

# A Qualitative Study of Undergraduate Racial and Ethnic Minority Experiences and Perspectives on Striving to Enter Careers in the Health Professions

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## ABSTRACT

**Background:** Diversification of the health care workforce by race and ethnicity offers a strategy for addressing health care disparities. This study explored the experiences with pathways programming and mentoring of minority undergraduates aspiring to health professions careers.

**Methods:** We interviewed 21 minority undergraduates in 4 focus groups. The interviews explored participants' backgrounds; perceptions of racial climate; exposure to health professions careers, mentors, and pathways programs; barriers to success; and desired support.

**Results:** Many participants described diminished confidence and feelings of isolation due to stereotyping and discrimination; some were empowered to pursue health care careers because of adversity. Common themes included desire for mentorship, earlier career exposure, and college readiness support.

**Discussion:** Minority students desire health career exposure, mentoring, pre-college advising, and a positive racial climate; unfortunately, these desires often go unmet.

9.1% and 12.0% of public high school students enrolled in the state, respectively.<sup>1-3</sup> Many complex socioeconomic factors contribute to these statistics. In a national assessment of child well-being, black children in Wisconsin scored in the lowest quartile in almost every measure reported, such as poverty and reading proficiency; the authors concluded that Wisconsin may be the worst state for an African American child to grow up.<sup>4</sup> These disparities persist into high school, where Wisconsin has the highest black-white graduation gap in the country.<sup>5</sup>

Enrichment programs, here termed pathways programs, have been developed around the nation to facilitate minor-

ity student matriculation into college and professional schools. (The authors have chosen to use the term “pathways” as adopted by the National Science Foundation instead of the older term “pipeline.”)

There are 4 general components of pathways programs: academic enhancement, motivation, mentorship, and research apprenticeship.<sup>6</sup> Summer, post-baccalaureate, and preadmissions enrichment programs have shown to be successful at increasing racial/ethnic minority student application and admission rates to health professions programs.<sup>7</sup> Less is known about which programmatic components make pathways programs effective at achieving these aims. For example, one of the most rigorously studied interventions, the Robert Wood Johnson Foundation Summer Medical and Dental Education Program, found that strong programmatic leadership and faculty engagement were more correlated with outcome than academic characteristics.<sup>8</sup> Further, given the evidence that the science achievement gap

## INTRODUCTION

Diversity of the health care workforce is dependent on the diversity of health professions educational programs. Of the 372 matriculating medical students from Wisconsin in the 2018-2019 school year, only 2.4% were black and 1.6% Hispanic, despite these groups making up 6.7% and 6.9% of the state population and

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starts at a very young age,<sup>9</sup> there is increasing interest in developing pathways programming for pre-collegiate students.<sup>10</sup>

The overall goal of this project was to better understand the educational experience, particularly around pre- and early college pathways programming, of undergraduates who are underrepresented in medicine aspiring to health professions careers. We explored programmatic components as well as contextual variables such as mentoring. Here we define underrepresented in medicine in accordance with the Association of American Medical Colleges as those “racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.”<sup>11</sup>

## METHODS

We used a descriptive exploratory approach to examine issues around the development of health care workforce diversity. In small focus groups, we asked undergraduate students interested in pursuing health professions careers to provide demographic information, racial climate descriptions, positive exposures to health professions fields and pathway programming, and barriers and desired opportunities regarding their career pursuits. This study was approved by the University of Wisconsin-Madison Education and Social/Behavioral Science Institutional Review Board.

### Subjects and Recruitment

Eligibility criteria were age 18 years or older; English-speaking; having grown up in the Midwest; and being enrolled at an undergraduate institution in Wisconsin, interested in pursuing a health professions career, and identified as a racial/ethnic minority underrepresented in medicine. Recruitment material defined underrepresented in medicine using the University of Wisconsin Department of Education’s definition of “targeted minority student,” who are students identified as racially/ethnically underrepresented at the University of Wisconsin.<sup>12</sup> This included African American, Native American, Latinx, Cambodian, Hmong, Lao, and Vietnamese students. We did not exclude any students who self-identified as underrepresented in medicine and did not fall in the category of “targeted minority.” Given acute racial disparities documented in Midwestern states,<sup>13</sup> we felt it appropriate to understand the experience of Midwestern students who self-identified as underrepresented in medicine.

The primary form of recruitment was through email solicitation. College administrators, scholarship program directors, pre-health advisors, and student organization leaders at a large public Wisconsin educational institution, a small private educational institution, and a technical college served as our primary recruiters. These contacts were asked to forward an email with a digital flyer detailing information about our study to underrepresented in medicine undergraduate students potentially interested in health professions careers. A link to a secured online survey was included in the email for students to indicate interest and provide contact

### Box. Focus Group Interview Questions

- If you feel comfortable doing so, please self-identify your racial/ethnic background and gender, along with your preferred pronouns.
- Where did you grow up? Is this urban, rural or suburban?
- How would you describe the racial climate of your school, currently and growing up? How did this affect your pursuit of your career goals?
- What exposure did you have growing up to health professional careers? Were you encouraged to pursue these careers?
- Were you exposed to any pathways programs that helped you navigate the educational pathway growing up? If so, please describe these programs.
- Do you identify mentors who have helped you get to where you are today?
  - If so, how did you become connected with them?
  - How have they supported you?
- What do you identify as the major barriers to your educational progress?
- What sort of support do you wish had been available to you?
- Are there other comments you’d like to share with us?

information. The survey included 3 eligibility questions: (1) Are you currently a student enrolled at a public or private institution in Wisconsin? (2) Do you consider yourself underrepresented in medicine and/or identify as a racial/ethnic minority? and (3) Are you interested in a health professions field either in medicine, pharmacy, dentistry, podiatry, optometry, physician assistance, nursing, occupational therapy, or physical therapy? All students who completed the survey and met the eligibility criteria were emailed by a study team member to schedule a focus group interview. Participants were enrolled in the study on a rolling basis.

### Focus Groups

All students who responded affirmatively to our recruitment email participated in one, 1.5-hour-long focus group session. Meals were provided as compensation for participation. Each group included 4 to 6 participants, 1 to 2 facilitators who themselves were people of color, and a research assistant who performed audio recording and documented field notes. Informed written consent was obtained prior to conducting each session. Facilitator(s) asked questions in an inverted funnel scheme, beginning with general background questions and building up to more open-ended questions (Box). One consistent facilitator served as the lead moderator for all 4 sessions to assure consistency in facilitation technique.

Audio recordings were stored in a secure online drive and later transcribed by a study team member. To ensure participant confidentiality, each participant was assigned a code name consisting of their focus group number (1, 2, 3, 4) and letter (A, B, C, D, E, F), which was determined by the order in which they spoke. No identifying information was included in the transcripts.

### Data Analysis

We derived codes directly from the text data. Two team members independently read transcript data by question, focus group, and participant to derive codes from words and expressions most commonly used during the interviews. These codes were then

**Table.** Themes Identified by Participants Regarding Pursuit of Health Professions Careers

Themes	Subthemes/Comments
Racial Climate as Context	<p>Equating not being white with being unqualified to pursue careers in health care.</p> <ul style="list-style-type: none"> <li>• Held back from advanced high school programming by teachers, leading them to think others believed they could not succeed.</li> </ul> <p>Experiencing feelings of exclusion, isolation, and lost confidence.</p> <ul style="list-style-type: none"> <li>• Summer introductory college program helpful but stigmatizing.</li> <li>• “You got into [the institution] because you’re black.”</li> <li>• Challenges of intersectionality (ie, being grouped with students based on 1 category such as ethnicity but not fitting in with another such as class.)</li> </ul> <p>Feeling isolated when did not qualify for on-campus pathway program but also not fitting in with other students who were from similar academic high schools.</p> <p>Being intentionally placed on a dormitory floor with international Asians with whom he had nothing in common.</p> <p>Enduring stereotypes.</p> <ul style="list-style-type: none"> <li>• “...just another Asian student pursuing medicine...I’ve been called a robot.”</li> </ul>
Exposure to Health Professional Careers	<p>Difficulty finding opportunities to shadow health care providers.</p> <p>Few college-preparation courses and programs included exposure to health professions in high school.</p> <p>Most shadowing or mentoring opportunities were found individually.</p>
Exposure to Pathways Programs	<p>Some precollege pathway programs provided exposure to future health professional careers.</p> <p>Both pre- and in-college pathway programs decreased feelings of isolation and increased feelings of connectedness; however, some participants felt these programs exacerbated stereotypes and discrimination by making it appear that underrepresented-in-medicine students only got into college with special help.</p>
Exposure to Mentors	<p>Most mentorship relationships were informal, including family members.</p> <p>Teachers, guidance counselors, and college advisors gave valuable academic and technical advice.</p> <p>People who could relate, support, boost confidence, give positive appraisal, and reaffirmation of pursuits were invaluable.</p> <ul style="list-style-type: none"> <li>• “You can do this. Look at me; if I did it, you can do it.”</li> </ul> <p>Mentors in positions of power helped participants believe in their potential.</p> <p>Mentors’ emotional support improved self-esteem, which further positively influenced work ethic, self-efficacy, and other personal and professional behaviors.</p> <p>Relationships could be reciprocal.</p> <ul style="list-style-type: none"> <li>• “I think him knowing me has taught him a lot about other races.”</li> </ul> <p>Words used to describe mentorship relationships: “reinforcement,” “trust,” “confidence,” “a safe place.”</p>
Barriers to Educational Success	<p>Prior to college, feeling uninformed about opportunities and resources for assistance of any kind, lacking confidence in writing essays for financial aid, scholarships, and applications.</p> <p>Some mentors and advisors were unsupportive.</p> <ul style="list-style-type: none"> <li>• Parent advised a different career due to the amount of time in training.</li> <li>• Academic advisors said they “wouldn’t make it” and should “just go to [a community college].”</li> </ul> <p>Once in college, feeling unprepared for the rigors of college, especially for first-generation college students.</p> <ul style="list-style-type: none"> <li>• No connections or ideas of what to expect once in college.</li> <li>• Had never learned appropriate study habits and struggled to engage in the “critical thinking” expected in college.</li> <li>• Difficulty of not seeing people who look like themselves teaching.</li> </ul> <p>Lack of students of color in science, technology, engineering, and mathematics fields makes them feel discouraged.</p> <p>Other commonly cited barriers: language; standardized testing; and finances to pay for college-prep courses, AP tests, and stress regarding college expenses.</p>
Desired Support Pre-college	<p>Access to opportunities such as shadowing and internship programs to gain exposure to health care professional careers.</p> <ul style="list-style-type: none"> <li>• Many felt this exposure should be granted early in elementary school.</li> <li>• People automatically tell us, ‘Oh go to the Army,’...but there’s no recruitment [that states], ‘You should think about being a doctor.’”</li> </ul> <p>Academic support from teachers and counselors; support for college success and readiness; pathway programs; mentoring; earlier exposure to collegiate experiences; help with finding resources like scholarships.</p> <ul style="list-style-type: none"> <li>• “I wish I had more advising on how to do scholarships and stuff like that...I think that was because the kids in the top classes [who received this advising] were almost all white kids...in the higher socioeconomic status.”</li> </ul> <p>Learning how to ask for help once in college.</p>
In-college	<p>More guidance as a freshman; someone who can direct them to useful resources.</p> <p>Someone who can reassure them when they are struggling.</p> <p>Racial/ethnic groups to join and mentorship by peers.</p>
Resiliency and Motivation	<p>Personally experiencing or witnessing racially/ethnically motivated trauma or humiliation growing up drove them to their career pursuits.</p> <p>Inspiration by minority physicians or older siblings.</p> <p>Independence and assertiveness boosted by military experiences.</p> <p>Witnessing parents struggle.</p> <p>Witnessing the struggle of others who share their racial/ethnic background, such as seeing underserved people at public clinics who experienced inadequate patient-centered medical care.</p> <ul style="list-style-type: none"> <li>• “Motivated by working at free clinics and seeing patient’s needs, the language barrier, and lack of minority role models in medicine.”</li> </ul> <p>Experiencing discrimination, intimidation, and isolation in college “pushed them” to succeed.</p> <p>Confidence-challenging situations sometimes a motivator.</p> <ul style="list-style-type: none"> <li>• “I just feel like I have the pressure to be just as good or even better than them [white students].”</li> </ul>

categorized into themes, which were verified by the remaining team members.

## RESULTS

### Sample Characteristics

Twenty undergraduate students from the large public institution and 1 student from the small private institution participated in a total of 4 focus group sessions held between spring of 2016 and fall of 2017. Participants shared demographic information at the beginning of each focus group session. One hundred percent of participants identified as persons of color, and 85% met the formal recruitment definition of underrepresented in medicine. Sixty-two percent were female and 100% cisgender. Nineteen percent of participants were born outside of the United States; 85% had grown up in the Midwest, with 24% identifying an urban and 10% a rural Midwestern upbringing (formal definitions of urban, rural, and suburban were not provided).

Seven themes were identified from 39 independent codes and are reflected in the Table. Acute consciousness of racial and ethnic identity, often coupled with poor confidence and feelings of isolation, were prevalent among participants, especially when they sensed a lack of belonging to any one group of students or available support programs. Although pathway programs countered these feelings, they often made participants feel stigmatized, promoting a sense of isolation. Most mentoring experiences were informal, and in the majority of cases, exposure to health professions was pursued by participants individually. Participants desired mentors and advisors who could provide both professional advice and emotional support, especially when they were struggling. Many participants' decisions to pursue health professions careers were based on personal experiences of witnessing those from similar backgrounds struggle with racial disparities and, similarly, many were driven to succeed secondary to their own experiences with discrimination.

## DISCUSSION

This study explored programmatic and other experiences that can promote or inhibit the success of minority students pursuing careers in health professions fields. We chose to investigate these experiences from a racialized context, which the authors feel is often the "elephant in the room" that is not addressed. In addition to the positive and negative effects of pathways programs and mentoring, participants identified many alternative issues that facilitated or inhibited their pursuit of health professions careers.

Lack of diversity and inclusion was clearly tied to feelings of isolation which, in turn, was associated with feelings of internalized racism, described by Camara Jones as the acceptance by members of stigmatized races of negative messaging around their own abilities and intrinsic worth.<sup>14</sup> Even attempts at institutional support, such as admittance and scholarships targeted at students

underrepresented in medicine, often led participants to feel singled out primarily for their minority status, resulting in loss of confidence. Although racial and ethnic diversity at institutions of higher education have improved with the establishment of various scholarship and pathway programs, there are still concerns with the feeling of inclusion by minority students. Similar to other studies, obstacles to success included lack of support personally, institutionally, and financially; discrimination; pressure to represent a culture; difficulties with standardized testing; and poor self-confidence.<sup>15,16</sup>

There was consensus across focus group participants that there should be more opportunities for exposure to health professions careers and that this introduction should occur at an early age. Several of the participants in our study discovered programs individually or with the help of a single teacher champion. Many also struggled to gain access to exposure to health professions careers through shadowing or volunteer opportunities. In addition, students expressed desire for more formal mentoring opportunities.

One limitation of this study is that our participants were self-selected and were already demonstrating resilience in pursuing their chosen careers in health care. These participants were often highly resourceful, assertive, and self-directed. Given this selection bias, it remains notable that this more resilient group still confronted significant challenges. A further study limitation is that 3 ethnically Chinese students chose to participate despite not meeting our formal definition of underrepresented in medicine. While future studies should more explicitly screen for appropriate participant inclusion during enrollment, we decided to honor participants' self-identification as underrepresented minorities and found that these participants' responses lifted the complexity, and sometimes poignancy, of the discussion. All participants expressed a sense of feeling on the outside of a white majority culture and a shared desire to want to succeed academically and to achieve a sense of belonging. Finally, the generalizability of this study is limited as our sample size was small and, despite efforts to recruit participants broadly from several academic institutions, the majority of those who enrolled in the study attended the large public university and none attended the technical college.

This field of research may benefit from future studies that compare the experiences of underrepresented in medicine students to nonunderrepresented in medicine students from similar backgrounds (ie, affluent, low socioeconomic status, international) to further characterize feelings of discrimination and isolation that may be unique to those who are underrepresented in medicine. It may also be important to hear the perspectives of minority college graduates who considered health professions careers but chose a different path. Additionally, future research questions should address how to develop positive traits, such as independence and motivation, among students underrepresented in medicine. Finally, conducting a study that does not

rely on self-selection may grant a more realistic view of underrepresented in medicine experiences.

## CONCLUSION

Minority undergraduates interested in health professions careers desire increased and earlier exposure to such careers, mentors who can lend not only technical but also emotional support, and pathways programs that provide comprehensive preparation for the higher educational experience. While developing pathways programming to promote diversity in the health care workforce, it will be critical to consider and address the challenging racial climate that minority students experience.

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