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UK College of Medicine African-American Medical Students' Experience with Faculty Mentoring

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UK COLLEGE OF MEDICINE AFRICAN-AMERICAN MEDICAL STUDENTS'
EXPERIENCE WITH FACULTY MENTORING

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Education in the
College of Education
at the University of Kentucky

By

Ashlee-Nicole C. Hamilton

Lexington, Kentucky

Director: Dr. Kelly Bradley, Professor of Educational Policy Studies and Evaluation

Lexington, Kentucky

2023

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ABSTRACT OF DISSERTATION

UK COLLEGE OF MEDICINE AFRICAN-AMERICAN MEDICAL STUDENTS' EXPERIENCE WITH FACULTY MENTORING

This research study explored the faculty mentoring experiences of African-American medical students at the University of Kentucky College of Medicine (UK COM). The purpose of the research is to determine benefits and challenges expressed by the African-American students so that UK COM can use the student voices to improve faculty mentoring for this student population. The following broad questions guided the research: 1) What are UK College of Medicine African-American medical students' experiences with faculty mentoring? 2) What are UK College of Medicine African-American medical students' experience with faculty mentoring on a satellite regional campus? Specifically, the investigation seeks to provide further detail regarding positive aspects of African-American medical students' experiences with mentoring as well as information about the challenges these students face—to inform future medical student mentoring programs for this under-represented population of students.

The study revealed that students perceived faculty mentoring to be beneficial to their personal and professional development; beneficial for learning about leadership, research, scholarship, and conference opportunities; and beneficial for networking and having a role model. However, this study found that African-American students desire more faculty of color, more programming and resources related to mentoring, and better availability of mentors. The study also found a need for more mentoring opportunities and better communication about mentoring for students on satellite regional campuses.

KEYWORDS: Faculty Mentor, Medical Student Experience, Benefit and Challenges, Perception, African-American

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UK COLLEGE OF MEDICINE AFRICAN-AMERICAN MEDICAL STUDENTS'
EXPERIENCE WITH FACULTY MENTORING

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DEDICATION

To all of my family, friends, and loved ones for their unconditional love and support.

Thank you for teaching me the value of persistence, dedication, and hard work. I especially dedicate this dissertation to my parents, who taught me the value of education, to my husband who has been there for me throughout this process, and to my daughter and second child that I am pregnant with now, never give up, believe in yourself, and follow your dreams.

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To my family and friends, thank you so much for your love and support. Each of you have a special place in my heart. Thank you for helping me become the person I am today.

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Chapter 1: Introduction

The study aims to understand African-American medical students' experiences with faculty mentoring at the University of Kentucky College of Medicine (UK COM). Nationally, African-American medical students experience challenges in U.S. medical education programs, including isolation, lack of mentoring and mentors who look like them, lack of connectedness to mentors, difficulty building relationships with mentors, feelings of imposter syndrome, underrepresentation, and interactions involving microaggressions (Christophers et al., 2021; Faison, 1996; Najibi et al., 2019; Price, 2019; Whaley, 2021). Investigating African-American medical students' experiences with faculty mentoring could generate valuable data to aid in the development, experiences, and achievement of African-American medical students matriculating at UK COM. This study will also consider African-American medical students' involvement with informal faculty mentoring as a way to obtain a holistic view of faculty mentoring experiences. Furthermore, this study contributes to the body of knowledge regarding the African-American medical student mentoring experiences, which is an understudied area. Finally, this study contributes knowledge regarding the mentoring experience of African-American medical students on a satellite regional campus.

The Role and Importance of a Mentor

Historically, Homer's poem *The Odyssey* coined the word "mentor." While away at war, the King left his kingdom and child in the care of a man named Mentor. Mentor was wise, a trusted advisor, an educator, and a guide to support and develop mentees.

Currently, the word mentor can be used as a verb, meaning to advise or train, or as a noun to signify an experienced and trusted advisor (Nimmons et al., 2019). While

mentors may have numerous roles, medical student mentors tend to help students focus on achieving goals, such as practical skills, personal and professional development, research, and academic development (Nimmons et al., 2019). Nimmons et al. (2019) described five key elements to mentoring:

1. Mentoring should help the mentee to achieve short- and long-term goals.
2. Mentoring should include role modeling and help with career development.
3. Both mentee and mentor should benefit from the relationship.
4. Relationships should involve direct interaction between mentor and mentee.
5. Mentors should be more experienced than the mentee.

Additional research has noted that mentors should provide other elements, such as psychological and emotional support (Brunsma et al., 2017; Cohen, 1995; Kram, 1983; Miller, 2002), role modeling (Davidson & Foster-Johnson, 2001; Eby et al., 2013; Hernandez et al., 2017; Syed et al., 2011), career guidance (Cohen, 1995; Levinson, 1978), and skill development (Kram, 1983; Schockett & Haring-Hidore, 1985).

Over time, a mentor impacts many elements of a medical student's development and achievement, not only academically but professionally and personally as well (Boyd et al., 2019; Farkas et al., 2019; Hee et al., 2019; Lee et al., 2019; Nimmons et al., 2019; Ramanadham & Rohrich, 2018; Sheri et al., 2019).

Faculty Mentoring at UK COM

At the beginning of their education at UK COM, all students are assigned to a learning community. These communities consist of smaller cohorts of students grouped with designated faculty with whom students will develop a longitudinal relationship across their journey through medical school. While faculty within the learning

communities serve as an advisor, students may also build mentor relationships with faculty advisors (The difference between a faculty advisor and mentor is that a faculty advisor can advise you once and be done, but a faculty mentor usually knows your values and guides you through a process). Students work with other professionals in the field; however, the learning community advisor(s) is one of the students' primary source for mentorship at UK COM.

An additional source of mentors includes Advanced Development Directors (ADD's). An ADD is a faculty member in a given specialty dedicated to career counseling in their area of expertise. Students can meet with an ADD any time during their medical school career but are required to meet with the ADD in their specialty during their third and fourth years of medical school to learn more about their specialty and make additional faculty connections. Adding to the potential mentoring roster is another primary contact for students: a clinical coach. Clinical coaches are faculty members assigned to 5-8 students as part of a third-year course called Entrustment in Clinical Medicine (ECM). These faculty members lead small group discussions during ECM and meet with students individually throughout their third year of medical school to discuss career planning, provide feedback on clinical skills and help students prepare some of the general parts of their residency applications. Both ADD's and clinical coaches are seasoned professionals that also receive paid, protected time for their formal mentoring role.

Types of Mentoring Relationships

Mentorships are traditionally classified as either formal or informal relationships. While informal mentor relationships tend to be spontaneous and lack structure, formal mentoring relationships are managed by an organization and involve structure. Formal

mentoring may also involve selection and assignment procedures, such as assignment of mentors with learning community advisors, advanced development directors, and clinical coaches.

Statement of the Problem

There is a lack of literature regarding African-American medical students' experience with faculty mentoring. Therefore, because of this blind spot in the literature, there exists a need to study medical students' faculty mentoring experiences. In addition to the lack of literature concerning African-American students' mentoring experiences, there is a lack of literature about their mentoring experiences on a satellite regional campus. This study contributes to both of these important areas of study. This study also recognizes the national problem of a shortage of underrepresented clinicians, which tend to serve our underrepresented populations. Improving faculty mentoring for African-American medical students is one way to address the national shortage of underrepresented clinicians by providing guidance that can have an impact on retention.

Current State of Faculty Mentoring in U.S. Medical Schools

Currently, the Association of American Medical Colleges (AAMC) conducts an annual survey of 4th year medical students. Findings from these surveys are published in *The Medical School Graduation Questionnaire*. The survey report provides information about how useful students felt faculty mentoring was at their school and how satisfied students were with faculty mentoring. Results of the 2021 All Schools Summary report (Table 1.1) show that about 45% of respondents find faculty mentoring very useful, but approximately the same percentage of students find faculty mentoring not useful to moderately useful. Data from the Summary Report shows that graduating U.S. medical students tend to find faculty mentoring useful; however, there is a lack of racial/ethnic

information about African-American medical students' faculty mentoring experience. Specifically, there is a lack of qualitative and quantitative information regarding the mentoring experiences of African-American medical students. As a result, the data provided by the MSQ about usefulness and satisfaction with faculty mentoring may not appropriately inform the faculty mentoring experiences of African-American students.

Table 1.1 AAMC, Graduation Questionnaire, 2021 Summary Report

How useful were the following resources in learning about specialty choice and career planning?							
Percentage of Respondents Selecting Each Rating							
		Did not use	Not useful	Somewhat useful	Moderately useful	Very useful	Count
Advising/Mentoring							
All Medical Schools	2021	4.7	5.5	15.3	26.5	48.0	15,500
All Medical Schools	2020	4.7	6.2	15.1	26.3	47.6	15,432
All Medical Schools	2019	4.9	5.9	14.7	27.1	47.4	15,653
All Medical Schools	2018	5.0	6.3	14.8	27.8	46.1	15,414
All Medical Schools	2017	5.6	5.5	13.8	27.5	47.5	14,430
All Medical Schools	2017	4.0	4.9	20.0	37.9	34.4	6,303
Student Support: Faculty mentoring*							
All Medical Schools	2021	2.3	5.0	11.7	36.4	44.7	14,960
All Medical Schools	2020	2.5	5.6	11.5	35.7	44.7	14,781
All Medical Schools	2019	2.4	5.4	11.6	36.4	44.3	14,990
All Medical Schools	2018	2.5	5.5	12.3	36.3	43.4	14,730
All Medical Schools	2017	2.3	5.5	12.0	35.9	44.4	13,759

The Association of American Medical Colleges (AAMC) also does an annual survey of 2nd year medical students. This report, *The Medical School Year Two Questionnaire*, provides information about student satisfaction with faculty mentoring. Table 1.2 below is drawn from the 2020 All Schools Summary. Like the Graduation Questionnaire from 2021, Table 1.2 from 2020 below shows that second year U.S. medical students tend to find faculty mentoring useful; however, just like in the Graduation Questionnaire, there is a lack of racial/ethnic information about African-American medical students' experiences with faculty mentoring. Even so, Table 1.2 indicates that about 75% of respondents are either very satisfied or satisfied with faculty mentoring.

Table 2 - 1.2 AAMC, Year two questionnaire, 2020 Summary Report

	Very dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Count
Student Support: Faculty mentoring*						
All Meidcal Schools 2020	2.50%	7%	14.70%	39.40%	36.30%	9,563

From the data provided by the AAMC, faculty mentoring, in general, is a satisfactory experience among medical students. However, information about students’ mentoring experiences is lacking. In an effort to remedy this shortcoming, the focus of this study is to gain knowledge of African-American medical students’ experiences with faculty mentoring. Specifically, the investigation seeks to provide further detail regarding positive aspects of African-American medical students’ experiences with mentoring as well as information about the challenges these students face—to inform future medical student mentoring programs for this under-represented population of students.

Purpose of the Study

The purpose of this qualitative, cross-sectional, and descriptive research study is to gain knowledge about UK COM African-American medical students’ experiences with faculty mentoring. The primary goal of the study is to examine positive aspects and challenges experienced by African-American medical students. Such information will inform future mentorship programs to enhance African-American medical students’ medical school experience, boost achievement, and reduce unwarranted stress.

The study’s research questions are:

- 1) What are University of Kentucky College of Medicine (UK COM) African-American medical students’ experiences with faculty mentoring?
- 2) What are University of Kentucky College of Medicine (UK COM) African-American medical students’ experiences with faculty mentoring on a satellite regional campus?

Significance of the Study

The results of this research are intended to provide valuable information to several audiences. The primary audience includes medical school faculty, staff and students. By examining the nature of faculty-to-student mentoring experiences of African-American students in an undergraduate medical education program, medical school faculty and staff may gain meaningful insights to inform future programing and a greater understanding of the role mentoring plays in shaping the medical education experience for African-American medical students and inform and improve upon existing faculty-student mentoring programs in academic medicine. Student participants may also benefit from the opportunity to reflect on their medical education experiences within this learning context. Secondary audiences such as prospective students and parents may also benefit from study findings as they carefully weigh admissions decisions between medical schools that may or may not offer mentoring opportunities. Ultimately, the findings of this study are important, as it will add detailed student reports to the body of literature about student mentoring experiences.

Definition of Key Terms

Mentor – An experienced and trusted adviser. Someone who teaches or gives help and advice to a less experienced and often younger person. A steady, long-lasting relationship designed to promote the mentee’s overall development.

Mentee – Someone who is less experienced in a field or topic that receives guidance, help and advice from a more experienced individual (mentor).

Formal Mentoring – Formal mentoring refers to the faculty-to-student mentor model, in which there is a formal process where selected faculty advisors are paired with students. This is referred to as the traditional dyadic model of mentoring, in which an experienced individual (mentor) is paired with a less experienced individual (mentee).

Informal Mentoring – Informal mentoring refers to the faculty-to-student mentor model, in which there is not a formal process in which selected faculty advisors are paired with students. Rather, either person may initiate the mentoring relationship, and the relationship may be loosely structured.

African-American Medical Student – Any individual currently enrolled as a medical student in the UK COM educational program that leads to a terminal medical degree, and has officially noted their race/ethnicity with the UK COM Registrar as Black/African-American, Black/Hispanic.

Overview

This chapter presented the introduction, statement of the problem, purpose, research questions, significance of the study, definition of key terms, and a summary of the study. Chapter 2 reviews relevant research on the topic. Chapter 3 describes research methods used in the study, including the design, instrumentation, and data collection and analysis. Chapter 4 reports results of the study and presents the data and analysis of the surveys. Chapter 5 concludes with a discussion of the results, implications of the results for best practices, and recommendations for future research.

Chapter 2: Literature Review

General Mentoring Relationship

In her groundbreaking work, Kram (1983) proposed four separate phases in the development of a mentoring relationship. The four phases included initiation, cultivation, separation, and redefinition. The first phase, initiation, is the start of the relationship and spans a period of six months to a year. This period highlights high expectations of mentees and mentors to develop a long-lasting relationship. If the relationship grows into a mentorship, it moves to the second phase: cultivation. This stage may last up to five years, and this cultivation stage is when the relationship between the mentees and the mentor strengthens. After the cultivation stage, the third phase is separation, and this phase can last between 6 months to two years. This stage involves a mental and fundamental shift in the relationship based on living in different geographical locations and decreased expectations. The final phase is known as redefinition. This phase may occur over an undetermined time period and is the end of the mentor-mentee relationship, in which the relationship is not established again, or it is redefined as an informal peer-to-peer relationship. Throughout the phases of mentoring, students will encounter benefits and challenges, highlights of which are shared below.

In general, a couple of the highlighted benefits of mentoring during the first phase of initiation are the opportunity to connect with first generation students or URM students who may not have had the guidance and mentorship necessary to excel (Ortega, 2020), and the opportunity for students to observe a positive role model (Adoga et al., 2019; Dave & Patel, 2020). However, a few of the challenges in the first phase of initiation are the mentors' ability to nurture personalized mentoring relationships and the mentor's

availability (Farkas et al., 2019; Sheri et al., 2019), as well as the lack of mentor training and clarity of the mentor role (Nimmons et al., 2019). In regard to the second phase of the mentor relationship, cultivation, some of the highlighted benefits are the following: students enhancing learning and research skills (Boyd et al., 2019; Mimmons et al., 2019; Romanadham & Rohrich, 2018), career development (Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Farkas et al., 2019; Romanadham & Rohrich, 2018; Scott et al., 2019), providing networking and collaborative opportunities (Burgess et al., 2018; Farkas et al., 2019; Jha et al., 2019; Nimmons et al., 2019), and fostering work-life balance (Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Romanadham & Rohrich, 2018). However, some of the challenges during phase two, cultivation, are a lack of structured mentorship and a lack of incentives for mentors and mentee to remain committed to the relationship (Jha et al., 2019), as well as unapproachable mentors and mentees time constraints (Barker et al., 2016 & Nimmons et al., 2019). Next, in general, the third phase of the mentor relationship, separation, presents the benefit for the mentee to take everything learned from the mentor relationship into their career to be as successful as possible. However, as Kram (1983) pointed out, there are challenges presented, such as the mental and fundamental shift in the relationship based on living in different geographical locations and decreased expectations. Lastly, in the fourth phase on the mentor relationship, redefinition, a general highlighted benefit is the ability to redefine the relationship and possibly create a long-lasting peer-to-peer relationship (Kram, 1983). However, a challenge may be ending the relationship (Kram, 1983).

Now that the general phases of the mentor relationship, benefits, and challenges have been explored, the following literature explores the socio-culturally informed

mentorship programs for African-American students in general. Later in the chapter, the literature review is specifically related to African-American medical students' faculty mentoring experiences in academic Undergraduate Medical Education settings, and will discuss benefits, challenges, and lack of socio-culturally studies to inform specific mentoring for African-American medical students.

Mentoring Programs for African-American Students

Researchers have examined a multitude of factors related to the mentoring of African-American students. Some studies focus on the nature of the environment (Allen, 1987; Wells-Lawson, 1994), and other studies focus on the faculty-to-student relationship (Ellis, 1997; Faison, 1996). The following literature examines the social environment experienced by African-American students in relation to faculty mentoring.

Mentoring has had an impact on academic performance and retention for African-American students (Allen, 1987; Himelhoch et al., 1997; Wells-Lawson, 1994). Most of the early research on undergraduate African-American students' mentoring experience in higher education focused on historically Black colleges and universities (HBCUs), but after educational benefits such as the GI Bill were established, African-Americans were able to attend HBCUs and Predominately-White Institutions (PWIs). Another turning point for African-Americans in higher education was the results of *Brown v Board of Education (1954)*, in which the percentage of African-Americans attending predominately-white institutions increased after 1954. Hence, the *Brown* decision eventually opened opportunities for African-Americans to advance academically and socially. Title VI of the Civil Rights Act (1964) also provided for federal regulations that prohibited the distribution of federal funds to colleges and universities that discriminated on the basis of race, color, or national origin. Initiatives such as the National Defense

Education Act (NDEA) and the National Defense Student Loan (NDSL) program also made it possible for more African-American students to enroll in college by providing necessary financial support. In addition, programs such as the Basic Equal Education Opportunity Grants (BEOG) and the Equal Education Opportunity program (EEOP) increased access for African-American students via direct loans and grants for low-income students.

However, it was not enough to solely enroll African-Americans. African-American students faced many challenges and concerns, such as discrimination and isolation, as they tried to adjust to the college environment. Therefore, research turned to comparing experiences of African-Americans students at HBCUs vs African-American students at PWIs. Allen (1987) found that African-American students at HBCUs were nearly twice as likely to claim excellent relations with White faculty compared to African-American students at PWIs. Similar to Allen, Wells-Lawson (1994) reported that African-American students at HBCUs experienced better relationships with faculty than did African-American students enrolled at PWIs. Research also turned to predictors of African-American student persistence. Himelhoch et al. (1997) examined 78 African-American students enrolled at PWIs and 217 African-American students enrolled at HBCUs, and their study revealed that faculty mentoring was a significant factor of persistence of African-American students at HBCUs and PWIs. In addition, for African-Americans enrolled at PWIs, faculty mentoring was the sole predictor for African-American persistence (Himelhoch et al., 1997).

The studies of Allen (1987), Wells-Lawson (1994), and Himelhoch et al. (1997) focused on undergraduate students; however, there are also studies that focused on

faculty mentors in graduate school. For example, Faison (1996) examined the effects of mentoring African-American students enrolled in graduate school at PWIs, and revealed the importance of mentors for African-American graduate students. However, African-Americans had issues with finding adequate mentor relationships due to a lack of available mentors (Faison, 1996). Faison (1996) found that African-American students could find advisors but could not find someone to help them navigate the predominately-white cultural setting. Furthermore, the cultural differences between white faculty and African-American students were also major hindrances in the development of mentoring relationships (Faison, 1996). Even though African-American students faced the aforementioned barriers, African-American students in Faison's (1996) study note that mentors were sought for support; guidance; networking; and academic, personal, and interpersonal needs. Participants in Faison's (1996) study voiced the importance of faculty mentoring to their experience and achievement. Faison (1996) concluded that mentoring African-American students at PWIs was invaluable to students' success and persistence; however, finding adequate mentors was sometimes difficult.

Ellis (1997) also provided research related to faculty mentoring of African-American students. Ellis (1997) examined the experiences of 67 African-American and white graduate students at a large PWI and found four major concerns of students. One of those major concerns was mentoring and advising. Concerning mentor relationships, participants noted that faculty mentors had a significant impact on students' satisfaction (Ellis, 1997). However, Ellis (1997) found that race and gender appeared to be a significant factor in determining successful mentoring relationships. White students were more likely than African-American students to have a good working relationship with

mentors (Ellis, 1997). Similar to Faison (1996), Ellis (1997) concluded that African-American students face barriers at PWIs that White students do not, and pointed out the importance of mentors within or outside the college to aid in achievement and development of African-American students personally, academically, and professionally. The findings from Faison (1996) and Ellis (1997) highlight the importance of examining the faculty-to-student mentor relationship's contribution to African-American student success.

Current research also suggests that African-American students face many barriers, barriers that faculty mentors play a critical role in surmounting. Some of these barriers faced by African-American medical students are underrepresentation, increased levels of stress, fatigue, lower quality of life and social support, physical and psychological health issues, and fewer faculty role models (Christophers et al., 2021; Grbic & Sondheimer, 2014; Mason et al., 2020; Redford & Hoyer, 2017; Romero et al., 2020). Other added hindrances for African-American students include stress about sharing vulnerability, tension around mentors not overly focusing on race while also not ignoring it, isolation, micro and macro aggressions, lack of social capital, financial stressors, and experiencing greater pressure to succeed because they are the school's face of diversity (Najibi et al., 2019; Price, 2019; Whaley, 2021). While research highlights the many obstacles of African-American students, research also revealed a common theme of faculty mentoring to overcome obstacles. Many of the benefits of faculty mentoring already mentioned in this chapter also apply to African-American students. However, some critical additional possible benefits are better student experience; increased student motivation; building network connections; building confidence; mental, physical, and social well-being;

academic, personal, and career development; and staying open-minded to challenges faced (Christophers et al., 2021; Mason et al., 2020; Najibi et al., 2019; Ortega, 2018; Romero et al., 2020; Whaley, 2021). This study seeks to gain a deeper understanding of faculty mentoring experiences of UK COM African-American medical students because we do not know about their experience.

Mentoring for African-American Students in academic UME settings

Student perceptions of faculty-to-student mentoring inform how best to assist medical students during their medical education career (Adoga et al., 2019; Dave & Patel, 2020; Kukreja et al., 2017; Nimmons et al., 2019; Ng et al., 2020). Since mentors play an important role in medical student success and career development, having a positive relationship with faculty mentors is likely to contribute to academic success, greater satisfaction with medical school, and enhancement of positive career development (Boyd et al., 2019; Farkas et al., 2019; Hee et al., 2019; Lee et al., 2019; Nimmons et al., 2019; Ramanadham & Rohrich, 2018; Sheri et al., 2019). Specifically, research suggests that mentors for medical students are helpful with the following: clinical and research skills, career development, retention and recruitment of trainees, personal and professional development of mentees, psychosocial support, job satisfaction, enhancing the curriculum vitae, improving critical thinking, increasing medical knowledge, providing networking and collaborative opportunities, fostering student development for competitive residency matches, preventing burnout, fostering work-life balance, building overall student wellness, promoting learning opportunities, and medical school satisfaction (Table 2.1).

Table 3 - 2.1 Mentee benefits from mentoring

Mentee benefits	Citation
Clinical and research skills	Boyd et al., 2019; Nimmons et al., 2019; Romanadham & Rohrich, 2018
Career development	Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Farkas et al., 2019; Romanadham & Rohrich, 2018; Scott et al., 2019
Retention and recruitment of trainees	Burgess et al., 2018; Nimmons et al., 2019; Romanadham & Rohrich, 2018
Personal and professional development of mentees	Burgess et al., 2018; Cross et al., 2019; Farkas et al., 2019; Hee et al., 2019; Lee et al., 2019; Meeuwissen et al., 2019; Nimmons et al., 2019; Romanadham & Rohrich, 2018; Sheri et al., 2019; Scott et al., 2019
Psychosocial support	Boyd et al., 2019; Burgess et al., 2018
Job-satisfaction	Burgess et al., 2018; Cross et al., 2019; Lee et al., 2019; Meeuwissen et al., 2019; Romanadham & Rohrich, 2018
Enhancing the curriculum vitae	Jha et al., 2019; Nimmons et al., 2019
Improving critical thinking	Jha et al., 2019
Increasing medical knowledge	Burgess et al., 2018; Jha et al., 2019; Nimmons et al., 2019
Providing networking and collaborative opportunities	Burgess et al., 2018; Farkas et al., 2019; Jha et al., 2019; Nimmons et al., 2019
Fostering student development for competitive residency matches	Farkas et al., 2019
Preventing burnout	Farkas et al., 2019; Romanadham & Rohrich, 2018; Scott et al., 2019
Fostering a work-life balance	Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Romanadham & Rohrich, 2018
Building overall student wellness	Farkas et al., 2019; Meeuwissen et al., 2019
Promote learning opportunities	Burgess et al., 2018; Meeuwissen et al., 2019
Medical school satisfaction	Farkas et al., 2019

In addition, current studies about medical student perceptions of the benefits of mentoring highlight the positive results that mentoring has on medical students (Adoga et al., 2019; Barker et al., 2016; Dave & Patel, 2020; Ng et al., 2020; Nimmons et al., 2019;

Ortega, 2020). As the studies mentioned in the previous paragraph and table, medical student mentoring can affect students' personal, academic, and career success. Medical students also mention other benefits of mentoring: observing positive role models, improving communication skills, identifying a letter of recommendation writer, boosting confidence, assisting in portfolio preparation, integrating students into team structures, improving consistency of the student experience, and supporting first-generation students (Adoga et al., 2019; Barker et al., 2016; Dave & Patel, 2020; Ng et al., 2020; Nimmons et al., 2019; Ortega, 2020).

Mentoring Challenges for African-American Students in Academic UME Settings

While there are many benefits of mentoring, there are nevertheless opportunities for improvement. Some challenges include the mentors' ability to nurture personalized mentoring relationships. For example, the mentor's availability, motivations, competencies, abilities, and experiences can have a significant influence on the mentee's needs, motivation, goals, experiences, commitment, and desired characteristics (Burgess et al., 2018; Farkas et al., 2019; Sheri et al., 2019). Jha et al. (2019) also suggest a lack of structured mentorship and lack of incentives for mentors and mentees to remain committed to the relationship add to the challenges with mentoring.

Nimmons et al. (2019) found other challenges to mentorship, such as lack of mentor training, a lack of clarity of mentor roles, and a lack of mentee engagement and interest. Additionally, challenges to mentoring noted by Nimmons et al. (2019) include the design and delivery of mentor programs, poorly defined expectations of the mentor role, mentors who have not received adequate training, and mentors with inadequate listening and feedback skills. Furthermore, mentee engagement with mentoring can pose a problem due to lack of student interest and lack of student participation (Nimmons et

al., 2019). One reason for students' lack of interest and participation can be mentors being assigned rather than self-selected by the mentee. In such cases, the mentorship relationship is less likely to be based on mutual respect and shared interest; therefore, the relationship is less likely to succeed (Burgess et al., 2018).

Barker et al. (2016) note perceived barriers to mentoring from the mentees' perspective, some of which include unapproachable mentors, mentor time constraints, a lack of opportunity to meet potential mentors, a lack of same-gender mentors, and lack of an official mentoring program at the institution. Other research highlights the challenges regarding some mentors' personal attributes and behaviors. For example, if mentors do not have personal attributes fitting for the faculty-mentee relationship, then challenges may arise, leading to a lack of student interest or students opting out of the faculty-student mentor relationship (Burgess et al., 2018). To counteract this challenge, Burgess et al. (2018) suggest that mentors should have certain personality traits, such as they should be generous, enthusiastic, motivating, patient, honest, responsive, and excellent at listening. Additionally, Burgess et al. note that mentors should be accessible to and compatible with mentees, even as they are able to assist mentees in reaching their goals (Burgess et al., 2018).

Lee et al. (2019) also suggest there are ethical issues associated with mentoring programs, including mentoring abuse, inadequate understanding of roles and responsibilities, poor alignment of expectations, and a lack of clear standards of practice. Other ethical issues identified by students include conflicts of interest, imbalance of power, and unrealistic expectations (Burgess et al., 2018). Yet, another challenge with mentoring is the mode of communication between mentors and mentees, in which

communication preferences range from in-person, email, group meetings, and one-on-one meetings (Scott et al., 2019). Poor communication in mentoring may lead to an unsuccessful mentoring relationship and a lack of collegiality (Burgess et al., 2018).

Chapter 3: Methodology

This chapter describes the methods and procedures proposed in this research study.

Researcher positionality, research design, instrumentation, data collection, and participant recruitment are presented. Additionally, the variables and data analysis that were employed are described. Since the purpose of this study is to examine UK COM African-American students' experiences with faculty mentoring, qualitative methods are used in the data collection and analysis process. The results of this study will be used as a resource to enhance faculty-student mentoring at UK COM, and to increase awareness of the role that mentoring plays in shaping the African-American medical student experience.

Researcher Positionality

As the Director of Student Services at the University of Kentucky College of Medicine (UK COM), I work with administrators and students to identify opportunities that are designed to help students prepare for their professional roles after graduation. Since the population for the study involves the students that I work with at UK COM, I made every attempt to set aside my assumptions, feelings and preconceptions by “bracketing” my experiences throughout the research process. The intent of bracketing is to minimize researcher bias in data collection, analysis, and interpretation (Hatch, 2002). It is my purpose to contribute to the knowledge base with respect to faculty mentoring in the field of undergraduate medical education (UME).

Research Design

This study utilized a cross-sectional methods approach. The qualitative method employed focus groups with questions from Appendix C as the instrumentation. Focus

groups were used in this study because they provide a qualitative approach to gain an in-depth understanding of issues. They accomplish this by obtaining data from a purposely selected group of individuals, who are UK COM African-American medical students.

Since medical students have pre-clinical curriculum (M1 and M2 student years) and clinical curriculum (M3 and M4 student years), the focus groups were divided to include M1's and M2's in a focus group and M3's and M4's in another focus group. Students on satellite regional campuses were grouped in the same manner, but separately from main campus students. Each focus group conducted had no more than five participants. These smaller focus groups provided an opportunity for a more "intimate" discussion, as well as set the design up for a more relatable conversation for each focus group. To effectively gather data that addresses the purpose of this study, qualitative methods were used to answer the following research questions:

- 1) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring?
- 2) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring on a satellite regional campus?

To answer the research questions, all responses were transcribed. The transcriptions were coded and organized to determine pertinent themes related to the mentoring experience between African-American medical students and faculty.

Instrumentation

To address the research questions, focus groups were conducted on a selected date and time that is best for the researcher and research participants within each group. The focus group guide consists of four questions. Initial focus group questions were shown to at least two Deans and two medical students at UK COM for their feedback. The questions, citations, and importance of questions included in the focus group guide are in Appendices C and D. This study asked participants to share their experiences with faculty mentoring at UK COM. Participant responses during the focus group sessions were recorded, and then Descripts, a web based transcribing program, was used for transcribing. To code data, this study used Dedoose, a web-based application that allows one to organize and analyze research data.

Sample Frame

This study focuses on UK COM medical students that are located at the main Lexington campus, and students that are located at the satellite regional campuses (Bowling Green, Northern Kentucky, and Morehead). This qualitative study is based on a targeted population of 35 African-American medical students ($n = 35$) enrolled at UK COM campuses. Fourteen of the students will be M1's with six students from the main Lexington campus and, eight students from the satellite regional campuses. Eight of the students will be M2's, with three of the students from the main Lexington campus and five from the satellite regional campuses. Six of the students will be M3's, with four students from the main Lexington campus and two from the satellite regional campuses. Seven of the students will be from the main Lexington campus (there are no M4 students on the satellite regional campuses). Participants do not include students who are on leave of absence or students that have withdrawn from UK COM. Only

African-American students who are currently enrolled as a medical student in the UK COM educational program that leads to a terminal medical degree will be recruited for this study.

Participant Recruitment

For participant recruitment, the researcher asked the medical student notes coordinator to include the research participation request in the medical student notes that goes out weekly to all UK COM medical students. Potential participants received an electronic recruitment letter (Appendix A) that explained the purpose and details of the study, as well as shared informed consent information. The recruitment letter informed potential participants that their responses are voluntary and that they can skip any questions if they want. Additionally, potential participants were informed that many individuals find satisfaction in knowing their contribution may help their education or future UK COM students; they also received \$10 in cash to participate. Ten dollars were given to each student participant after they completed the research participant acknowledgement of participation and compensation consent form and the focus group has ended. The researcher brought the acknowledgement of participation and compensation consent form to in person focus groups for students to sign and receive their \$10 cash after participating in the focus group. If the focus group was via Zoom, then the acknowledgement of participation and compensation consent form was emailed to participants to sign. After the form was signed, the student received their \$10 cash via their preferred mailing address (Appendix E). Participants were notified that responses will be anonymized as much as possible through the use of pseudonyms. The electronic recruitment letter was sent at a convenient time for students to read and

determine if they would like to participate.

Due to limited responses from the recruitment letter sent in the medical student notes, the researcher also placed a recruitment flyer (Appendix F) in common student areas at all UK COM campuses. An unintended form of recruitment came from the SNMA minority student organization seeing the recruitment letter in the medical student notes and the students took it upon themselves to share on their student organization listserv. Also, many participants decided to spread the word about the study, so word of mouth also became unintended recruitment. The unintended recruitment within this study may be related to the trust and impact that the researcher has with the students in her role at UK COM. When potential participants believe in the researcher, they may be more likely to participate and spread the word to other potential participants.

Data Collection

To answer research questions one and two, 1. “What are University of Kentucky College of Medicine (UK COM) African-American medical students’ experiences with faculty mentoring?” and 2. “What are University of Kentucky College of Medicine (UK COM) African-American medical students’ experiences with faculty mentoring on a satellite regional campus?”, this study used focus groups and asked questions from a structured focus group guide (Appendix C). Data collection and focus groups did not occur until review of the study and approval was granted by the University of Kentucky Medical Institutional Review Board (IRB). Focus groups were conducted in person or via Zoom. If the focus group was in person, focus groups were conducted at a private room location on the University of Kentucky campus.

Consent was obtained from each participant in the focus groups following a discussion explaining the purpose of the study. Prior to the start of each focus group, the consent information was read aloud to participants. Participants then had the opportunity to acknowledge consent by staying for the focus group or leaving the focus group before the researcher began with the focus group guide questions. A copy of the consent form was also provided to participants for reference. Also, a detailed copy of the focus group script was provided to each participant during focus groups to refer participants to.

A semi-structured focus group guide (see Appendix C) was used to guide each focus group. The participants were informed that the focus group will take up to 30 minutes maximum. An encrypted recording device was used for recording responses in a confidential manner with no identifying features of the participants, to protect participant identity. In addition, each participant was given a pseudonym. These steps will make the study as anonymous as possible.

The demographics of each participant (gender, race/ethnicity, class year, age, and first-generation status) were obtained from each student participant. Focus groups were conducted by medical student class year. All data collected is kept confidential.

Data Analysis

Data analysis began with transcribing the focus group discussions and data being organized by medical class year status. The audio recordings from each focus group were uploaded to Descript for automatic transcription. The researcher will identify voices on the audio recording by labeling the researchers voice as “Interviewer” and identifying each participants’ voice and labeling participant voices by each participants’ pseudonym. The researcher knew what to label each participant

because the participants changed their Zoom name on the screen to their pseudonym, and before each participant spoke during the focus groups, the participants said their pseudonym. When it comes to the focus group that was in person, the participants did the same thing by announcing their pseudonym prior to speaking, and the voices were distinguishable because there was one male and one female. Since Descripts is able to transcribe participant voices using voice recognition, the researcher noted in Descripts how many individuals were in the focus group speaking. Then Descripts was able to find the different voices and play a clip of each voice so the researcher could label each individual with their pseudonym for transcription. After transcription was complete in Descripts, the researcher verified written text via recordings and vice versa. The researcher verified written text within 24-48 hours after the focus group because the researcher was more familiar with the focus group content and speakers a short time after the focus group.

Once the researcher was satisfied with the accuracy of the transcription, the researcher exported the transcription and stored it on a password-protected computer. The researcher repeated the previous steps for each focus group session. Then the researcher uploaded each focus group transcription to Dedoose to begin coding and identifying recurring themes. This research study used In Vivo coding, which is coding that uses a word or short phrase from the actual language found in the qualitative data record (the terms used by participants themselves). This study also used the splitting technique with the In Vivo coding, which refers to splitting the data into smaller codable moments (micro-coding). Once text was coded and themes arose, the researcher used the data to provide a deeper understanding of the research problem and

make suggestions to UK COM Deans about faculty mentoring of African-American medical students. Also, in direct response to the research questions, the researcher will review policies and procedures concerning mentoring at UK COM and propose updates to policies and procedures, as well as develop an evaluation process for mentoring at UK COM.

The researcher used member checking to solicit feedback from the interviewees and determine the accuracy of the data report. Once the themes were developed, they were sent to participants for review. Participants were asked to respond to the relevance of the themes based on their perceptions of faculty mentoring at UK COM. Participant feedback will be incorporated into the final research product.

Limitations

This study does not include a large number of African-American students; however, there is a limited sample frame available (n=35). This small sample size makes it difficult to determine if particular outcomes in this study are true findings and limit the researchers' ability to generalize. However, the scope of this study is set up as an individual case study, and the set-up of this study allows concentration on improving faculty mentoring for UK COM. In addition, with the lack of African-American students available to participate, this may add a limitation of few students wanting to participate if they feel that responses may be easily traced back to them. Furthermore, there were no M4 students on regional campuses, so this had an impact on the researcher's ability to receive upperclassmen perspective on regional campuses. Therefore, this study did not meet saturation, but leads to next steps. To counteract some of the limitations, this study includes protection of anonymity as much as

possible, low to minimal risk to participate, and a monetary incentive for participation. Furthermore, the responses of the participants cannot affect the students' academic or personal standing within UK COM.

Chapter 4: Results and Analysis

Introduction

The purpose of this research was to study the UK COM African-American students' experience with faculty mentors. Two research questions were central to the study: (1) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring?; (2) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring on a satellite regional campus?

This study utilized a cross-sectional methods approach. The qualitative method employed focus groups with questions from Appendix C as the instrumentation. The study was conducted with a targeted population of UK COM African-American medical students. A call for participation was sent in the weekly medical student notes newsletter that all UK COM medical students receive via email. A population of 35 enrolled UK COM African-American medical students had the opportunity to see the call for participation in the medical student notes newsletter. Of the population, a total of 14 students participated in the focus groups, constituting a response rate of 40%. To address the low response rate, flyers were hung up in common student areas across campuses. Also, cash was offered for participation. This chapter presents a qualitative analysis of the study's results.

Demographic Data

Demographic data is provided for the sample population based on the number of students who actually participated in a focus group. Within the population of UK COM self-identified African-American students that participated in this study, 64 percent were

female (9) and 36 percent were male (5). The age range of participants were between 22-32 years.

Findings

The below findings are separated by research question one and research question two. The researcher used In Vivo coding, which is coding that uses a word or short phrase from the actual language found in the qualitative data record (the terms used by participants themselves) to develop categories. After coding participant responses, the researcher developed three overarching categories that captured the essence of participant responses. The three categories are career and school related experience, formal mentoring experience, and improvements. The career and school related experience section provides insight from participant responses about career and school related benefits and challenges, such as networking, work-life balance, navigating medical school, and learning about research and scholarship opportunities. The formal mentoring experience section provides insight from participant responses about mentor programming, such as the Mentor from Matriculation program and the Introduction to Clinical Medicine (ICM) course. The improvements section provides insight from participant responses about how they feel UK COM can improve mentoring, such as more faculty mentors of color and more programming. Analysis of the four focus groups (one focus group including five M4 participants, one focus group including four M2 participants, two focus groups including two M1/M2 participants, and one focus group including one M1 participant) revealed the following for each research question.

Research Question 1: What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring?

The questions in Appendix C were asked of each focus group to understand the UK COM African-American medical students' experience with faculty mentoring. To understand their experience, all focus groups were audio recorded, transcribed, and then coded, using in-vivo coding, to develop pertinent themes to the UK COM African-American medical students' faculty mentoring experience.

Career and school related experience

Majority of the participants shared that mentors are helpful to their career-related experience in regards to networking, career advice, personal advice, being a role model, boosting confidence, learning skills, and work-life balance. For example, Ashley shared that "I think that it's great to have somebody who's already established and, you know, acting like a role model or it could be your own role model. Um, and it's nice to see it in action and it gives you kind of like hope and confidence to someday be like that." Additionally, Ashley shared that "you can kind of pick and choose the things that you like about what they're doing and kind of add it to, uh, your own routine."

Simone shared that in her experience mentors have been helpful concerning learning what specialty that you may not want to go into if you see that the mentor does not have a good work-life balance or if the mentor's life is not what you would like for your future. Xavier added that he has done most of his shadow work with faculty mentors that are African-American, and that has been a largely positive experience.

Participants also shared that mentors are helpful with school related experiences. For example, Abby said, "I feel like mentorship really, when you look back at it really just is essential for the entire process. Um, because I know for me, my mentor, she gave me general stuff to succeed in years one and two to set your stuff up for success. But

when year three and year four came around, she really broke it down for me to be the most successful applying to OB/GYN. And I had no idea, you know, what to do prior.”

Keith shared that his experience with mentors has helped him seek out opportunities that he may not have sought otherwise. Keith mentioned mentors helped him with scholarship opportunities, leadership opportunities, and opportunities to present at conferences. Keith said “without some of those conversations, um, I might not have come across or felt confident doing those types of things on my own,” and he went on to say mentors “promote myself in like my specialty.” Myra added that her mentor was very supportive and said that her mentor “certainly helped open some doors that, um, I don't think would've been available if I were to not have that mentorship opportunity with her.” Additionally, Anna said about her mentor, “she's opened up a lot of connections for me, um, like a lot of research opportunities.”

Myra shared that mentors helped her with the transition between class years and with the sense of belonging. Myra stated, “I think there was a sense of that I didn't belong in the specialty that I was wanting to pursue. Like a big sense of that. And so I think, at least for me, one of the most important aspects of like what mentorship gave me is the sense that like, I do belong and that I should pursue and I wanna pursue irrespective of the lack of representation in the field that I'm wanting to go into.” Additionally, Maya stated that “the unfortunate bias that still persists in the field that I want to go into. Um, I think mentorship was a, like, it was a very big impact in keeping me motivated and keeping me in a head space that like, it's okay to do what I want to do, even though I don't see people like me doing it.”

Mia added that mentors help you refocus. Specifically, Mia stated “I think what's also super beneficial about it is we're very much, um, focused on like what we're doing in the moment, studying for classes, studying for exams, and doing well and sometimes you just get kind of trapped in that mindset, and I think a mentor just kind of, um, refocuses you and like just shows you the bigger picture of like everything you're working towards.” Additionally, Darlene said that in her experience mentors have been helpful to reach out to since medical school is tough every year. Darlene also shared that mentors are helpful for advice, brainstorming, asking questions about success and the process, and just having a friend. Kenny summed up the value of mentors by saying “And I think medical school is, the ultimate challenge for me that I've had to do, and if I needed my mentors to get here, I can only imagine how much more do I need them in the competitive and difficulty of medical school.”

From this section, the positive influence of mentorship on career and school related experiences is gleaned. Specifically, participants highlight the mentor's ability to serve as a role model and an example of work-life balance, including positive and negative examples. The positive and negative examples serve a purpose for students to learn what to do or what not to do, in which both circumstances provide a learning opportunity for students. Additionally, the opportunity to observe a mentor may help a student decide if they would like to enter a specific specialty. Furthermore, this section highlights the mentors' influence on thinking through the entire process of medical school and navigating transitions in medical school, in which M1 and M2 transition years are very different from M3 and M4 transition years. In M1 and M2 years, students spend most of their time in classrooms and labs. However, in M3 and M4 years, students

transition to clinical settings. A couple of the participants mentioned that they are first generation students and shared that mentors are especially helpful with transitions for first generation students as well. Not only are mentors helpful with transitions and the entire process, but participants shared that mentors are helpful with guiding students to find research and scholarship opportunities, as well as helping students to refocus. While participants shared many benefits of mentorship in this section, there were several challenges mentioned in focus groups, such as lack of faculty mentors of color, a need for more programming, and issues with availability of mentors. Those challenges are presented in more detail in the following sections.

Formal mentoring experience

Participants also shared details about their formal mentoring experiences through courses such as ICM and ACM, through mentorship from the learning communities “houses”, and experiences through the Mentor from Matriculation to Graduation program, which is a program at UK COM that matches African-American students with an African-American mentor from matriculation to graduation.

Abby shared that through the Mentor from Matriculation to Graduation program (MMG), she was paired with an OB/GYN and her experience has been great. Abby shared that the experience got even better when she realized that she wanted to do OB/GYN in third year and it helped because Abby and her mentor were able to talk plainly about being a woman of color in medicine. Anna added that she also had an amazing experience with the MMG program. However, Alicia shared that her experience was not so great. She shared issues of lack of communication, lack of commitment, and sometimes experiencing no responses. Keith added that his experience was not as great

either. Keith shared that he was paired with someone who was not in the same specialty as what he wanted to pursue and that hindered the experience. Mia added insight about the MMG program that suggests sharing details with prospective students. Mia said that if prospective students know they will be matched with an African-American mentor, then it may encourage more African-American students to apply and really consider coming to UK COM because there are reservations due to the lack of African-Americans.

Alicia stated that “through like ACM and ECM when we were having those courses, those faculty, um, they were available and able to answer my questions. I know Dr. Crain specifically; she helped me get into one of the AI’s that I needed. So super helpful.” However, Alicia did bring up the fact that Dr. Crain is not a woman of color and is not able to relate to those experiences. Additionally, Edward shared that he was mentored through ICM and his experience was great. Edward also shared that he has received mentorship through Fam track, a program available to mentor students interested in family medicine. He shared that Fam track members are really interested in educating medical students and they really want to see students grow. Furthermore, Simone shared that through ICM, her mentors have been available to discuss anything she is interested in and that they are open to mentoring her. Kenny had similar experiences with his mentor as well. Kenny shared that he has met with his house mentor multiple times and that his house mentor is very involved with students. Kenny also shared that he’s had a great experience with the MMG program. He stated, “it’s great to have faculty mentors and when you get a mentor who’s a physician of color, it adds an extra layer, you know.” As far as ICM, Kenny shared that his ICM mentor is “super great.” He said that when he shared his background with his ICM mentor, she connected him with a physician who has

similar interests. Darlene added the perspective of having a formal mentor as a first generation student. Darlene shared that being a first generation student, formal mentoring has helped her navigate medical school. Darlene said that in her experience mentors helped her gain knowledge and support that other students may have, but that she wouldn't have without mentors. However, Ashley had a different experience with formal mentors. Ashley shared that she would meet formal mentors randomly and then have one or two meetings with them. Then, after that, Ashley was not sure if she was bothering them because the mentors tend to be really busy. So she started to figure out who else was a mentor and found that having a list of mentors available would be very helpful.

From this section, positive aspects and challenges with mentor programming are gleaned. While some participants had wonderful experiences with programming, others did not. For example, some students were matched with a mentor from the MMG program that fit their needs and personality well. Other students were matched with mentors through the MMG program that did not meet their needs or match their personality, and therefore there was a lack of ability of the mentor to effectively mentor. Other students brought up the challenge of lack of communication and commitment from mentors, which also harmed the mentor-mentee relationship. However, some students expressed positive experiences with mentors in ICM, ACM, and through Fam track. Specifically, one student was helped by a mentor to get an Acting Internship (AI); one student shared that a mentor heard about their interests and the mentor helped the student with networking; and another student shared about positive experiences with the availability and communication of formal mentors. Another student brought up her experience as a first generation student and expressed that mentors have helped her

navigate medical school and gain knowledge and support that she may not have received otherwise. While students expressed positive aspects and challenges of mentorship in this section, an overall concern was the lack of programming. Students expressed their interest in more faculty mentorship at UK COM, especially mentorship from faculty of color.

Improvements

Participants offered insight on ways that UK COM may improve faculty mentoring. Majority of the participants shared that improvements include more faculty of color, more formal programming, more informal meetings, more resources, and more frequent meetings with faculty mentors. For example, Myra shared that, “to my knowledge, there's no faculty of color that are within like the general surgery department. Um, so when it came to about third year where I was like, um, very much wanting to pursue surgery, this is what I wanna do. Um, I think a lot of that relatability that comes from a person of color was not there.” Additionally, Mya stated that “Um, just like advice and navigating those territories from being a like, well, like female, a black female. Like I wasn't able to get that like anywhere else because again, our faculty is, is predominantly white. So I think I've tremendously missed that opportunity.” Lastly, Myra stated, “I wish we had more faculty of color that were in those like more competitive specialties, it would've been a lot more helpful.” Additionally, Keith shared “I feel like a lot of my mentors too, haven't necessarily, um, looked like me or have been from, you know, backgrounds underrepresented, but have been willing to at least mentor me on kind of the steps that I need to take in general to just do well as an applicant.” Keith also shared that

although mentors have been willing to help, there is a definite lack of more relatable conversations about just navigating medical school as a person of color.

Edward shared that it would be more beneficial if he could relate more with a mentor and have a mentor that he can envision himself being in the future. Specifically, Edward shared that “I think if UK COM had more faculty members of color that would be great because all the faculty members I’ve been mentored by have not been people of color. So it was just harder, I feel like to relate, um, for them to understand me.” Simone echoed Edward in saying that “we definitely need more faculty mentors of color to, um, be guides for us, so um, that is one really important point.”

Myra shared that time commitment and resources are two areas of improvement. Myra shared that she has had issues with mentor availability, as well as finding resources like a list of mentors when her mentor is unavailable. Simone also shared about the issue of time constraints and how hard it is coming into medical school knowing that the African-American students are all reaching out to the same very limited pool of African-American mentors. Additionally, Alicia agreed with time commitment being an issue and suggested that before someone agrees to be a mentor they should make sure they have the time and are willing to commit to students. Anna added that having a contract between the mentor and mentee would be helpful to develop expectations and goals and decide how and when they want to meet. Additionally, Ashley shared that she was expecting more of an ongoing meeting or frequent touching base with African-American mentors. She shared that a benefit may be enriching conversations that help students think about things that they may not otherwise think about. Mia added that a frequent gathering would help students to connect to their mentor, as well as other mentors. In addition,

many of the participants mentioned that their mentor is not in their specific specialty, so meeting other mentors of color and personalizing the mentor experience would be beneficial. Furthermore, Kenny shared that mentor matching would be helpful if students can rank their specialties of interest and be paired with a mentor that meets their interests. Additionally, Keith recommended group mentoring in an informal setting. Keith's idea is if a faculty member opens their home to an informal meeting for students to talk and faculty to check on students, it will be very helpful. Lastly, Xavier shared that some more programming like the Mentor from Matriculation to Graduation program would be helpful to the African-American student mentor experience.

From this section, improvements for faculty mentoring at UK COM are gleaned. Participants suggest improvements such as more faculty of color, more formal programming, more informal meetings, more resources, and more frequent meetings with faculty mentors. For example, participants expressed challenges with finding mentors of color, especially in the competitive specialty fields like Surgery. Without mentors of color, participants shared challenges of relatability. While participants expressed the issue of lack of faculty mentors of color and relatability with mentors, they also shared that mentors that are not of color have been as helpful as possible in general. Additionally, participants shared that mentor time commitment and resources are other areas for improvement. Some specific areas of improvement for commitment with mentors are responding to correspondence and availability. As far as resources are concerned, participants expressed interest in having a list of mentors available, interest in having informal gatherings with mentors and mentees, and additional programming. Furthermore, participants shared that it would be helpful if students can rank their

specialty interests and be matched with a faculty mentor that is within a specialty of interest.

Research Question 2: What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring on a satellite regional campus?

When exploring the University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring on a satellite regional campus, this study ran into a limitation. While the number of African-American medical students on the main campus in Lexington is sparse, the number of African-American medical students on the satellite regional campus is even more sparse. For example, there are no African-American medical students at UK COM satellite regional campuses in the 4th year class. There are two African-American medical students at UK COM satellite regional campuses in the 3rd year class. Therefore, this study received no participation from upperclassmen medical students. However, UK COM is making improvements with the number of African-American medical students across campuses in the incoming classes. Although numbers of African-American students are increasing at UK COM, this study was limited on student participation.

Despite efforts such as sending out a call for participants in the medical student newsletter, hanging flyers in student areas on the satellite regional campuses, and offering cash to participate, this study only received two satellite regional students that agreed to participate, which is a limitation of the study and suggestion for further research. This study recruited one out of five African-American student participants from the satellite

regional campuses in the 2nd year class. This study also recruited one out of eight African-American students from the satellite regional campuses in the 1st year class. Based on responses from the two satellite regional students who participated, limited experiences were captured. Those experiences glean insight on benefits and improvements needed, as well as why the number of African-American students on the satellite regional campuses may be so sparse.

One of the findings of this study is the limited number of African-American students on the UK COM satellite regional campuses. A couple of students shared insight on why there may be limited African-American students on the satellite regional campuses. Ron shared that going to a regional/rural campus, he expected to be treated one way as an African-American, but he actually was treated with the utmost respect and surprisingly received “southern hospitality.” Ron’s statement shares insight that the number of African-American students at the satellite regional campuses could be low due to perceptions of what the experience may be at the location. However, another participant on the Lexington campus shared additional insight. Anna shared that her first choice was actually a satellite regional campus; however, she was not accepted to that campus. She was instead accepted at the Lexington campus and that is how she ended up in Lexington rather than a regional/rural campus. This adds insight on the fact that our satellite regional campuses only select 30-35 students per incoming class, in which those limited numbers may exclude some students that may be interested in a satellite regional campus.

In addition to sharing about the limited number of African-American students on the satellite regional campuses, our satellite regional campus students also shared insight

about benefits of mentoring and improvements needed. Some benefits of faculty mentoring that our satellite regional students shared are the southern hospitality, networking, being able to learn from experienced mentors, receiving tips on how to study, and having someone to talk with when class is not going well. Furthermore, Ron shared that mentors also help you with how to apply what you are learning. Ron stated that having a mentor is like you pick up things little by little and mentors show you how to conduct yourself while you're transitioning from the mindset of a student with little to offer to a physician with a lot to offer. Ron referred to this as learning how to be a patient advocate and learning that you have an important role, which gives Ron and other students' confidence.

Ron and Regina also shared that the Mentor from Matriculation to Graduation program has been one of the most beneficial experiences for them. Regina shared that she and her mentor have a lot in common and they were able to hit the ground running and everything has been great. However, Ron suggests that the Mentor from Matriculation to Graduation program should be shared earlier rather than randomly a couple months into the first semester. Ron's suggestion was to share that program during orientation week. Specifically, Ron stated, "I think it's pretty valuable to get that stuff early on and I feel like having the chance to, um, to like watch someone who's experienced and skilled in those fields, like do what they do and you can kind of pick certain things from them and from other people as well. And you can kind of integrate that into your own like learning process. I think that just makes anyone, just a better position in the long run."

Additionally, Regina shared that her mentor is located in Lexington and not on the satellite regional campus. Therefore, Regina has to meet with her mentor via Zoom,

which limits the personal touch to mentorship unless satellite regional students are willing to drive to meet their mentor. This limitation leads to the main improvement that our satellite regional student participants suggest and that is to have more faculty of color. Concerning improvement with faculty mentoring, Regina stated, “I think an obvious thing would be diversity, like trying to hire more people, um, from diverse backgrounds.” She shared that she knows UK is working towards that and also shared that she feels it is kind of hard to get faculty of color at satellite regional/rural campuses and to stay there because they may not want to stay in a rural area, in which there is nothing UK COM can do about that. Furthermore, based on that only one of her professors was a minority during her Anatomy course, Regina did add that it would be nice to have more faculty of color.

Overall, both of the satellite regional campus students summed up their faculty mentoring experience as being positive. Ron shared that his experience has been very positive and that he has not encountered any negative experiences. Ron further shared that everyone has been overly nice and that was surprising considering the stigma of what you think when coming to the South. Additionally, Ron shared that he has done some shadowing with African-American and non-African-Americans, that and he has been treated with respect, and that race has not been an issue. Regina summed up her experience with faculty mentoring as being great and shared that mentors have been “super nice,” very attentive, and really interested in her progress and success.

Summary

The purpose of this chapter was to present the general findings of the study regarding the UK COM African-American medical students’ faculty mentor experience.

For research questions one and two, a few major categories emerged from the data related

to the faculty mentor experience. Those were benefits of faculty mentoring in regard to career related experience, benefits of faculty mentoring in regard to school related experience, formal mentoring experiences, and improvements for faculty mentoring.

Chapter 5: Discussion and Conclusion

Introduction

The beginning of medical education for many students, particularly African-American students, may be consumed with unfamiliar territories and personal adjustments. This may be especially true for African-American medical students enrolled at predominately White institutions. Faced with the feeling of imposter syndrome and isolation, African-American medical students may seek mentors. These mentors may form from interacting with faculty during courses, advising appointments, or informal interactions. Throughout a medical student's career, mentors are critical to the personal, professional, and academic well-being of African-American medical students. Therefore, it is important to examine the UK COM African-American medical student experience with faculty mentoring, especially the faculty mentor experience on a satellite regional campus.

Key findings reveal that African-American medical students experience isolation, lack of mentoring and mentors who look like them, lack of connectedness to mentors, challenges faced with building relationships with mentors, feelings of imposter syndrome, underrepresentation, and microaggressions more than do majority students (Christophers et al., 2021; Faison, 1996; Najibi et al., 2019; Price, 2019; Whaley, 2021). Although African-American students face these many challenges, studies show that mentors can have a positive impact on African-American students' experiences (Adoga et al., 2019; Barker et al., 2016; Dave & Patel, 2020; Ng et al., 2020; Nimmons et al., 2019; Ortega, 2020). The following section addresses key findings related to those positive impacts and challenges experienced within the faculty-student mentor relationship.

Summary of findings

In this study, the focus was on the mentoring experiences of African-American medical students at one institution. Of interest was how this select group of participants interpreted their mentoring experiences within the context of being enrolled at a predominately White institution, as well as being enrolled at a predominately White institution on a satellite regional campus.

Two main research questions guided this study: (1) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring, (2) What are University of Kentucky College of Medicine (UK COM) African-American medical students' experiences with faculty mentoring on a satellite regional campus?

UK COM African-American medical students' experience with faculty mentoring

In answer to the first question, the results showed varied experiences with faculty mentoring of the African-American students enrolled at UK COM. A few categories seemed to characterize their experiences, which are career related experiences, school related experiences, formal mentor experiences, and improvements for faculty mentoring. Specifically, participants mention benefits of mentoring related to career experiences, such as networking, work-life balance, career development, and personal/professional development. Current research supports these findings. For example, research suggest that mentorship provides networking and collaborative opportunities, such as opportunities to network and collaborate within specialties or network and collaborate through more broad opportunities like general conferences and meetings (Burgess et al., 2018; Cross et al., 2019; Lee et al., 2019; Meeuwissen et al., 2019; and Romanadham & Rohrich, 2018). Concerning school related experiences, participants mention benefits

such as clinical and research skills, learning opportunities, navigating difficult medical school transitions, and help with getting into particular internships. Current research supports the findings that mentorship is beneficial for medical students in regard to clinical and research skills (Boyd et al., 2019; Nimmons et al., 2019; and Romanadham & Rohrich, 2018), as well as that mentorship is beneficial in regard to learning opportunities. Specifically, research suggests that mentorship helps to improve critical thinking (Jha et al., 2019) and increases medical knowledge (Burgess et al., 2018; Jha et al., 2019; Nimmons et al., 2019). However, research does not support or disprove the findings that mentorship benefits students with the difficult medical school transitions between class years and helps with getting into internships. This finding is considered a contribution to the literature. Concerning formal mentoring opportunities, many of the students talked about programs on campus, specifically the Mentor from Matriculation to Graduation program targeted for minority students, as one program that contributed to their faculty mentor experience. However, they were concerned about the limited faculty of color available, the lack of frequency with meeting with mentors, and timing of program introduction. Even though UK COM is providing this programming, some of the respondents in this study seemed to feel that the programming is limited for minority students, and respondents would like to see more formal and informal opportunities available. Current research does not support or disprove the findings about the Mentor from Matriculation to Graduation program because there is no research about this newly developing program. However, current research does suggest that a challenge with mentoring is a lack of an official mentoring program at the institution (Barker et al., 2016) and the design and delivery of mentor programs (Nimmons et al., 2019). Lastly,

concerning improvements, participants suggest improvements such as more faculty of color, more programming, and better communication about faculty mentors that are available. There is no current research that supports or disproves these specific improvements concerning UK COM faculty mentoring, so these findings contribute to literature. Now that this study's overarching categories have been explained, the following paragraph will get into more specific conclusions from participant responses.

In this study, faculty mentors were particularly important as students navigated their environment and pursued their educational career. Students shared that faculty mentors are beneficial for many reasons, such as career and personal advice, learning how to promote oneself in a specific specialty, learning about leadership, research, conference, and scholarship opportunities, help with navigating medical school, networking opportunities, hands on and career related experience, developing clinical skills and navigating the clinical experience, transition from pre-clinical class years to clinical class years, and serving as role models. Concerning career and personal advice, participants mention advice such as job satisfaction, work-life balance, and competitiveness in their specialty. Specifically, participants mention observing mentors to learn if the mentor's specialty would be a satisfying job, which may help the student determine a specialty choice. Research also suggest that mentorship is beneficial for students' learning about and obtaining job-satisfaction (Burgess et al., 2018; Cross et al., 2019; Lee et al., 2019; Meeuwissen et al., 2019; Romanadham & Rohrich, 2018). In regard to work-life balance, participants mention how having a mentor serves as a role model to learn more about fostering work-life balance and helping to determine specialty choices based on the work-life balance of specific specialties. Current research supports

the notion that mentorship is beneficial with helping students foster a work-life balance (Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Romanadham & Rohrich, 2018). Additionally, participants mention the benefit of learning how to be competitive in a specialty, especially a competitive specialty such as Surgery. Current research also supports the notion that mentorship is beneficial with fostering student development for competitive residency matches (Farkas et al., 2019). Concerning how to promote oneself in a specialty, research does not support or disprove this specific finding. However, research does support in general the idea that mentorship is beneficial to career development (Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Farkas et al., 2019; Romanadham & Rohrich, 2018) and promoting learning opportunities (Burgess et al., 2018; Meeuwissen et al., 2019), in which learning how to promote oneself may fall under these general categories. Concerning learning about leadership, research, conference, and scholarship opportunities, hands on and career related experience, and developing clinical skills, research supports these findings in general related to **benefits of mentoring by learning clinical and research skills** (Boyd et al., 2019; Nimmons et al., 2019; Romanadham & Rohrich, 2018); **confirming benefits related to career development** (Boyd et al., 2019; Burgess et al., 2018; Cross et al., 2019; Farkas et al., 2019; Romanadham & Rohrich, 2018); **and promoting learning opportunities** (Burgess et al., 2018; Meeuwissen et al., 2019). Additionally, research supports the finding that mentorship is beneficial to helping students network (Burgess et al., 2018; Farkas et al., 2019; Jha et al., 2019; Nimmons et al., 2019). However, research does not support or disprove the finding that mentorship is beneficial with navigating medical school and transitioning from pre-clinical class years to clinical class years.

These findings are particularly important because they emphasize the need for faculty mentors for African-American medical students at UK COM. Faculty mentors may assist students in adjusting to their new environment, overcoming feelings of isolation, and networking with mentors for career and personal advice. As one student mentioned, “I feel like mentorship really, when you look back at it, really just is essential for the entire process.” As another student mentioned, “I think medical school is, the ultimate challenge for me that I've had to do, and if I needed my mentors to get here, I can only imagine how much more do I need them in the competitive and difficulty of medical school.”

Another finding is that informal opportunities that lead to increased peer interactions are valuable, as these types of opportunities build relationships and help navigate medical school. Specifically, participants shared a desire to connect with peers and faculty in an informal setting, such as a faculty mentors' house. Participants in this study feel that an informal opportunity like this is a mechanism for providing encouragement and support related to personal and career matters, and view this informal opportunity as a chance to share ideas and helpful information across class years to help each other succeed in medical school. Participants in this study who identified as a first generation student shared that an informal gathering at a faculty mentors' house would be even more so beneficial for them, as they face challenges to navigate unfamiliar territories. However, current research does not support or disprove this finding. Current research focuses on formal programming and suggests that a challenge with mentoring is a lack of an official mentoring program at the institution (Barker et al., 2016) and of the design and delivery of mentor programs (Nimmons et al., 2019). Perhaps, part of the

challenge with design is being too formal, as participants in this study feel that an informal setting will be beneficial.

Majority of the participants in this study developed supportive and encouraging faculty mentor relationships. However, that was not the case for all. Some students shared challenges such as communication, availability of faculty mentors, challenges with not having a faculty mentor that could fully relate to the experience of an African-American student, lack of frequency with meeting faculty mentors, issues with time constraints, and issues with aligning goals and expectations for the mentor-mentee relationship.

Concerning communication challenges, participants mention delayed responses or no responses and the poor communication leading to unsuccessful mentoring relationships. Current research supports these findings and adds that a reason for communication challenges between mentors and mentees may be the mode of communication preferences, such as in person, email, group meetings, and one-on-one meetings (Scott et al., 2019). Burgess et al. (2018) also support the finding that poor communication may lead to an unsuccessful mentoring relationship, which may include a lack of frequency in meetings with a mentor. A lack of frequency of meetings with mentors is also a challenge expressed by this study's participants. Concerning availability of mentors, participants shared challenges such as scheduling conflicts/time constraints, and limited availability of mentors. Current research supports the finding that a challenge with mentoring is the availability of mentors, as well as time constraints (Burgess et al., 2018; Farkas et al., 2019; Sheri et al., 2019). Concerning the challenges with not having a faculty mentor that could fully relate to the experience of an African-American student, participants highlight that some mentors could mentor them in general, but not necessarily in regard to the

experience of an African-American in the medical field. Current research supports this finding in general by highlighting that if mentors don't have personal attributes fitting for the mentor-mentee relationship, challenges may arise, leading to a lack of student interest or students opting out of the relationship (Burgess et al., 2018). Concerning issues with aligning goals and expectations for the mentor-mentee relationship, participants mention that mentors and mentees don't set goals and expectations at the beginning of the relationship, and this leads to challenges with the effectiveness of the relationship. Current research supports this finding and suggests that the mentor's availability, motivations, competencies, abilities, and experiences can have a significant influence on the mentee's needs, motivation, goals, experiences, commitment, and desired characteristics (Burgess et al., 2018; Farkas et al., 2019; Sheri et al., 2019).

Discussions about these challenges lead to improvements recommended by participants. Participants recommended improvements such as informal group mentoring opportunities, more formal programming like the Mentor from Matriculation to graduation program, the development of resources and a list of available faculty mentors, more opportunities to meet with faculty mentors, and more faculty of color. Out of all the improvements mentioned, participants really desire more faculty of color. One participant said, "to my knowledge, there's no faculty of color that are within like the general surgery department. Um, so when it came to about third year where I was like, um, very much wanting to pursue surgery, this is what I wanna do. Um, I think a lot of that relatability that comes from a person of color was not there." Additionally, the same participant stated that "Um, just like advice and navigating those territories from being a like, well, like female, a black female. Like I wasn't able to get that like anywhere else

because again, our faculty is, is predominantly white. So I think I've tremendously missed that opportunity.” Another participant shared that although mentors have been willing to help, there is a definite lack of more relatable conversations about just navigating medical school as a person of color.

The findings from this study suggest that faculty mentoring is an important issue for African-American students at UK COM. Existing research does not support or discount this conclusion for students at UK COM because there is no existing research about this particular group of students at UK COM. However, existing research does highlight the importance of mentorship for African-American students. Specifically, research suggest that a mentor impacts many elements of a medical student’s development and achievement, not only academically but professionally and personally as well (Boyd et al., 2019; Farkas et al., 2019; Hee et al., 2019; Lee et al., 2019; Nimmons et al., 2019; Ramanadham & Rohrich, 2018; Sheri et al., 2019). Furthermore, African-American medical students mention other benefits of mentoring: observing positive role models, improving communication skills, identifying a letter of recommendation writer, boosting confidence, assisting in portfolio preparation, integrating students into team structures, improving consistency of the student experience, and supporting first-generation students (Adoga et al., 2019; Barker et al., 2016; Dave & Patel, 2020; Ng et al., 2020; Nimmons et al., 2019; Ortega, 2020).The perceptions of faculty mentoring on the African-American medical students’ experience should indicate to professionals the areas that are most significant in developing mentoring experiences. From the results of this study, it is suggested that formal and

informal mentoring programs are important in providing success mechanisms for African-American students at UK COM.

Formal and informal mentoring experiences may provide UK COM African-American students opportunities to develop relationships within the institution that facilitate academic and social integration. Integration into the campus environment may enhance the feelings of inclusivity, and the faculty mentor is a valuable resource that can aid a student in feeling integrated and included. Additionally, programs such as the Mentor from Matriculation to Graduation program may help students overcome some challenges and help navigate medical school. Furthermore, UK COM African-American students value faculty mentors because they provide career and personal advice, and help students navigate the intricacies of medical school.

UK COM African-American medical students' experience with faculty mentoring on a satellite regional campus

In answer to the second question, the results showed different experiences with faculty mentoring of the African-American students enrolled at UK COM on a satellite regional campus. Students on a UK COM satellite regional campus shared far fewer benefits of faculty mentoring. Students shared benefits such as networking, help with studying, having a role model, and having someone to reach out to when questions arise. However, it is notable that students on the satellite regional campuses did not bring up benefits such as learning about leadership, research, conference, and scholarship opportunities, help with navigating medical school, hands on and career related experience, and developing clinical skills and navigating the clinical experience. This seems to suggest that the faculty mentoring on a satellite regional campus may be on a broader scope and there is much opportunity for growth.

Another finding with question two is the lack of student knowledge about available resources and student organizations. One student shared that she is not aware of a student group or something that discusses minority student issues. However, there is a student organization just for that purpose, but the student on the satellite regional campus had no knowledge of the student organization. Therefore, this study's findings suggest that there is a need for better communication to satellite regional campuses to ensure that students on the satellite regional campuses are aware of all available resources. While research does not support or discount this specific finding, research does highlight some challenges that may result in a lack of student knowledge about available resources and student organizations. Specifically, research suggests that a mentor's competencies, abilities, experiences, and lack of training can have a significant influence on the mentee's needs and experiences (Burgess et al., 2018; Farkas et al., 2019; Sheri et al., 2019). In relation to the specific finding about the lack of student knowledge about available resources and student organizations, if the mentor does not have the knowledge of resources and does not have the training to communicate the resources to mentees, then this may directly affect the mentees' needs and experiences.

Students on the satellite regional campuses also expressed concerns with a limited number of faculty of color. One student shared that her faculty mentor of color is not on her campus, so she has to meet with her faculty mentor via Zoom or drive to meet her mentor. Having to meet with a mentor via Zoom highlights a missed opportunity for satellite regional campus students to meet mentors in person, unless they have time and gas money to drive to meet their mentor. This is a different challenge that the Lexington campus students did not bring up, which highlights an even more sparse availability of

faculty of color on the satellite regional campuses. Research supports this finding and suggests that if mentors do not have personal attributes fitting for the faculty-mentee relationship, then challenges may arise, leading to a lack of student interest or students opting out of the faculty-student mentor relationship (Burgess et al., 2018). In relation to this study, participants believe that mentors of color will be beneficial to their medical school experience.

Additionally, the UK COM satellite regional campuses tend to have a limited number of African-American students. Therefore, this study was limited with findings about the African-American student faculty mentoring experience on a satellite regional campus. However, it does highlight the issue of a lack of minority students on the satellite regional campuses at UK COM. UK COM is making progress with minority student matriculation, but this historical issue of a lack of African-American students at UK COM impacted this study's ability to have more African-American student participants. Student participants in this study did provide insight about why there may be a lack of African-American students on the satellite regional campuses. One student mentioned that coming to the South he expected to be treated in a certain way, but was met with Southern hospitality. Another student participant shared that a satellite regional rural campus was her first option, but she was denied there and accepted on the Lexington campus. This highlights the fact that there are a limited number of spots available on the satellite regional campuses and some African-American students may not make the cut.

Overall, the UK COM African-American medical students' experience with faculty mentoring on a satellite regional campus seemed to be positive, but this study

highlights the need for improvements. Improvements include more faculty of color and students of color, better communication, more specific mentoring benefits on a satellite regional campus, such as learning about leadership, research, conference, and scholarship opportunities, help with navigating medical school, hands on and career related experience, and developing clinical skills and navigating the clinical experience.

Challenges and limitations to the study

While this study offers insight into the UK COM African-American medical students' experience with faculty mentoring, it has limitations. First, the population of participants was selected from one institution; therefore, generalizations cannot be made for all African-American medical students. However, the scope of this study is set up as an individual case study and the set-up of this study allows concentration on improving faculty mentoring for UK COM. Additionally, the population of UK COM African-American medical students is sparse; therefore, there were a limited number of students available to participate. Furthermore, there were no M4 African-American students on the regional campuses, so this impacted the researcher's ability to gain the upperclassmen insight on regional campuses. Therefore, this study did not meet saturation, but leads to next steps. Third, this study examined one factor, drawn from the literature, of the African-American medical students' experience, faculty mentoring. Consequently, other factors that may contribute to the African-American medical students' experience were not examined. Lastly, the study did not control for individual student characteristics. An analysis of various background characteristics may have been significant as well as other contributing factors within the campus environment.

In spite of the study limitations, this study contributed to literature key takeaways

such as considering equity of services across campuses and the benefit of mentoring with transitions between class years.

Recommendation to practitioners

This study suggests that UK COM African-American students benefit from faculty mentoring. Faculty mentoring is an essential component to aid in a positive medical school experience. Programs such as the Mentor from Matriculation to graduation program may prove advantageous.

Participants discussed their need to see more faculty of color that look like UK COM African-American students. Although many students expressed positive experiences with their mentors, they expressed the gap of relatability and connection when it comes to navigating medical school as a student of color. Participants suggested that it might be possible for UK COM to hire more faculty of color and establish practices that retain those faculty of color. Because of hiring more faculty of color, minority students may see more faculty that look like them and this may increase a sense of belonging and inclusivity. However, since there is a national shortage of underrepresented clinicians, then UK COM may consider a mentor program partnership with another academic medical institution, begin a program that connects African-American UK COM Alumni with current students for mentorship, or strengthen peer mentoring among current UK COM students. Furthermore, due to the national shortage of underrepresented clinicians, UK COM may consider mentorship being a component of the ICM course curriculum since many study participants mentioned mentoring benefits from ICM instructors. Another suggestion is to strengthen and continue pipeline programming, such as UK COM's connection with mentoring young black males through

the BMW academy and consider pipeline programming efforts to retain UK COM African-American students for residency at UK and mentor these individuals for future faculty appointment. With the intentional focus on pipeline programming, the national problem of underrepresented clinicians may improve. This study may influence these pipeline programs by contributing the benefits, challenges, and needs of African-American medical students, which may help pipeline programs develop meaningful mentorship and programming that will aid in future success of potential underrepresented clinicians. However, pipeline programming will take some time to start seeing the true impact. In the meantime, this study recommends looking at other potential beneficial options. For example, with the national shortage of underrepresented clinicians, a next step could be to consider if students need sponsorship, mentorship, or both. If sponsorship is a need of African-American medical students, then UK COM can look into ways to provide sponsorship.

Due to the importance of faculty mentoring, it might also be beneficial to offer more programs that provide interactions between students and faculty mentors. This may help alleviate some of the challenges expressed by students in this study, as well as help matriculating students to graduation. As students in this study stated, they desire more of those interactions to aid in support and encouragement, aid in navigation of medical school, and serve as a stress relief and a reminder to refocus.

For formal programming, the SNMA student organization for minority UK COM students may request \$1,000 per semester from the student government association. The director of student services can help the SNMA student organization apply for funds and plan formal programming. For informal programming, this study suggests that UK COM

put effort into identifying minority faculty and/or staff that are willing to open their home a couple of times a semester or once a semester if multiple individuals are willing, so that this student population has an opportunity to connect and network in a more comfortable and relaxed environment.

In response to research question two, this study suggests better communication of resources to the UK COM satellite regional campus students and mentors. This can be done by the director of student services requesting a list of satellite regional campus African-American students and their mentors. The director of student services can arrange a Zoom meeting with the regional students and faculty mentors and go over all the available resources and student organizations. For example, there is a research and fellowship opportunities SharePoint folder that the director of student services manages. Also, in response to research question 2, this study suggests that UK COM includes a welcome meet and greet with African-American students and mentors during orientation week or early in the semester. Since students and mentors are spread across multiple campuses, the director of student services can arrange a Zoom meeting so that everyone can participate.

Regarding next steps, the exploration of demographics may help determine if experiences and needs are different based on age, gender, sex, race, and first-generation status. Also, a next step is collaboration between the SNMA student organization, the Student Affairs Office, the MMG coordinator, and the UK COM Office of Diversity, Equity, and Inclusion to develop more programming. Another group to collaborate with is the Faculty of Color Network, an organization led by faculty members from underrepresented groups to support professional development, mentorship, and support to

students, trainees, and faculty of color in the UK College of Medicine.

Recommendations for future research

The projected increase in the number of minority students expected to enroll at UK COM provides motivation for administrators to develop programs and services that will enhance the opportunities for African-American medical students to succeed.

Success depends upon inclusion at the institution, academically and socially.

Researchers state that African-American students often have difficulty forming relationships with faculty and staff (Christophers et al., 2021; Faison, 1996; Najibi et al., 2019; Price, 2019; Whaley, 2021). African-American students also tend to be challenged with greater difficulties than White students in adjusting to the dominant campus culture, resulting in academic and social isolation (Allen, 1992). In spite of obstacles, students with positive mentor relationships are more likely to experience academic success, report better experiences in medical school, and glean insight to aid in positive career development (Boyd et al., 2019; Farkas et al., 2019; Hee et al., 2019; Lee et al., 2019; Nimmons et al., 2019; Ramanadham & Rohrich, 2018; Sheri et al., 2019). Additionally, the mentors' support has been found to be a key element for retention and graduation (Allen, 1987; Bridgall, 2004; Himelhoch et al., 1997; Wells-Lawson, 1994).

Although limited to one university, this study highlights many factors that can help African-American students succeed at UK COM. This study provides a variety of opportunities for additional research including the exploration of demographics that may help determine if experiences and needs are different based on age, gender, sex, race, and first-generation status. It may also be helpful to explore personality characteristics to help determine which students choose to develop relationships with mentors and seek services. Additionally, it may be helpful to study the types of personality traits that may influence

a person to seek a mentor. Another opportunity for future research is to examine if there is a relationship between mentorship and academic performance, as well as what key functions of the mentoring relationship would be most noteworthy for boosting persistence and academic achievement for minority students. Furthermore, a comparative study of faculty's opinion and student's opinion on mentoring relationships for students may be beneficial. Additionally, a comparative study of the attributes of mentoring relationships for students enrolled at medical schools that produce the most Black/African-American medical school graduates and predominately White medical schools may be beneficial and add to the knowledge base of mentoring for specialized student populations. The results of this study suggest that there are actions that can be taken by students, faculty, and administration to boost UK COM African-American students' experience and success. Further studies may focus on a more extensive range of experiences and perspectives.

APPENDICES

Appendix A – Recruitment Letter

To UKCOM African-American medical students:

A Researcher, Ashlee Hamilton, at the University of Kentucky is inviting you to take part in a survey about your experiences with faculty mentors during medical school.

Your responses will help gain knowledge about the African-American medical students' faculty mentoring experiences at UK COM. Some volunteers experience satisfaction from knowing they have contributed to research that may possibly benefit others in the future. An additional benefit of this study is that each participant will receive \$10 in cash.

For this study, you will be asked to participate in one focus group with UK COM first and second year African-American medical students or to participate in one focus group with UK COM third and fourth year African-American medical students. The focus group session will take up to 30 minutes maximum. The focus group will be available via Zoom or in person. If the focus group participants choose a Zoom meeting rather than in person, then cameras must be turned on; however, the session will only be audio recorded. Also, if the focus group is via Zoom, then participants must have the proper technology available for sound and video to participate.

There are no known risks to participating in this study.

Your responses within the focus group are anonymous, which means no names will appear or be used on research documents or be used in presentations or publications. The researcher will maintain confidentiality of responses and use pseudonyms for each participants' responses used for this study.

Responses from each student help us to develop understanding of a much wider range of viewpoints. Of course, you have a choice about whether to participate in the focus group, but if you do participate, you are free to skip any questions or discontinue at any time.

If you have questions about the study, please feel free to ask; my contact information is provided below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859- 257-9428 or toll-free at 1-866-400- 9428.

If you are willing to participate in this study, please reach out to Ashlee Hamilton at ashlee.crump@uky.edu.

Thank you in advance for your assistance with this important project.

Sincerely,

Ashlee Hamilton (ashlee.crump@uky.edu)

College of Medicine, University of Kentucky

PHONE: 859-323-2460

Appendix B – Consent Form

Instructions for focus group (informed consent)

Inform participant that this conversation will be audio-recorded and transcribed verbatim. If the focus group is via zoom, inform the participants that cameras must be turned on; however, the session will only be audio recorded. Also, ensure that participants have technology available for sound and video to participate.

Proceed with the following statements:

“I want to remind you of your rights as a participant that were outlined in the recruitment invitation and review with you some additional information about your participation in this focus group.”

“After I have read these statements, you may ask for additional information, decline to participate, or agree to continue as a participant in this phase of the research.”

- The focus group will take up to 30 minutes maximum.
- There will be no cost associated with participating.
- All data gathered will be stored on a password protected computer/laptop.
- Your information will be kept confidential and will be retained for 6 years before being destroyed after the conclusion of the study, per IRB policy.
- You will be asked to honestly discuss your faculty mentor experiences in medical education. Since experiences may be both positive and negative, a breach of confidentiality is possible. If this occurs, you may be identified as having negatively evaluated your program.
- You will be assigned a pseudonym to minimize the possibility of this breach of confidentiality and any other identifying characteristics will be removed.
- You should feel free to discuss your experiences without identifying the name of your faculty mentor or any other identifying information (i.e. date, time, location). Removal of identifying information will also minimize the possibility of breach of confidentiality.
- Your participation in this research is voluntary and you may withdraw at any point without adversely affecting your relationship with the investigator. Your decision will not result in any loss of benefits to which you are otherwise entitled, and your responses will not affect your standing in the program.
- There may be additional follow up correspondence to verify themes in the data.

If you have questions about the study, please feel free to ask; my contact information is provided below. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859- 257-9428 or toll-free at 1-866-400- 9428.

Ashlee Hamilton (ashlee.crump@uky.edu)
College of Medicine, University of Kentucky
PHONE: 859-323-2460 or 859-492-6750

Do you understand these statements?
Do you accept these conditions of participation?
Shall we continue?

Appendix C – Focus Group Guide

Appendix C Dissertation Focus Group Guide African American Medical Students and Faculty Mentors

Focus group protocol notes – If the focus group is via Zoom, email each participant the focus group protocol prior to the focus group session to follow along during the focus group. If the focus group is in person, print the focus group protocol and give one to each participant to follow along during the focus group. Also, if in person, print the acknowledgement of participation and compensation form for each participant, and bring \$10 cash per participant. Have each participant sign the form at the end of the focus group and then give each participant \$10 cash. If the focus group is via Zoom, then email the acknowledgement of participation and compensation form to each participant. Once signed and returned, then get a mailing address from the participant to mail the \$10 cash or mail it to the campus location and have the student pick it up at the student affairs office.

During the focus group session, take up to 4 minutes to read the introductory paragraph below and read aloud the consent information. For questions 1, 2, and 3, allow up to 7 minutes maximum. Bring a stopwatch for timing. Start the stopwatch right before you read the question. If the discussion gets down to one minute remaining then notify the focus group by saying, “Excuse me for interrupting, we have one minute left for responses”. If the discussion gets down to 15 seconds remaining, then say, “Excuse me for interrupting, I appreciate the thoughtful discussion on this question, but it is time to move forward to the next question so I can be respectful of your time. We’ll have time for additional responses toward the end of this focus group session”. If the discussion for questions 1, 2, or 3 end at any point prior to 7 minutes then say, “I appreciate the discussion on this question. Let us move on to the next question.”

For question 4, allow up to 5 minutes. Use a stopwatch for timing. If the discussion gets down to 1 minute remaining then notify the focus group by saying, “Excuse me for interrupting, we have one minute left for responses”. If the discussion gets down to 15 seconds remaining, then say, “Excuse me for interrupting, I appreciate the thoughtful discussion on this question, but it is time to end the focus group”.

Focus group script and questions:

This is Ashlee Hamilton on (DATE). I will now read aloud the informed consent information (pause for 10-15 seconds after reading the informed consent information in case any students would like to leave and not participate). Thank you for participating in this research study. The purpose of this study is to explore the UK College of Medicine African-American medical student experience with faculty mentors. This study refers to faculty mentors as mentors you may have gained through formal opportunities at UK COM (i.e. house advisor, ICM, ACM, or ECM instructors, or Advanced Development Directors) or informal opportunities (i.e. you sought out). When answering the questions below, if you are referring to a specific formal type of UK COM mentor or an informal mentor, please share that at the beginning of your response. All answers will be kept confidential. Please remember your participation is voluntary and you may stop at any time or skip any question. Do you have any questions before we begin?

1. How has your experience been with faculty mentors at UK COM?
2. Are there ways that UK COM may improve faculty mentoring? If so, how?
3. Are there ways that faculty mentoring is beneficial to your experience? If so, in what ways?
4. Thank you for participating today. Your contribution is greatly appreciated. Do you have any final thoughts you would like to add about the UK COM African American students' experience with faculty mentoring? At this time you may also add any additional thoughts that we may not have got to in the previous questions above.

Appendix D – Focus Group Guide Questions, Citations, and Importance Table

Question	What led me to question/Citations	Importance/Why it matters
How has your experience been with faculty mentors at UK COM?	Christophers et al, 2021; Grbic & Sondheimer, 2014; Mason et al, 2020; Najibi et al, 2019; Price, 2019; Redford & Hoyer, 2017; Romero et al, 2020; Whaley, 2021	The cited literature provides research on the African-American students' mentoring experience; however, we do not know how the faculty mentoring experience is for African-American students at UK COM, especially for our African-American students in a rural environment at our regional campus locations. This question is important because it provides information about the African-American students' mentoring experience at UK COM, which we currently do not know about their experience. This question also contributes to the body of literature by adding the African-American students' mentoring experience on a satellite regional campus. This is important because we do not know about their experience. Knowing about their experience may help improve their experience.

<p>Are there ways that UK COM may improve faculty mentoring? If so, how?</p>	<p>Farkas et al, 2019; Jha et al, 2019; Nimmons et al, 2019; Sheri et al, 2019)</p>	<p>The cited literature suggests that there are challenges with faculty mentoring and some ways to improve faculty mentoring include faculty training, provide opportunities to meet potential mentors, and clarification of mentor roles. However, we do not know if students at UK COM feel there are ways to improve faculty mentoring. If there are ways to improve, we do not know the ways that UK COM African-American students feel that faculty mentoring may be improved. Even if faculty mentoring is going well, they may have further suggestions on how to continue improvement.</p>
<p>Are there ways that faculty mentoring is beneficial to your experience? If so, in what ways?</p>	<p>Christophers et al, 2021; Mason et al, 2020; Najibi et al, 2019; Ortega, 2018; Romero et al, 2020; Whaley, 2021</p>	<p>The cited research suggests benefits of faculty mentoring for African-American students, such as better student experience, increased student motivation, networking, building confidence, mental, physical, and social well-being, and development. However, we do not know if UK COM African-American students will express the same benefits or share additional benefits that research has not yet provided.</p>

<p>Thank you for participating today. Your contribution is greatly appreciated. Do you have any final thoughts you would like to add about the UK COM African American students' experience with faculty mentoring? At this time you may also add any additional thoughts that we may not have got to in the previous questions.</p>		<p>This question is important because there may be final thoughts students would like to share that may be valuable knowledge gained about the African-American students' faculty mentoring experience.</p>
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Appendix E – Research Participant Acknowledgment

I, _____, acknowledge that I participated in the research study about UK COM African-American students' mentoring experiences with Ashlee Hamilton on _____ (date). I, _____, acknowledge that I received compensation in the amount of \$10 cash for participation in this study and that I did not receive any other gifts or compensation for participation.

Principal Investigator Signature _____

Research Participant Printed Name _____

Research Participant Signature _____

Appendix F – Recruitment Flyer



BLACK/AFRICAN-AMERICAN MEDICAL STUDENTS' EXPERIENCE WITH FACULTY MENTORING REQUEST TO PARTICIPATE IN ASHLEE HAMILTON'S DISSERTATION PROJECT

Ashlee Hamilton is requesting your participation in her dissertation project focused on the Black/African-American medical students' experience with faculty mentoring. If interested in participating, please email Ashlee at akcrum2@uky.edu in the UK College of Medicine department.



**PARTICIPATE IN 1
FOCUS GROUP
(MAXIMUM OF 30
MINUTES)**

**PARTICIPANTS WILL
RECEIVE \$10**

**PROVIDE INSIGHT
THAT MAY HELP
CURRENT AND
FUTURE
BLACK/AFRICAN-
AMERICAN MEDICAL
STUDENTS**

**QR CODE BELOW
FOR MORE
INFORMATION**

QR CODE



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VITA

1. Place of birth

Lexington, Kentucky

2. Educational institutions attended and degrees already awarded

MEd, Higher Education Administration, University of Kentucky (Lexington, KY), 2012

M.P.A., Public Administration, Kentucky State University (Frankfort, KY), 2008

B.A., Psychology, Berea College (Berea, KY), 2006

3. Professional positions held (do not include job descriptions)

Director of Student Services, University of Kentucky, Office of Medical

Education Student Affairs Coordinator, University of Kentucky, Office of

Medical Education Center for Academic and Tutorial Services, University of

Kentucky

Athletic Academic Administrative Assistant, Kentucky State University

Graduate Assistant, Kentucky State University

Academic Services, Berea College

4. Scholastic and professional honors

UK College of Medicine, Class of 2022 Graduation – Honorary Class Member, 2022

UK College of Medicine, Class of 2021 Graduation – Honorary Class Member, 2021

UK College of Medicine, Class of 2020 Graduation – Honorary Class Member, 2020

UK College of Medicine, Class of 2019 Graduation – Honorary Class Member, 2019

UK College of Medicine, Class of 2018 Graduation – Honorary Class Member, 2018

Omicron Delta Kappa, The National Leadership Honor Society (Qualifications for membership include exemplary character, responsible leadership in campus or community life, superior scholarship, and genuine fellowship), 2010

Phi Kappa Phi Honor Society

Student Ambassador, University of Kentucky, College of Education, 2010-2011 & 2011-2012

Student Ambassador Coordinator, University of Kentucky, College of Education, 2010-2011

Recipient of the Lyman T. Johnson Academic Award, 2009-2012 academic years

Recipient of the Barbara Ayers Threadgill Scholarship for Development, 2010

Golden Key International Honour Society (Pillars: Academics, Leadership, and Service; Values: Integrity, Collaboration, Innovation, Respect, Diversity, Excellence, and Engagement), 2010

Captain of the first team in history of Berea College Women's basketball to win a conference tournament championship.

Recipient of the Roland Wierwillie Athletic Award at Berea College

-Given to a junior athlete (out of all male and female sports)

-In good standings with academics, labor and sports

-An athlete who reflects leadership

-Additional qualities: A motivation to succeed, reaches out to others, and reflects an inner and outer discipline of spirit and body.

Berea College Dean's List

Two K.I.A.C Season Championships (2004-2005 and 2005-2006)

One K.I.A.C Tournament Championship (2005-2006)

Academic Services Employee of the year, Berea College, 2005 – 2006

5. Professional publications

(N/A)

6. Typed name of student on final copy

Ashlee-Nicole C. Hamilton