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GROUNDWORK

Underrepresented Minorities in Medical School Admissions: A Qualitative Study

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Abstract

Phenomenon

This study explored Black/African-American and Hispanic/Latino medical students' perceptions of the medical school admissions process. Previous research has explored other elements of the medical education continuum. However, little is known regarding minorities' perceptions of navigating the medical school admissions process. To address this gap in the literature, this exploratory study suggests a conceptual model describing why minorities apply to medical school and the influences affecting their admissions experience.

Approach

This qualitative study utilized a grounded theory approach. Between December 2012 and January 2014, the principal researcher conducted one-on-one telephone and in-person small group interviews, as well as web-based telephone feedback sessions, with Black/African-American and Hispanic/Latino medical students.

Findings

Thirty-three students participated, including 23 Black/African-American and 10 Hispanic/Latino medical students. Participants represented 25 U.S. allopathic medical schools. Emergent themes are categorized under two headings: 1) motivations for a career in medicine and 2) barriers and supports. Motivations for a career in medicine include: perceived fit, prior experience or knowledge, encouragement and role models, desire to help others, interest in science, and perceived benefits. Barriers and supports included: information, guidance and social support, financial and academic factors, and persistence.

Insights

Building upon theories of student college choice and academic capital formation, the researcher's analysis and interpretations result in the proposal of a conceptual model describing minority applicants' experience in medical school admissions. The study also suggests research and practice implications related to pre-medical advising, mentoring, financial assistance, information, outreach, and data collection.

Introduction

The United States is increasingly diverse in terms of race and ethnicity.¹ Nonetheless, the representation of Blacks/African-Americans* and Latinos/Hispanics* in medicine has not kept pace.²⁻⁶ In 2013, 4.1 % of U.S. MD physicians were Black or African American and 4.4 % were Hispanic or Latino.⁴ These figures have not kept pace with the growth of these groups in the U.S. population, and this mismatch has implications for patient care⁴ and for medical education. The benefits of increasing physician diversity are numerous.⁷⁻¹⁶ Additionally, extensive research supports the benefits of diversity in higher education,^{17,18} specifically in medical school.^{4,19-23} Accordingly, the Association of American Medical Colleges (AAMC) and others have called for increased physician diversity.^{9,24,25} They and others are focusing on increasing the numbers of underrepresented minorities matriculating into medical school.

Previous research has identified challenges to increasing the number of underrepresented minorities in medical school. One challenge is that measurement of readiness for medical school has traditionally been limited to three academic metrics: total grade point average (GPA), science GPA, and Medical College Admission Test® (MCAT®) scores. According to the AAMC, Black/African-American and Hispanic/Latino applicants continue to lag behind non-minority applicants on all of those measures.²⁶ To address this issue, in 2007, the AAMC expanded its efforts to increase the presence of underrepresented minorities in medicine with its Holistic Review Project. The goal of the project was to support excellence in admissions through the development of mission-centered, admissions-related tools and resources that medical schools could use to create and sustain diversity. The project has since evolved into “a catalyst for

* This paper uses the terms “Black” and “African-American” interchangeably, reflecting their use in the particular study cited.

* This paper uses the terms “Hispanic” and “Latino” interchangeably, reflecting their use in the particular study cited.

thinking about and conducting admissions differently” (p. 1).²⁷ Considering diversity as a multidimensional concept, the AAMC conceptualizes holistic review as:

...a flexible, individualized way of assessing an applicant’s capabilities by which balanced consideration is given to experiences, attributes, and academic metrics (E-A-M) and, when considered in combination, how the individual might contribute value as a medical student and future physician (p. ix).²⁸

Schools utilizing a holistic admissions process operationalize diversity in each stage of the process, with the goal of widening of the lens through which applicants are considered.

Acceptance rate data indicate that applicants with different levels of academic preparedness are accepted into medical school, and that more and more schools are considering applicants holistically.²⁹ However, schools have increasingly rated the importance of applicant demographics like race and ethnicity in the admissions process as relatively low.²⁹ As Monroe et al. suggest, one possible reason is that schools believe that conducting holistic reviews of applicants allows minority and other underrepresented applicants to show their potential, and thus renders consideration of characteristics such as race and ethnicity unnecessary.

Literature Review

Previous research has explored other elements of the medical education continuum that influence minority student persistence including predisposition toward and decision to pursue medicine,^{4,30-33} minority interest and persistence in the sciences,³⁴⁻³⁹ the challenges minorities face,^{40,41} undergraduate and graduate school choice,⁴²⁻⁵¹ applicants’ use of information,⁵² and minority medical students’ experiences and perceptions of success in medical school.⁵³⁻⁵⁵ Specifically, further research is needed to understand the factors affecting medical school enrollment and the way these factors play out in practice.⁵⁶ As suggested by Monroe et al.,²⁹

more research is needed about why minorities do or do not apply to medical school and what influences affect their decision-making.

Further, little is known regarding minorities' perceptions of the medical school admissions process. Few studies of medical students and medical school admissions disaggregate students by race or ethnicity, making comparisons of the experiences of applicants from different racial and ethnic groups difficult.^{30,52} With further research, we could better understand if qualified students from underrepresented minority groups are attracted to medicine versus other careers and thus be able to target interventions to more effectively support minority applicants. As suggested by Alexander et al.⁵⁷ more research is needed to explore elements and interventions that enable minority students' success. Further, there is a scarcity of research from the student perspective;⁵⁴ the majority of such qualitative work conducted to garner the student perspective has focused on the medical school experience,⁵³⁻⁵⁵ rather than the admissions experience.

Approach

Given the dearth of research of the experience of minorities in medical school admissions, this study sought to add to the literature by developing a conceptual model describing why minorities apply to medical school and the influences affecting their admissions experience. With institutional review board approval through the University of Pennsylvania, this study used a grounded theory approach⁵⁸⁻⁶⁰ to explore the medical school admissions experiences of a sample of Black/African-American and Hispanic/Latino students.

Grounded theory is a qualitative research methodology in which theory is “derived from data, systematically gathered, and analyzed throughout the research process (p. 12).”⁵⁹ Designed primarily to develop a set of integrated concepts that provide a theoretical explanation of a social

phenomenon,⁵⁸ the method is a discovery-oriented approach that attempts to conceptualize and develop theory based on the similarities of experience of an aggregate of individuals.⁶⁰

Grounded theory is a distinctive and valuable qualitative methodology for several reasons. First, the method uses a clear, articulated analytical process.⁶¹ Second, it emphasizes the generation of practical theory grounded in the data of real experience. Third, the approach lends itself to both qualitative and mixed methods research.⁵⁸ Fourth, due to its iterative nature, the method is self-correcting; cycles of data collection and analysis allow for categories of data to emerge, be theorized, and be continually re-examined.⁶¹ Consequently, grounded theory has become one of the most widely utilized qualitative research methods in studies of medical education^{58,62} and therefore the most appropriate approach for contextualizing the interview responses in the current study.

The key source of data for this study was the perceptions of minority medical students of their experiences in the medical school admissions process. Participants were Black/African-American or Hispanic/Latino medical students solicited from members of the Student National Medical Association (SNMA)* and the Latino Medical Student Association (LMSA)**. Participants were solicited via these organizations because these organizations include members from the targeted racial and ethnic minority groups attending medical schools around the U.S. Convenience and snowball sampling were used to identify study participants. Students were invited to participate via email, the LMSA Facebook page, and in-person at regional and national conferences. Respondents completed a brief initial survey to ensure they met criteria for

* SNMA is a non-profit 501(c)(3) corporation and is the oldest and largest medical student organization dedicated to the education of medical and pre-health students of color.⁶³ All allopathic and osteopathic medical students, pre-medical students, residents, physicians and other supporters of the mission and vision of SNMA may participate.⁶³

** LMSA is a 501(c)(3) non-profit organization founded to represent, support, educate and unify U.S. Latino(a) medical students.⁶⁴

inclusion, including that they were either current allopathic medical students or accepted students matriculating in the next academic year, and that they self-identified as either African-American or Latino/a. Each participant who met the criteria and was interviewed was given a 5 dollar Amazon.com gift certificate.

Phase 1 included 29 one-on-one telephone interviews conducted from December 2012 through April 2013. Two additional group interviews of two participants each were conducted at the SNMA National Conference in March 2013. Thirty-three students participated in Phase 1, including 23 Black/African-Americans (all members of SNMA) and 10 Hispanic/Latinos (all members of LMSA). Participants included first- through fourth-year medical students and one enrolled student who had not yet matriculated at the time of interview. Twenty-one women and 12 men participated. Participants represented 25 U.S. allopathic medical schools; each participant was asked to select a pseudonym (see Tables 1 and 2). Each participant completed a questionnaire identical to the AAMC's Matriculating Student Questionnaire (MSQ).

The principal researcher conducted all interviews and data analysis. Interviews were conducted following a semi-structured interview protocol (Appendix A). The protocol included open-ended questions asking participants to describe relevant aspects of their experience in medical school admissions. Using an iterative process, throughout Phase 1 the researcher continually refined the semi-structured interview protocol (Appendix A). Interviews averaged 39 minutes. Interviews were audio-taped and transcribed.

From the analysis of Phase 1 interview data, the researcher developed preliminary findings and elements of an emergent conceptual model describing the medical school application process for the participating students. In Phase 2, participants were invited to participate in one of four web-based or telephone feedback meetings conducted from December

2013 to January 2014. Six participants responded to Phase 2: three attended a meeting; two participated in one-on-one telephone sessions; one did not participate. Preliminary findings and the emergent conceptual model were presented to participants in Phase 2. The researcher solicited participants' feedback to further refine the emergent conceptual model. Consistent with grounded theory methodology, data collection continued until all eligible volunteers were interviewed, until a point of theoretical saturation was reached, and until the categories of data were well developed and validated by participant feedback.^{60,62}

Findings

Emergent themes are categorized under two headings: 1) motivations for a career in medicine and 2) barriers and supports. Motivations for a career in medicine include: perceived fit; prior experience or knowledge; encouragement and role models; desire to help others; interest in science; and perceived benefits. Barriers and supports included: information, guidance and social support, financial and academic factors, and persistence.

Motivations for a Career in Medicine

Participants described a variety of motivations for pursuing a career in medicine. Ensuring medicine was a right fit was essential to participants; many characterized the medical school admission process as a long, difficult road requiring commitment and conviction. Participants believed that this particular road requires commitment and a personal conviction that this is the correct path for an individual. A Black/African-American male first-year student stressed this point:

I would say make certain. I would say that it seems like a very rewarding profession. You can go to work and come home and feel like you worked hard and that you made a difference. I would say that it is a very strenuous road, in terms of medical school. Definitely try your best to make sure it is something you want to do...Prove to yourself

that this is the best fit for you as an adult. Do your best to try and figure that out, that it is something you really, really enjoy, because if you do not really enjoy it, you will find medical school very tough to keep going through.

Participants also perceived that medicine requires passion, an inner drive, and reason to persevere, even when the road seems tough. As a Hispanic/Latino female second-year student described, a passion for medicine can help keep the work in perspective and keep it fun: “If this is not something you will be passionate about, just know it is a lot of work. If you are passionate about it, it is a lot of work, but it is also a lot of fun.”

Some participants were influenced to pursue medicine by prior experience or knowledge gained via early exposure to illness, participation in pre-medical programs, or health-related work experience. Many reported specific individuals influenced them to pursue medicine: 29 of 33 reported a parent as a strong or very strong influence; 23 reported a physician as an influence; 19, another friend or relative; 19, a professor or teacher; 13, a health professions/pre-medical advisor; and 7, a career guidance counselor. One Black/African-American female matriculant described the positive influence her aunt, who is a nurse, had on her decision to pursue medicine:

I think I have always been drawn to medicine. I have an aunt who is a nurse and I have always watched her taking care of family members and people in our church. I was always drawn to science in general, but I like medicine because you are working with people, one-on-one. You are helping them with healthier, happier lives to the best of your ability.

Other individuals not directly connected to medicine also motivated some participants. A

Black/African-American female first-year student described how high school faculty encouraged her:

...growing up in a small town, my high school had about 99 people in my graduating class and I got to know all of my high school teachers very well...they could see that I had a lot of potential and I talked to them about what I wanted to do. They always encouraged me to not settle. I had the reassurance of my teachers that they thought I was capable of doing the work.

A number of participants viewed their parents as role models or were inspired by their struggles. A Black/African-American male third-year student described how his parents supported and inspired him:

Definitely support from my parents because of where they grew up and the struggles they had. They were a source of inspiration because they came all the way from Africa to America and had struggles.

The desire to help others was a commonly reported reason for applying to medical school. Some became interested in medicine to serve community needs such as disparities in access for minority, urban, immigrant, rural, public, children's, and women's health, health care system re-design, global/international health, and the need for minority and culturally competent physicians. Said one African-American male third-year student: "Because I was academically strong and because I really want to serve people, I kind of felt like I have a duty to do this, and that satisfied me." Others felt a career in medicine was an obvious choice given their interest in science.

The perceived benefits of becoming a physician (e.g., salary, work/life balance, appreciation, respect, authority, and heroism) influenced some participants. When surveyed, 31 of the 33 participants reported anticipated future salary and/or lifestyle as very positive or positive influences in their decision to study medicine. However, when interviewed, a number of participants mentioned that salary was not an influence in their decision-making. Illustrating this apparent contradiction in findings, one African-American female first-year student described weighing economic and employment considerations with her parents:

[...My parents were concerned about] job security and getting the return on the investment that college would be...I wanted to make sure that I had some job security. I knew that everyone is going to need a doctor; and so I think that was the factor.

Barriers and Supports

Although a number of participants described the admission process as straightforward, the majority described it as overwhelming, difficult, and expensive. As one African-American male third-year student described, each step involved its own particular hurdles:

Getting through the MCAT and all that was hard and extremely expensive. You have to register for MCAT, preparation for MCAT class, getting books and materials and having to pay for it all... I think probably the most challenging thing for me was the whole application process with all the letters of recommendation...It was a tough process for me...I did not know with my scores if I could get into a top program. I did not know which schools were better. All these things were completely difficult and overwhelming...

For some, the timing of their application affected their experience. A number had been advised to apply early and many reported feeling stressed that they did not apply early enough. Interviews added additional stress and expense to the process; however, most participants found them to be informational and enjoyable. Participants who received early acceptances described this as confidence boosting and advantageous for judging future invitations against that guaranteed seat. For others, early acceptance via a pipeline program reduced the expense, time, work, and stress of the traditional admissions process.

Information, Guidance and Social Support

Acceptance to medical school was credited by some to having information, guidance, and support from family, peers, or mentors. Conversely, for those without these resources, navigating the process was particularly challenging. These participants reported misunderstanding elements of the process, (e.g., application expense, financial aid availability, timing, differences between schools and applicants' ideal qualities, school selection, and resources), and believing they were disadvantaged in comparison to peers.

Medical schools were valuable sources of information for those who reported that feedback from schools rejecting their applications facilitated their eventual acceptance. Conversely, others felt they were hindered by not receiving feedback. The few who searched school websites for information about the admissions process reported that the quality of the websites mattered, being critical resources for students with no other access to information.

Other important sources of information included pre-medical advisors and committees, college faculty and organization advisors, and post-baccalaureate program staff. For example, one Hispanic/Latino male fourth year student was encouraged by an admissions counselor at a medical school fair. He stated:

...I felt very intimidated and I wondered if I would ever be able to get accepted into this school. At which point he said something really profound to me, which was, "If you choose not to apply then you are making the decision for them, and you shouldn't do that. You should just go ahead and apply and see what happens." Sure enough, that encouraged me to apply to a lot of other places that I would not have applied to...

The converse—advisors described as unhelpful and possibly detrimental to participants' admissions experience—also emerged. Notably, the only instance in which a participant reported perceiving racism was at the hands of his pre-health advisor. Participants without mentors reported feeling alone throughout the process.

Many participants mentioned that family facilitated their experience via application assistance, role modeling, and general encouragement. In addition, peers, friends, siblings, and upperclassmen supported participants by sharing information they may not have received via formal channels.

Financial and Academic Factors

The majority of participants expressed being hindered or stressed by expenses, noting finances as the biggest challenge they faced. Many cited application fees as posing barriers;

some reported limiting the number of secondary applications they submitted as a result. For example, one Hispanic/Latino female third year student felt constrained to apply to fewer schools than she might have had she been granted a fee waiver:

I did not qualify for [financial help], so that was definitely a limiting factor in the number of places that I applied. I had a friend who applied to 24 schools, and sent out 24 primaries and God knows how many secondaries, and she spent the same amount that I did, applying to nine, because she received the fee assistance waivers. In total I spent \$2,000 on the med school process including interviews, flights, hotel stays and everything.

Travel for interviews added further expense; a number reported limiting the schools to which they applied to ones within a certain geographic region. For example, a Black/African-American female first year student described her choices as being constrained by her lack of a car: “The car situation was a barrier. I would have liked to interview at some places but I could just not afford to travel...” Even for those who qualified for the AAMC’s Financial Assistance Program (FAP), assistance was limited. Participants who had to work to pay expenses not otherwise offset by FAP, schools, or parental help, reported that it affected the time and attention they could devote to their applications.

Participants reported the importance of high undergraduate GPAs and high science GPAs for medical school admissions as facilitating acceptance. Regarding the MCAT®, 18 of 33 participants reported taking the exam once; 14 took the exam two or more times; and one was not required to take the exam. Of those who took the exam, 26 responded that they completed an MCAT® preparation course. The fourteen who took the exam two or more times changed their studying methods, citing online MCAT® practice exams or MCAT® preparation as contributors to improved scores, along with personal study habit changes, mentor advice, and additional coursework.

Many participants credited health- or research-related programming with preparing them for admission to medical school. Such programs helped participants prepare for the MCAT®, interviews, and other elements of their applications, and often provided first-hand medical school, clinical, and research experiences. Some participants who participated in post-baccalaureate programs were guaranteed admission into the hosting school's medical school.

Persistence

Participants' attitudes toward the admissions process also influenced their experience. Many participants experienced moments of doubt during the process. However, many noted the importance of staying focused on their passion for medicine. Resourcefulness, sense of personal responsibility, and perseverance also facilitated the participants' experiences and eventual acceptance. A few believed that their perseverance, even in the face of rejection, facilitated their eventual acceptance. An African-American female first year student was one such participant:

I think actually being a re-applicant helped me. Going through it for the first time was kind of a hard hit and so I could tell when I went back and actually talked to people, they really admired the fact that I did not give up or quit and I tried to make myself a better applicant. That really showed them that I was serious in pursuing this path.

Discussion

Based on this study's findings, a conceptual model emerged⁶⁵ depicting how Black/African-American and Hispanic/Latino applicants navigate the medical school admissions process. This model, depicted in Figure 1, considers the influences previously discussed as affecting individuals' motivations to apply to medical school. Next, the model considers the barriers and supports affecting applicants' experiences as they navigated through the admissions process. The model includes consideration of how these influences can affect applicants' decisions to re-apply, if not accepted.

Relationship of the Model to Prior Research and Theory

The themes and conceptual model that emerged are both consistent with and different from prior research and theory. Similar to the undergraduate college choice process as described in Hossler and Gallagher's⁴³ 3-phase model, this study's findings support the idea that the medical school admission process can be understood as a series of choices, beginning with predisposition toward medicine and the decision to apply to medical school.

This study supports the notion of the student choice construct, which considers that students' decisions are based on their individual *habitus*,⁴⁸ at the medical school level. However, this decision-making may differ from that related to other programs in that many participants described a deep-seated passion to help others as influential in their decision to pursue medicine. Consideration of the broader health care environment is warranted because, as Colquit and Killian³² found, aspiring medical students can be dissuaded or persuaded in their interest in medicine according to what they perceive the future of medicine to be.

Previous theorists⁶⁶ have focused on the development of academic capital and college-going among students at the undergraduate level. This study's findings suggest that this framework can be extended to gaining admission to medical school. The six processes described by St. John et al.⁶⁶ supporting college-going (e.g., concerns about college cost, networking, trust, information, cultural capital, and habitual patterns) seem to align with those described by this study's participants.

This study also supports previous findings that Black/African-American and Hispanic/Latino students are attracted to medicine because of the intellectual stimulation they perceive to be inherent to the profession and physicians' ability to help others.³⁰ In contrast to studies of pre-medical students who opted not to pursue careers in medicine,³² these participants

did not express concerns about incompatibility with family life, financial rewards not justifying the investment, or treating patients who might die. Similarly, in contrast to the pre-medical students studied by Lovecchio and Dundes³⁰ who were concerned with debt, the current participants hardly mentioned debt as a concern. Contrasting Kassebaum and Szenas's³⁴ findings, only one participant mentioned employment considerations as affecting her decision-making.

This study's findings seem to support reasons for leakage of qualified minorities along the medical education pipeline identified by previous studies.³⁰⁻³⁴ In addition, the findings support previous findings that minorities can be disadvantaged in terms of academic preparation and educational opportunities^{40,41} and socio-economic inequality and financial concerns,⁶⁷ as well as in stereotyping and inequalities in pre-health advising.⁶⁸ These challenges pose barriers to increasing diversity and, although the study participants were able to overcome them, previous research suggests that many others with similar struggles are not.

Study findings correlate with previous research about facilitators and barriers to minority success along the medical education continuum: social support;⁵² professional exposure;^{52,53} financial aid;⁵² personal characteristics;⁵² family, peer groups, and self-perceptions;⁵¹ potentially discouraging advising practices;⁵¹ access to services and assistance;⁵¹ and education, group identity, faith, and social responsibility.⁵³ Findings also support the suggestion of Atkinson et al.⁶⁸ that a combination of positive factors—rather than any one alone— correlates to higher acceptance rates, and extends these previous findings to suggest that, although a combination of negative factors can derail a student, any combination of negative factors can be overcome.

Previous research has indicated that applicants use multiple types of information and value these differently. This study's findings align with Matthew and Grbic's⁵² quantitative study

of 2010 Pre-MCAT® Questionnaire (PMQ) data in noting that “friends, peers, and word-of-mouth” and “medical school student or recent graduate” were the common resources cited, but contrast with their finding that 59% of respondents used the 2010 PMQ-cited school websites to evaluate schools. Similarly, in contrast to previous research,⁶⁹ the media was not identified as influential to participants’ decision-making. Surprisingly, only one participant in the current study mentioned using the Medical School Admission Requirements (MSAR®) resource, contrary to Matthew and Grbic’s⁵² finding that 37 % of applicants rated the MSAR® highest for helping them make application decisions.

Potential Directions for Research and Practice

Similar to previous studies, this study revealed that quality pre-medical advising, or lack thereof, can significantly impact students’ navigation through medical school admissions.⁶⁸ Further research is needed to better elucidate the role pre-medical advisors play in this process; however, particularly for applicants who may not have guidance from other sources, an advisor can be critical. Thus, colleges should invest in having sufficient pre-medical advisors, specifically advisors from minority groups. The study also suggests potential benefits of enhancing mentoring. As Matthew and Grbic⁵² submit, applicants of lower socio-economic status and minority groups could benefit from more explicit guidance on how best to network and use mentors.

Financial aid—and information about it—is critical. Financial concerns can deter students from pursuing medical careers or limit the selection of schools to which they apply. Financial aid programs like FAP may consider changing their award guidelines to aid more needy students. Medical schools may consider additional ways to reduce the financial burden for

minority applicants, including additional discretionary funds to waive secondary fees, travel stipends or web-based interviews.

Students commented on the difficulty of accessing school information via the internet, suggesting that administrators may consider reviewing their school's internet presence to ensure it is clear and easily navigable. Information about the MSAR[®] should be included in outreach efforts. Further, providing feedback on rejected applications may assist re-applicants in improving weak areas.

Reaching potential applicants early in the educational pipeline is key to expanding the pool of qualified minority applicants. Administrators should consider novel ways to increase their outreach to minority applicants including via minority student conferences, informational workshops, and direct communication; participants reported expecting this and noticing when schools did not. Minority student clubs and college courses with higher proportions of minority students are also potentially under-utilized outreach venues outreach. Schools might also tailor outreach to address minority applicants' most common concerns and ensure that outreach is welcoming to applicants' families.

Including an additional question on the MSQ regarding the number of times the student applied before being accepted would provide valuable data for future research. Repeating quantitative studies such as Matthew and Grbic's⁵⁴ and disaggregating data by applicant race and ethnicity, as well as exploring how applicants use various types of data, may provide further insight. Additionally, further study focusing on the choice process could help explain how minority applicants choose which medical schools to attend.

This study's findings suggest that influences affecting minorities in the medical school admissions process are varied and complex. Few, if any, participants benefited from all of the

facilitators discussed. However, each could mention at least one, and generally more than one, element that facilitated their experience. The question warranting further exploration, then, is what quotient or combination of facilitators versus barriers is required for a successful experience?

As administrators seek to increase the number of minority applicants to medicine in general—and to their schools specifically—it is important to understand how applicants perceive the process, their needs, and the facilitators and barriers they face. Importantly, the challenges faced by the participants in this study very likely pose insurmountable for equally qualified but less resilient or resourceful individuals, who may represent an overlooked pool of potential minority physicians.

Limitations

As with all qualitative research, the data in this study is rooted in participants' experiences and was limited in a number of ways. Although the study included representation from a cross-section of medical schools, convenience and snowball sampling resulted in a relatively small sample of students, representing a subsample of the national population of medical students 1) who had the interest, means, and time to participate in a minority student organization's conference, as well 2) as those who consented to an hour-long interview. Given the organizations' focus on supporting student leaders of color, participants may represent students who tend toward leadership positions, as well as those who identify strongly with the racial/ethnic element of their identity. Students who experienced either more – or possibly fewer – barriers to admission may also have been overrepresented in the sample. The study did not include perspectives of applicants who were not accepted or did not matriculate into medical

school. Given that participants described experiences that occurred in the past, data may be affected by recall bias. Further, the analysis does not attempt to understand differences in perceptions across the minority groups included in the study. Findings may not be generalizable to all Black/African-American and Hispanic/Latino medical students; however, the conceptual model could be tested with other groups to ascertain its transferability and relevance. Additional research is needed to explore potential practice and policy implications that emerged.

For this study the principal investigator conducted all of the interviews and analyzed the data. The investigator is a medical education administrator and was a doctoral student in a higher education program at the time of this research. For transparency purposes, the investigator disclosed this duality of roles in the preamble to each interview. The investigator also ensured that no students with whom she had had previous experience was included in the study. However, it remains possible that student responses were influenced by their knowledge of the investigator's involvement in medical education. Further, like all qualitative research, this study was shaped by how the researcher understood, synthesized, and presented participants' descriptions of their experiences.

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All tables, figures, appendices and quotations are the author's own work.

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TABLE 1: PROFILE OF PARTICIPANT SCHOOLS

School	Total Students Sampled	Percentage of Students Sampled (n=33)
Case Western Reserve University School of Medicine	1	3%
Columbia University College of Physicians and Surgeons	1	3%
Creighton University School of Medicine	1	3%
Drexel University College of Medicine	3	9%
Eastern Virginia Medical School	1	3%
Harvard Medical School	1	3%
Icahn School of Medicine at Mount Sinai	1	3%
Lewis Katz School of Medicine at Temple University	4	12%
Meharry Medical College School of Medicine*	1	3%
New York University School of Medicine	2	6%
Ohio State University College of Medicine	1	3%
State University of New York, Downstate Medical Center College of Medicine	1	3%
Stritch School of Medicine Loyola University Chicago	2	6%
The George Washington University School of Medicine and Health Sciences	1	3%
The Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania	1	3%
University of Illinois at Chicago College of Medicine	1	3%
University of Kentucky College of Medicine	1	3%
University of Louisville School of Medicine	1	3%
University of Miami Leonard M. Miller School of Medicine	2	6%
University of Michigan Medical School	2	6%
University of Pittsburgh School of Medicine	1	3%
University of Texas School of Medicine at San Antonio	1	3%
Wake Forest School of Medicine of Wake Forest Baptist Medical Center	1	3%
Yale School of Medicine	1	3%

* a Historically Black College/University (HBCU)

TABLE 2: PROFILE OF PARTICIPANT DEMOGRAPHICS

Race/Ethnicity	Gender	Medical School Year	Total Students Sampled	Percentage of Student Sampled (n=33)
Black/African-American	F	0 - Class of 2017	1	3%
Black/African-American	F	1 - Class of 2016	6	18%
Black/African-American	F	2 - Class of 2015	4	12%
Black/African-American	F	3 - Class of 2014	3	9%
Black/African-American	F	4 - Class of 2013	1	3%
Black/African-American	M	1 - Class of 2016	3	9%
Black/African-American	M	2 - Class of 2015	1	3%
Black/African-American	M	3 - Class of 2014	3	9%
Black/African-American	M	4 - Class of 2013	1	3%
Hispanic/Latino	F	1 - Class of 2016	3	9%
Hispanic/Latino	F	2 - Class of 2015	1	3%
Hispanic/Latino	F	3 - Class of 2014	2	6%
Hispanic/Latino	M	1 - Class of 2016	2	6%
Hispanic/Latino	M	3 - Class of 2014	1	3%
Hispanic/Latino	M	4 - Class of 2013	1	3%

FIGURE 1: MINORITIES IN MEDICAL SCHOOL ADMISSIONS

