigma about the quality of the education. She was extremely happy to be able to find a small African American student community at the school she eventually settled on, during her undergrad years “We were like our own little bubble... If I did not know your name, I knew your face”. That same need for community and mentorship is the primary reason that URMF 6 says she did go to an HBCU for her undergrad degree, after hearing the stories imparted by her grandfather, of his time as an athlete at an HBCU for his undergrad degree, during segregation. In most cases, the URM women in this study expressed a need to find and stay close to students with whom they could relate and feel most comfortable.

### **Differences Unique to Each Group**

Despite the many commonalities among experiences between the two groups, there were also a few stark differences. The most striking of the differences were the education levels of participants’ parents. All the African American women in this study have at least one parent that has at least a bachelor’s degree, and three of the four have one parent with a graduate or terminal degree. Whereas the Latina participants’ parents’ education levels were as early as fourth-grade education, followed by a tenth-grade education, high school graduation, GED, associate’s degrees, and in only one case, a bachelor’s degree.

This, therefore, indicated a lower mean income range, than their African American counterparts. Additionally, the Latina students tended to attend public schools for their primary and secondary education, where the African American students often attended predominantly white, or private schools. While the differences between education and income were in some cases stark, all the Latina students discussed the notion of breaking with generational

expectations and norms. Each of them identified family as a primary responsibility for past and even current generations of their extended families. They also expressed comfort, however, with shifting their priorities to education, as a means of honoring and supporting their families and communities.

### **Summary**

From the very first interview and throughout the remainder of the data collection, themes emerged among the stories that participants chose to focus on as relevant experiences that influenced their decisions. It became apparent that there was no identical hierarchy of influences or experiences that led these women to medical school. However, there were individual experiences that formed broader shared conceptual themes. Alternately, there were shared potential barriers that each woman overcame during her journey. How they overcame those barriers varied.

Early on, family support and guidance were identified as among the greatest positive factors and garnered far more speaking time from every participant. A strong family connection, especially the maternal role-model as care-giver, came to the forefront of most of the conversations. The academic and community pressure and expectations that participants place upon themselves are reflective of typical medical school students. Each participant identified some of the same barriers--finance, preparation, lack of mentorship, lack of community, and how their prior experiences had helped them overcome those obstacles. In these cases, each URM female participant showed a history of resilience and success and outlined a responsibility and desire to support not only themselves, but also their family, and their community. There were extensive similarities between the participants and their journeys, but the themes presented here were among the most significant to identify what led them to medical school.

## CHAPTER 5: DISCUSSION

Throughout the past several decades, most minority populations have seen a steady increase of representation in medicine, in closer proportion to their national population. Unfortunately, African American females and Latinas have not seen that same proportionate representation, leading to a persistence of racial and ethnic disparities in the United States healthcare system (American Association of Colleges of Osteopathic Medicine, 2018). Regardless of overall public health improvements and increased outcomes, these underrepresented minority populations continue to suffer poorer patient outcomes and higher mortality rates (Hsu, Bryant, Hayes-Bautista, Partlow, & Hayes-Bautista, 2018). Previous studies exploring discrepancies in patient outcomes have found that there are cultural differences in the way that healthcare is viewed, especially among underrepresented minority populations, (Byington & Lee, 2015; Halperin, 2015; US Center for Disease Control and Prevention, 2020), who tend to seek providers that “look like them” (Halperin, 2015). Without a proportionate increase in URM providers, these populations will continue to suffer poorer outcomes. This study seeks to determine what experiences contributed to the choice of eight URM females, prior to attending medical school. A large part of interpreting this phenomenon is understanding that while some experiences are similar or shared, they are inherently and uniquely interpreted by each participant.

### **Limitations**

Limitations of this study were discussed in previous chapters and included a small sample size and the singular southeastern location, which limit generalizability. One overarching delimitation is that this study is focused on URM female students who have enrolled in medical school when the goal of the study is to eventually contribute to the body of knowledge regarding

the lack of enrollment of URM females. Data for this study were collected during the late fall of 2020. Unexpectedly, additional limitations became evident during data collection. Namely, effects of current social movements, intense political discord, increasing demands, and consequences of the COVID-19 pandemic.

When the World Health Organization declared COVID-19 a pandemic back in March of 2020, little was known about how profoundly the American way of life would change. Ultimately, schools and businesses shut down, a massive, unparalleled conversion of curricula began with an accelerated switch to virtual delivery, and only employees considered “essential” were allowed to work in-person (Haque, Mumtaz, Khattak, Mumtaz, & Ahmed, 2020). In most cases, medical students were not considered essential employees and were thus blocked from entering the clinical setting (Compton, Sarraf-Yazdi, Rustandy, & Krishna, 2020). That changed the methodology and all but halted their practical clinical training for several months. For medical students that heavily rely upon community and structure for support during didactic training, isolation began to play a part in elevated stress levels (Shibu, 2021). Studies conducted across the globe, throughout the year, showed that medical students largely preferred to return to their clinical training (Compton, Sarraf-Yazdi, Rustandy, & Krishna, 2020), but there was an added pressure and reality of fresh unpreparedness (Haque, Sadaf, Khattak, Mumtaz, & Ahmed, 2020). Once safety measures were in place, medical students were allowed to return to clinical training, and many went into an almost scrambled catch-up mode of learning while also acting as a front-line healthcare worker (Compton, Sarraf-Yazdi, Rustandy, & Krishna, 2020; Haque, Mumtaz, Khattak, Mumtaz, & Ahmed, 2020; Rashid, Nicholson, & Gill, 2020).

The disparities in survival and mortality rates during the COVID-19 pandemic among minorities are considered evidence of continued systemic oppression and marginalization

(Nkomo, 2020). The Black Lives Matter movement has grown in strength and number since it was founded in 2013 in protest of systemic inequity in the United States and internationally (Bell, Berry, Leopold., & Nkomo, 2020). The movement gained more ground during this particularly heated and polarizing presidential political campaign year. Throughout 2020, across the country, African Americans and allies protested police brutality, ongoing oppression and marginalization. Racial tensions were at a generational high and all those elements gripped the United States and maintained a particularly life-altering stronghold on medical students of color-very specifically the populations involved in this research. It is therefore possible that the comfort levels, responses, and outlooks of participants have come under strain.

### **Summary of Domain Themes**

The domains of family, education, and community were addressed during data collection interviews. The coding process was carried out separately for the three domains, and each contained themes and subthemes that were similar for all participants. Which domain had the most influence in their decision to attend medical school, varied by participant. Each participant also discussed obstacles they faced, that they believe plays a part in why their community representation has not increased. Many of the conclusions discussed below regarding education, family, barriers, and intersectionality, are consistent with past and current literature.

### **Family**

#### **Support**

Among the most positive influential aspects of each participant's journey was the support of their family. Participants described being emotionally "close" to at least one, or both, of their parents, and as having a positive relationship with siblings and in most cases, their maternal grandparents. The value that each placed on their family connections, and home life, was a

common thread throughout each of the three phases of the interviews. The makeup of household and family dynamics varied. Participants came from one or two-parent households, had younger siblings, older siblings, or were their parents' only child. In every case they described a supportive and encouraging family. Research has shown that potential medical students often choose schools that make them feel comfortable, and one key component to that comfort and subsequent success for URM medical students has been shown to be a school with a "family atmosphere" (Elks, et al., 2018). This was a sentiment that each participant expressed while discussing their specific choice of medical school.

### **Influence of Same-Sex Parent**

Among the most prevalent subthemes within the family domain, was the influence of the participants' mothers. Both in outward emotion and verbal description, participants emphasized the influence and impact of this particular relationship, more than any other family or community member. In describing their parents, both African American and Latina participants referred to their mother as a strong driving force behind her success. Though their mothers could waiver between kindness and strict overbearing during their adolescence, participants described a more recent understanding of why she parented the ways she did. It is important to note that participants from two-parent homes also mentioned their fathers as being supportive and a driving force in their education. It was the connection with their mother, however, that gave them an ingrained sense of female self-awareness, self-confidence, ability, independence, and beauty. The support from their mothers included encouragement, affection, discipline, caregiving, and especially an example to follow, of unwavering belief in her daughter's abilities.

## **Academic Intensity**

Within each family, was a clear expectation of proficiency in academics based upon the participant's proven abilities. In a few cases, the participants were themselves the academically intense person in the family. They were aware of the options that their academic abilities were creating for them, especially if as a long-term plan, it would free their families from socio-economic struggle. They pushed themselves harder. Most importantly, no one in the participant's family ever told them they could not meet the challenges of medical education or were in any other way not fully capable. Parents often expected more, academically, of these women than they did other members of the family. The parents made it clear that they recognized their daughter's talents, potential, skills, and capabilities, and expected her to go as far as she possibly could, regardless of the academic level of completion of the parents. Oftentimes, parents' academic intensity came at the cost of socialization, which made participants' need for community within the school that much more urgent.

## **Community**

### **Definition and Implications**

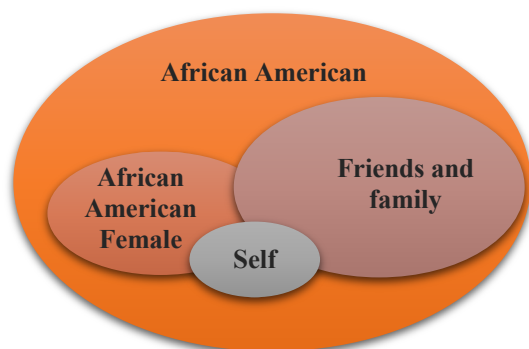
Between the two groups of URM females that participated in this study, there was some thematic variance in the definition of community. Both groups did include their families as a part of their communities; however, the Latina participants described immediate and extended family as the core of their community, which then extends outward to their wider Latin and then Hispanic communities as seen in Figure 1 below. Whereas, for the African American women, there was more of a connection and direct relationship to the larger African American community first, based upon a shared history of experiences, including social oppressions, sexism, microaggressions, racism, and resilience, as seen in Figure 2 below. The African



American participants also emphasized more connection among the women in their broader community, where the Latina participants tended to refer to the women in their family, as their female connections. Regardless of group, the community female influence was strong for all participants. While some members of each group also described religion as a part of their formative years, the levels of that influence were in no way consistent from one participant to the next, and not something that most of them focused on for an extended time. Much of the religious influence manifested within their familial and community relationships, functions, and experiences.

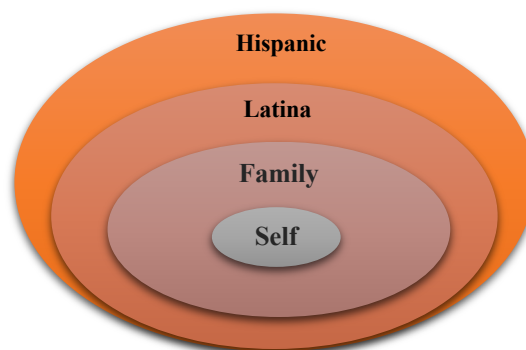
**Figure 1**

African American Community



**Figure 2**

Latina Community



### **Expectations, Bridges, and Options**

When asked about expectations regarding community, participants answered in two ways. They first explained what they expect of themselves, and then what they feel their community expects of them. There was no identifiable division between the two groups, and responses ranged from "they expect nothing from me" to "they expect me to do my part to lift our community". There was an inference for some, that since their community expects nothing from them, they are afforded unspoken freedom to choose their path, and excel as far as they choose. In response to those expectations or lack thereof, participants all expressed a desire to be

a bridge between their community and healthcare. They hope to break down language, cultural, and trust barriers, to improve overall health outcomes for their community.

### **The Desire to Give Back**

The abuses and negligence that African American, minority, and immigrant populations have suffered throughout the history of United States healthcare, has created an avoidance-driven chasm between those populations and quality care. Participants expressed a desire to be a part of repairing that relationship. All participants expressed a desire to give back to their communities in some way. They are acutely aware of the widespread distrust, miseducation, and fear of healthcare systems that are inherent in their communities. Their antidote to those problems is to personally assist in rebuilding that trust, increasing healthcare literacy, and instilling comfort in seeking medical care. This is where the intersectionality of their race, ethnicity, and gender plays its biggest role. All participants are aware of their future role as a URM female physician and their contributions to representation. They wish to increase the representation of URM female physicians as well as inspire the next generations. This adds another unique layer of social and academic pressure to each of them, as they take personal responsibility for their entire communities.

## **Education**

### **Preparation**

Several participants described an understanding or direct experience with healthcare prior to completion of their undergraduate education. This experience and understanding came from various places but had a similar influence on each participant. Some have family that worked in healthcare or family members with impressive healthcare needs. This exposure desensitized participants in a way and contributed to a sense that pursuing healthcare and medicine was not

intimidating or out of reach. In most cases, participants also described either an early emphasis on advanced STEM courses, arts, and creative programs or health careers programs in high school or during their undergraduate years. Advanced courses and good grade point averages have shown correlative meaning regarding the persistence of URM students as they move into STEM programs during college (Kirk Mitchell, 2011; Petersen, Pearson, & Moriarty, 2020). All participants enjoyed the challenge of academics and did well in primary and secondary school.

### **Earlier Mentorship and Guidance**

Regardless of academic preparation, family experience, or healthcare knowledge, there remained a gap in understanding of the intricate preparation for medical school. Only one participant described a full course during her undergraduate years, where the steps to take were outlined. Unfortunately, part of the message she received was that there was a very small chance she would achieve medical school acceptance. How education was approached by trusted community or family members, played a vital role for each participant, in their journey toward medical school. In every interview, the idea of mentorship was mentioned. The majority of participants voiced a need for earlier guidance than what they had been offered. In many cases, participants did not feel supported or encouraged as potential medical students that are also women of color. This corresponds to recent research among medical students and residents showing that near-peer mentorship is among the most successful elements for retention and support of URM medical students (Scott, Cook, Farmer, Kim, Pomfret, Samardzic, et al., 2019; Sobbing, Duong, Dong, & Grainger, 2017; Youmans, et al., 2020). The intersectionality of race or ethnicity, and gender, was most apparent as the guidance that some participants did receive, was from women of their race or ethnicity; someone that they may not have known well, but they still trusted their guidance.

## **The Importance of Finding Community in Education**

Several of the participants in this study overcame feelings of isolation and not quite belonging, while in school. This occurred at varying points in each of their academic journeys. For some participants, the intensity of their parents' academic drive meant little opportunity for socialization. Several of them had attended a primary or secondary school where they were one of very few persons of their race or ethnicity. For others, it was during their undergraduate years that they experienced minimal diversity and cultural or racial isolation. However, all the participants in this study exhibited adaptability and self-confidence in their educational environment. Those experiences of feelings of isolation led to a desire to be among a more diverse student population when they became old enough to make their own choices. They sought acceptance to be themselves, and a sense of belonging. Finding people that "look like me" is a concept that exists in many industries where representation is disproportionate, but especially healthcare and education (Townes, et al., 2020) and is no different for the participants of this study, several of whom used that exact phrase.

## **Perceived Barriers**

Throughout the data collection and interviews, participants described experiences that influenced their decision to pursue medical education. For the most part, they discussed the positive influences but alluded to some experiences that could have derailed their plans, if not for their strong support systems. Toward the end of each interview, participants were given an opportunity to summarize, based on their prior responses, what they would consider a potential barrier to their choice. Several responded that a family catastrophe would have been the only thing that would hold them back once they had set their mind on medical school. There were

three responses; however, that were repeated almost unanimously--lack of guidance on the process, finance, and poor academic preparation.

### **Process Guidance**

The complex process of preparing for and applying to medical school was a challenge that each participant described as something to overcome. Several participants had attended programs during high school or undergrad, which gave them a first-hand understanding of healthcare professions and roles. In some cases, the steps and requirements were not explained until the participants were in the later stages of their undergraduate education. Because of their lack of knowledge early on, half of the participants lacked the required science courses or scores to be admitted to medical school and had to complete graduate-level work, to become qualified. Additionally, each participant at some point in their interview mentioned the exorbitant cost of medical school and reflected on the financial strain either they or their families, have endured. The cost of just applying to medical school was not always made clear to participants until they were fully invested in the process.

### **Finance**

When asked what could have been a barrier for them, or almost was a barrier, participants all mentioned cost. Not just the cost of medical school, but also the cost of applying. For students from lower socio-economic families, or that are coming from schools with minimal advanced STEM courses, preparation course costs alone, could have been a deal-breaker. Some participants in this study were limited in the number of schools to which they were able to apply. At least one participant described the financial assistance she received from her parents, but that even after their help, she had to take out multiple credit cards to cover the costs. Several participants described the cost to themselves or their families, as a risk, considering the rigors of

medical school and the possibility of failure. In many cases, student loans are funding their attendance. Many of the participants in this study have, or will, leave medical school with massive financial burdens.

### **Education**

The greatest education barrier expressed by participants is the lack of focus on STEM courses, and the preparation necessary to go directly from undergraduate studies to medical school. Some participants explained that they enjoyed STEM courses and programs and had taken advanced level courses during high school. They credit that enjoyment of STEM as an important factor in their personal ability to move on to medical school. The participants that attended public schools especially, indicated a need for greater focus and challenge in STEM courses. Several participants mentioned a need for improved programs to retain URM students in STEM programs.

### **Review of Research Questions**

The purpose of this Interpretative Phenomenological Analysis (IPA) was to explore the influences of lived experiences of the African American female and Latina students at one southeastern osteopathic medical school. The phenomenon being examined is what ultimately led URM females to the decision to attend medical school. This IPA study is intentionally interpretative and explored participant perceptions of their experiences, as well as themselves. Looking through the Critical Race Feminism lens allowed conclusions to be drawn that address influence and experience surrounding race, ethnicity, and gender. Interpretation and analysis led to multiple themes which were then compared against current literature to best answer the research questions and discover each participant's connection to the phenomenon.

***Research Question 1- How do URM females describe their decision to pursue medical education?***

The participants in this study describe their decision to pursue medical education as a complex process, fed by many external forces. However, once they made the decision, they were determined to succeed and turned that pressure inward. Those external forces that were pushing them in the direction of medical school, ultimately became the ongoing support systems that the participants rely on to emotionally survive- proficiency in academic achievement, self-confidence instilled by supportive family, academically driven parents, positive same-sex role models. They chose this particular school because it represented for them, that feeling of family, the academic challenge they are each accustomed to, and the mission of the school to serve rural and underserved populations. This offered a sense of giving back to their communities, which is what each participant expressed a desire to do.

***Research Question 2- How do cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?***

The cultural, societal, and familial experiences influenced the value that participants placed on certain aspects of their lives and experiences. Regardless of the socio-economic status, or varying life experiences, the way that each of these participants grew up was that the greatest value was placed first on academics and family, and then community. This was evidenced in their expression of seeking a familial atmosphere when selecting a school. Whereas many students in medical schools are legacies (meaning they had a generation of physicians before them within the family), none of the participants in this study were legacies. They each felt some external pressure to succeed, but the greatest pressure and motivation to continue to medical

school ultimately came from within them, due to that value that they placed on their family, academics, and giving back to their community.

### **Literature Support and Recommendations**

#### **The Importance of Support**

The greatest influence for participants in this study, described as having been vital to their trajectory toward medical school, was a strong support system. While experiences varied, for each of them the core of their support came from family, then community, then a challenging curriculum, and teachers and guidance counselors that encouraged and assisted them. This finding is supported by several studies of Latino (Flores, 2018; Molina, et al., 2019; Toyokawa & Toyokawa, 2019) and African American female students (Pietri, Johnson, & Ozgumus, 2018). The most impactful support for all of the study participants was the relationship she has with her mother and in some cases the other women in her family. Their mothers were sometimes strict, sometimes vulnerable, but they passed on to their daughters an unconquerable sense of self. They also tended to pass down to their daughters through example, a desire to give back to the family and greater community. This familism tends to manifest in an expressed hope, especially among daughters, to be able to eventually work in an area where they can assist in giving back to their families and communities (Brown, Liu, & Scheffler, 2009; Toyokawa & Toyokawa, 2019). Past studies have proven the vital importance of familial and community support systems, which can essentially close academic gaps and keep URM students academically engaged (Elsaesser, Heath, Kim, & Bouris, 2018; Flores, 2018; George Mwangi, Daoud, English, & Griffin, 2017; Goodenow & Grady, 1993; Williams, Banerjee, Lozada-Smith, Lambouths, & Rowley, 2017), ultimately leading these participants to positive academic outcomes.



Based on this study, the types of support that families can offer are the academic drive and expectations that these participants experienced. Additional means, such as cognitive challenges in the home, encouraging and rewarding academic achievement, keeping close contact with their child's primary and secondary schools, remaining positive when their students struggle academically and especially socially (Roy & Giraldo-Garcia, 2018; Williams, Banerjee, Lozada-Smith, Lambouths, & Rowley, 2017). The socio-emotional skills that parents of URM students instill in their children have a direct effect on their academic outcomes throughout life (Flores, 2018; George Mwangi, Daoud, N., English, & Griffin, 2017; Roy & Giraldo-Garcia, 2018; Williams, Banerjee, Lozada-Smith, Lambouths, & Rowley, 2017).

The participants in this study all exhibited a strong connection to family and a desire for better connection to community. The need for emotional support for medical students is long established (Derck, Yates, Kuo, Hwang, Sturdavant, Ross, Finks, Sandhu, 2018). As the population of the United States and the demographic of healthcare workers changes (Townes, et al., 2020), so too will our understanding of what type of support is most influential for each student population. Medical students are among the most driven, and at-risk population of professional students in the world (Shoaib, Afzal, & Aadil, 2017). Having a strong support system in place prior to entering medical school is vital not only to them following through with their goals, but also to maintain their emotional health through medical school (McLuckie, Matheson, Landers, Landine, Novick, Barret, & Dimitropoulos 2018).

Another primary takeaway of this study that corresponds to recent literature is not only the influence of people and experiences, but also the importance of recognizing the differences and commonalities in each story (Gillborn, 2015; Hsu, Bryant, Hayes-Bautista, Partlow, & Hayes-Bautista, 2018). This study has shown that African American female students and Latina

students are experiencing the world and academia differently from each other, and from other women (Cervia & Biancheri, 2017; Childers-McKee & Hytten, 2015; Han, Kim, Kim, Cho, & Chae, 2018). Those variants should be considered when attempting to attract and retain a faculty, staff, and student body that are representative of the state and national demographic numbers (Schor, 2018). To lump all URM populations and students together when attempting to build a more diverse school or workforce is to err.

### **Explore STEM and Healthcare**

Several participants expressed a need for more STEM-focused education for their communities. Historically, URM secondary students have been offered poorer access to STEM programs and are subsequently less likely to pursue science programs and majors long term, due to lack of adequate preparation (Perna & Swail, 2001; Petersen, Pearson, & Moriarty, 2020). Participants also explained the need for pipeline programs that would target URM students, and assist in understanding and financing the pathway to medical school (Geller, Bonaquisti, Barber, & Yaekel, May, 2017). Many participants described experiences during their high school and undergraduate years that exposed them to the idea of healthcare careers and what to expect from that career, but only one had experienced what could be considered a pipeline program. While some progress has been made over the past several decades, building pipelines remains a slow process (Camacho, Zangaro, & White, 2017).

In the absence of pipeline programs, understanding the complex process of applying to medical school was further complicated for participants of this study due to a general lack of awareness and guidance. Being first-generation potential physicians, how to meet the requirements for medical school admission was not adequately described early in the process. Some participants felt unprepared for the complex process and standards and had to complete

Master's degrees to ensure they had the science courses, preparation, and grades they needed. Education that includes representation must be presented at a younger age to URM females and their families, so they can begin to plan for it as an attainable reality (Derck, et al., 2018; Kirk Mitchell, 2011; Petersen, Pearson, & Moriarty, 2020; Toven-Lindsey, Levis-Fitzgerald, Barber, & Hasson, 2015). Participants felt that these explanations and standards need to be mapped out more clearly during high school and undergraduate schooling.

### **Mentorship and Ongoing Community**

Having a community lends itself to the guidance and mentorship that URM participants deserve to feel informed in their decisions (Goodenow & Grady, 1993; Halperin, 2015). The majority of participants in this study had spent a portion of their formative academic years without a strong presence of community within their academic settings. Those experiences taught this particular group to adapt to, and overcome, a sense of isolation. The same experiences may not be shared by other URM students. A sense of belonging and comfort in secondary school settings nurtures better motivation, social-emotional, behavioral, and academic outcomes (Korpeshoek, Canrinus, Fokkens-Bruinsma, & de Boer, 2020), which naturally causes parents to seek schools with similar demographics. Most study participants expressed a desire to be in a more diverse environment if the opportunity presented itself. At this southeastern medical school, they did not find the diversity they had hoped for, but their earlier experiences helped them accept and adapt to a less diverse school.

Comfort and support in school settings has been described as the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment (Goodenow & Grady, 1993, p. 80). Participants in this study described the guidance they needed during their formative years as a trusted source, especially a member of their own

community, to tell them how and when to start financially planning, which courses they needed to take, what order to take them, what extra-curriculars they should be completed, how to begin the process of actually applying, and someone that would continue that guidance into medical school. Many undergrads that declare pre-med as a part of their program are offered advice on all of this, and some of it is available online (Association of American Medical Colleges, 2021), but the information is often extremely generalized, it is vast, and can quickly become overwhelming.

Undergraduate and medical schools have the opportunity for a symbiotic relationship where potential medical students are concerned (Merchant & Omary, 2010). To create community for URM female medical students, schools that lack diversity in racial and ethnic makeup must first build their diversity and inclusion programs around admissions, as well as faculty and staff. There must be people that “look like me” (Fisher, Rodriguez, & Campbell, 2017; Page, Castillo-Page, & Wright, 2011).

However, once diversity begins to grow, the sustenance and weight of maintaining the community connection cannot fall squarely onto the shoulders of the few URM students and staff (Flaherty, 2019), thus it is the responsibility of medical schools to create that space (Rodriguez, Campbell, & Pololi, 2015; Schares, 2017). As the world becomes more connected via technology, especially in light of pandemics and online education, communities are existing virtually and continuing to widen. Schools have additional opportunities to find or create a supportive community for URM females, simply by creating a virtual space, when physical space is not available. Creating a connection for upcoming URM students to connect to current medical students and mentors has proven a vital tool when implementing a supportive familial and community atmosphere (Derck, et al., 2018).

## Finance

The exorbitant cost of attending medical school is outshone only by the cost of application. Each student that applies to medical school must score well on their Medical College Admissions Test (MCAT) to be considered for the extremely competitive seats at each medical school (Association of American Medical Colleges, 2021). In 2020, approximately 53,000 students applied to United States medical schools an average of 17 times, and less than half of those students were accepted (Association of American Medical Colleges, 2020). The cost of MCAT preparation courses with good reputations can range from around \$1800 to \$7000, depending on the student's timeline (Kaplan, 2021). If they are able to afford or skip the preparation courses, the cost of the MCAT itself is more than \$300 for each attempt. The AAMC does have a fee assistance program that aids individuals with extreme financial limitations, which cuts the cost of the exam in half and provides some preparation materials (Association of American Medical Colleges, 2021b).

Once they have completed the MCAT, the student application materials are distributed to the medical schools that students have requested. The application distribution to the first school on their list costs around \$170 and each subsequent school is almost \$50 (Association of American Medical Colleges, 2021). Finally, students must be able to afford travel and lodging to and from medical school interviews all over the country. The cost to students or their families quickly becomes a financial risk. Student loans are funding at least some part of the attendance of between 76% to 89% of medical students' education nationally (Education Data, 2020). While reducing the cost of medical school is largely unrealistic, there must be education made available to students and families early on, especially those URM families that do not have a family member already in medicine, to allow for long-term financial planning before, during, and after

medical school. Ultimately, one irony created is that the cost of medical school loan debt risks causing URM medical students to seek employment in higher-paying rural areas where their communities do not tend to live because jobs within larger healthcare systems in cities tend to pay less (Morse, 2015; Rivas, 2015).

### **Recommendations for Further Study**

Several topics showed some common threads but were unable to be explored to appropriate depths during this study. Not all the topics mentioned applied to each of the two groups. Future studies should focus on delving further into these topics to continue building knowledge of potential URM influences.

- The hierarchy of parental values and its influence on career choices of URM students.
- Exploring the career choices of the parents of medical students. In this study, for example, all parents were connected in some way to either caregiving or education.
- Cultural adaptation through Latin and immigrant generations.
- How colorism within the African American community affects education outcomes.

### **Conclusion**

Representation in healthcare is becoming a nationally recognized need, to improve health outcomes for URM populations and communities (Lett, Murdock, Orji, Aysola, & Sebro, 2019; Townes, et al., 2020). This study aimed to identify the influences and experiences that brought eight URM female students to one southeastern medical school. The four African American participants and the four Latina participants had some vastly different experiences that should be

acknowledged in future strategizing and efforts at diversification. However, some commonalities were discovered. The emotional support and academic drive of parents, especially their mothers, and families, and the responsibility to community, self, and family, are some of the driving forces that cradled these students' decisions. The URM students that are aspiring beyond what their families expect of them have been armed with an ingrained sense of self-capability, due directly to these support systems. They then seek a sense of familial and community connection when choosing a medical school.

This study has shown that to encourage the representation of URM females in healthcare, there are tools that the academic medicine and public health industries can put into place. Schools, universities, and medical schools can take a more active approach to create pipelines targeted at students and their families. These pipelines and programs should consist of short or long programs that not only explain the luxurious parts of being in medical school, but also the realities of cost, financial planning, pre-requisites, and ways that the family can support their student. Potential students must be set-up with mentors or guides as early as high school, that will be committed to assisting when they are needed. With the support of family, a strong female role model, a love of science, and guidance to navigate requirements, potential URM female medical students will develop the self-confidence and self-efficacy to succeed. It will be then that they fulfill their wish to give back to their families and communities, and the representation of URM females in medicine will finally begin to grow.

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## APPENDIX A- Participant Introductory Email

Hello!

My name is Brianne Holmes, and I am the Director of Professional Development here at Southern Medical College (pseudonym). I have been working toward my Doctorate in Education for the past two years and I am finally ready to undertake my dissertation research. I am seeking participants that identify as meeting the following criteria:

- 1) African American females or Latinas
- 2) Second generation American or later
- 3) Currently attending, or alumna

The purpose of this study is to capture the influences and experiences of underrepresented minority females in medical school, so that we can better understand what drew you to medical school. By understanding your influences and experiences, progress can be made to increase the representation of URM females in medicine.

The process of this study will be a 30 to 60-minute interview either in person or via WebEx, depending on your location, convenience, or comfort level. The interview will be recording and then transcribed (by myself), but your identifying information will be eliminated, meaning you will be “de-identified”. Once I have transcribed the interview, I will email it back to you (in an encrypted document), so that you can review and ensure your intended message came across, and make any corrections or additions. That transcript check can also be done via WebEx if the participant prefers.

**As with any human subjects research you have the right and ability to disenroll from the study at any time, up until the study is published. You may be asked some personal questions during the interview, and it is your right to answer or refrain from answering any question, and still remain in the study. If you choose to withdraw a previously recorded response, you have the right to withdraw that response. Regardless of the extent of your participation in the study, you will be de-identified and protected.**

Two years ago, when I began this program a friend and mentor advised me to choose a topic that I felt was important; something I am passionate about understanding, and most importantly- something that I feel will contribute to a better world. Two years ago, I chose this topic having no possible expectation that when it was time to conduct my research, the country would be in the midst of a pandemic in addition to social unrest. I do feel passionately about this, and feel that this research is so important, especially right now. The world needs to hear your story, and learn from it. I hope you will consider participating!

If you are interested, please email me at this address (that I have created specifically for this research) and we will review the Informed Consent, and set a date for our interview:

[Bholmesdissert20@gmail.com](mailto:Bholmesdissert20@gmail.com)

Many thanks,

Brianne Holmes

## APPENDIX B- Interview Questions

The interview questions below will serve as a guide, and will be asked to each participant. .

Subsequent probing questions may vary between participants. Interview questions will attempt to ultimately answer the study's Research Questions, which are:

- (1) How do URM females describe their decision to pursue medical education?
- (2) How do cultural, societal, or familial experiences or expectations influence these URM females to pursue medical education?

### Interview Questions

- 1.) Can you tell me about the moment, or phase of your life when you determined that you wanted to be a doctor?
  - a. At what age?
  - b. Did your doctor "Look like you"? (Explain the research)
- 2.) Can you tell me how you interpreted your role within your family?
- 3.) Can you tell me about your family dynamics?
  - a. Siblings or cousins?
    - i. Brothers? Older or younger?
    - ii. Sisters? Older or younger?
    - iii. Siblings' or cousin careers?
    - iv. Age gaps?
  - b. Parents?
    - i. Parents' careers?
  - c. Grandparents?
    - i. Grandparents careers?

- ii. Were they present and involved?
- 4.) Who played the most influential role (good or bad) in your decision to attend a medical school?
  - 5.) Can you tell me about elementary school?
  - 6.) Can you tell me about middle and high school?
  - 7.) Can you tell me about what was expected of you academically by your family?
    - a. Was that the same for all your siblings or cousins?
  - 8.) Can you tell me about what you feel is expected of you by your community?
  - 9.) Please explain to me any negative experience you had during your time in academia that may have derailed your intentions?
  - 10.) What was your greater goal, for attending medical school?

Optional probe questions listed are meant to be examples of where the conversation might go, but are not guaranteed. Any responses that could potentially identify the students, or their family members, will be removed or given pseudonyms, etc. Measures taken to protect identity will minimize any risk of recognition based upon responses.

## **APPENDIX C- Participant Consent Form**

### **UNIVERSITY OF NEW ENGLAND**

#### **CONSENT FOR PARTICIPATION IN RESEARCH**

**Project Title:** Influences and Experiences of Underrepresented Minority Females Prior to Entering Medical School

**Principal Investigator(s):** Brianne Holmes

#### **Introduction:**

- Please read this form. You may also request that the form is read to you. The purpose of this form is to give you information about this research study, and if you choose to participate, document that choice.
- You are encouraged to ask any questions that you may have about this study, now, during or after the project is complete. You can take as much time as you need to decide whether or not you want to participate. Your participation is voluntary.

#### **Why is this research study being done?**

The purpose of this study is to capture the influences and experiences of underrepresented minority females in medical school, so that we can better understand what drew them to medical school. By understanding your influence and experiences, progress can be made to increase the representation of URM females in medicine.

#### **Who will be in this study?**

Participants that identify as meeting the following criteria:

- 4) African American females or Latinas
- 5) Second generation American or later
- 6) Currently attending, or alumna

#### **What will I be asked to do?**

Participants will take part in a 30 to 60-minute interview either in person or via WebEx, depending on your location, convenience, comfort level, and CDC guidelines regarding COVID in the United States. The interview will be recording and then transcribed (only by the researcher), but participants identifying information will be eliminated, meaning they will be “de-identified”. Once I have transcribed the interview, I will email it back to you (in an encrypted document), so that you can review and ensure your intended message came across, and make any corrections or additions. That transcript check can also be done via WebEx if the participant prefers

**What are the possible risks of taking part in this study?**

There is no greater than minimal risk to participants of loss of confidentiality or privacy from the method of data collection or storage. There is no sensitive information being gathered, and anything that is identifiable during interviews (specific schools, towns, family members names, etc.) will be given a pseudonym. Additionally, because of the current COVID-19 travel and movement restrictions, data will remain in the same location it is collected, for the duration of the study.

Data will be participant stories, and their interpretations of those stories. No information gathered can put them at risk academically or professionally, and will be de-identified. As a current staff member at the school where the study participants are or were formerly students, the researcher works with the faculty and staff only. The sample population for this study has no direct supervisory connection to the researcher. The researcher holds neither academic nor employment authority over any of the participants, and the participants hold no authority over the researcher

**What are the possible benefits of taking part in this study?**

Underrepresented minority females may benefit from the analysis and potential understandings of this phenomenon. People in similar roles and community members may also

benefit as the school will have the insight and guidance to build initiatives, marketing, increase recruitment and retention, and the URM communities could ultimately see fair representation in healthcare. There will be no monetary compensation for participating in this study

**What will it cost me?**

There is no cost to participants.

**How will my privacy be protected?**

Participant comfort in privacy and anonymity is of the utmost importance. Participants will know when they are being recorded. That data (recordings) will be stored in a locked and secured location for the duration of the study (at the researcher's home). The name of the school and of the participants will be protected by the use of pseudonyms and storage of audio or video files on an encrypted thumb drive. Storage of data during the research will be in a locked drawer, accessible only by the researcher.

**How will my data be kept confidential?**

There will be no one else handling or privy to information obtained besides the researcher. Data will be stored on encrypted thumb drives, in a locked and secured location for the duration of the study (at the researcher's home), and for at least three years after the conclusion of the study, at which time it will be destroyed. The name of the school and of the participants will be protected by the use of pseudonyms.

**What are my rights as a research participant?**

- Your participation is voluntary. Your decision to participate will have no impact on your current or future relations with CUSOM.
- You may skip or refuse to answer any question for any reason.
- If you choose not to participate there is no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.

- You are free to withdraw from this research study at any time, for any reason.
  - If you choose to withdraw from the research there will be no penalty to you and you will not lose any benefits that you are otherwise entitled to receive.
- You will be informed of any significant findings developed during the course of the research that may affect your willingness to participate in the research.
- If you sustain an injury while participating in this study, your participation may be ended.

**What other options do I have?**

- You may choose not to participate.

**Whom may I contact with questions?**

- The researcher conducting this study is Brianne Holmes
  - For more information regarding this study, please contact Brianne Holmes via phone or email.
- If you choose to participate in this research study and believe you may have suffered a research related injury, please contact Brianne Holmes
- If you have any questions or concerns about your rights as a research subject, you may call Mary Bachman DeSilva, Sc.D., Chair of the UNE Institutional Review Board at (207) 221-4567 or [irb@une.edu](mailto:irb@une.edu).

**Will I receive a copy of this consent form?**

- You will be given a copy of this consent form.

---

**Participant's Statement**

**I understand the above description of this research and the risks and benefits associated with my participation as a research subject. I agree to take part in the research and do so voluntarily.**

---



Participant's signature

Date

---

Printed name

**Researcher's Statement**

**The participant named above had sufficient time to consider the information, had an opportunity to ask questions, and voluntarily agreed to be in this study.**

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Researcher's signature

Date

---

Printed name