Experiences of Minoritized Learners in Preparation for Graduate Medical and Health Care Education

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Abstract

Context: Disparities in the healthcare system persist in society today, affecting both minoritized patients and providers. A diverse healthcare workforce is ideal to treat a patient population that is also becoming increasingly diverse. We examined the experiences of minoritized students pursuing healthcare-related degrees, including athletic training, in pre-medicine and healthcare professions. Methods: We used a phenomenological approach to explore the lived experiences of 10 minoritized pre-medicine and healthcare profession students (age=20±2 years). Participants engaged in an online semi-structured interview (Zoom, San Jose, CA). All interviews were audio-recorded and transcribed. We used a consensual qualitative research (CQR) approach with a 3-person data analysis team and multi-phase coding approach to identify core ideas. The data analysis team established a consensual codebook that was applied to all the transcripts. The consensus codebook’s trustworthiness and credibility were established through member checking, multi-analyst triangulation, and auditing. Results: Three domains were identified regarding minoritized pre-medicine and healthcare profession students relating to their experiences while pursuing their respective graduate degrees, including athletic training (Figure 1): 1) Belonging 2) Relationships 3) Preparation. Minoritized pre-health profession students want to experience more diversity and inclusion in the healthcare system. Feelings of belonging, relationships with others, and prior experiences of preparation help to encourage these students to pursue careers in healthcare, although barriers still exist. Focused professional resources are needed to continue supporting minoritized students in their pre-healthcare programs. Conclusions: Minoritized learners want to see and be represented in healthcare. Colleges and universities must tailor individualized resources to minoritized learners to help increase diversity in the healthcare system.

Author Bio(s)

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Kenneth E. Games, PhD., LAT, ATC, is a professor in the Doctorate in Athletic Training program and interim dean of the College of Graduate and Professional Studies at Indiana State University.

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United States

ABSTRACT

Background: Disparities in the healthcare system persist in society today, affecting both minoritized patients and providers. A diverse healthcare workforce is ideal to treat a patient population that is also becoming increasingly diverse. We examined the experiences of minoritized students pursuing healthcare-related degrees, including athletic training, in pre-medicine and healthcare professions. Methods: We used a phenomenological approach to explore the lived experiences of 10 minoritized pre-medicine and healthcare profession students (age=20±2 years). Participants engaged in an online semi-structured interview (Zoom, San Jose, CA). All interviews were audio-recorded and transcribed. We used a consensual qualitative research (CQR) approach with a 3-person data analysis team and multi-phase coding approach to identify core ideas. The data analysis team established a consensual codebook that was applied to all the transcripts. The consensus codebook’s trustworthiness and credibility were established through member checking, multi-analyst triangulation, and auditing. Results: Three domains were identified regarding minoritized pre-medicine and healthcare profession students relating to their experiences while pursuing their respective graduate degrees, including athletic training (Figure 1): 1) Belonging 2) Relationships 3) Preparation. Minoritized pre-health profession students want to experience more diversity and inclusion in the healthcare system. Feelings of belonging, relationships with others, and prior experiences of preparation help to encourage these students to pursue careers in healthcare, although barriers still exist. Focused professional resources are needed to continue supporting minoritized students in their pre-healthcare programs. Conclusions: Minoritized learners want to see and be represented in healthcare. Colleges and universities must tailor individualized resources to minoritized learners to help increase diversity in the healthcare system.

Keywords: underrepresented, higher education, diversity
INTRODUCTION
The practice of including or involving people from a variety of different social and ethnic origins, along with various genders, sexual orientations, abilities, faith, spirituality, and other categories, is known as diversity. Diversity has been acknowledged as a crucial strategy for improving professional performance and addressing health disparities. The healthcare system should be implementing a more diverse workforce. People of color frequently experience difficulties getting access to fair healthcare. The health status of minoritized communities, including African Americans, Indigenous Americans, Hispanics, and a number of Asian subgroups, has never been on par with that of white Americans throughout the history of the United States. The need for more diverse healthcare providers can be crucial for the advancement of healthcare systems and decreasing healthcare disparities. Beneficial patient outcomes and satisfaction have been connected to racial concordance between patients and clinicians. The future of health care will be more dependent on our diverse healthcare staff as the demographics of our nation continue to change and health inequalities in underrepresented populations are more identified.

In the health professions, racial and ethnic minorities are underrepresented. Reducing health inequalities, resolving educational opportunity gaps, and expanding diversity in the health professions are possible through programs promoting pipeline education and affirmative action. However, the proportion of minorities enrolling in higher education also affects how many minorities graduate and join the healthcare system. This pipeline problem, on the other hand, is claimed to be the sole cause of these low percentages and statistics. According to the pipeline problem, the lack of adequately qualified members of underrepresented groups is the primary cause of the failure of diversity projects. Even when the greatest methods for producing high-quality outputs are destined to produce, at best, modest output because of the low input (or percentages) of minorities moving through the system at each level. Racial and ethnic minorities continue to be underrepresented in the medical field. Equality of opportunity and educational pipeline programs are crucial for reducing health disparities, increasing the diversity of the health professions, and addressing educational opportunity inequalities. The need for an expansion of the healthcare pipeline is important to the advancement of healthcare education within the US. Studies have found several factors contribute to low recruitment and retention of students from ethnically diverse backgrounds in higher education, particularly those enrolling in allied health professional programs. Common beliefs and findings hold that many institutions fail to adequately prepare and support students who, despite motivation and ambition, may not have completed high school and may experience additional stress that may not be experienced by their classmates. Under preparedness for college, racism, lack of comfort and confidence in the health and science disciplines, stereotyping, and lack of mentoring are some of the most often stated factors that affect retention. The idea of addressing the racial gap is rising within healthcare but the overall problem may be deeper, within the education system. This study explored the experiences of minoritized students from pre-medicine and healthcare professions in pursuit of their healthcare-related degrees, including athletic training.

METHODS
Research Design
This study used a phenomenological approach to examine the lived experiences of minoritized healthcare students relative to their perceptions and barriers experienced while pursuing higher education. We used semi-structured qualitative interview with a brief demographic survey (Qualtrics) to capture our data.

Participants
Each participant provided consent prior to beginning the survey and again before the interview. This study was approved by the Institutional Review Board of XXX. Participants were recruited if they 1) identified as a minoritized individual, 2) are a student enrolled in a pre-health program, and 3) over the age of 18. There were 10 participants interviewed, and demographic information can be found in Table 1.

Qualtrics emails were sent to Historically Black College and University (HBCU) program directors to begin the recruitment process. Recruitment was also expanded to include emailing college counselors at colleges and universities not recognized as HBCU, as well as through social media due to low response. Participants were given access to a link to the intake survey and asked to provide digital informed consent before participating. After consenting to the research, participants answered demographic questions and provided their preferred contact information for an individual follow-up interview.
Table 1. Participant Demographic Characteristics

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age, y</th>
<th>Ethnicity</th>
<th>Major</th>
<th>Future Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strawberry</td>
<td>19</td>
<td>Black/African American</td>
<td>Kinesiology</td>
<td>Strength Coach</td>
</tr>
<tr>
<td>Grapes</td>
<td>18</td>
<td>Black/African American</td>
<td>Pre-Med</td>
<td>Pediatric Physiatrist</td>
</tr>
<tr>
<td>Papaya</td>
<td>22</td>
<td>Black/African American</td>
<td>Exercise Science</td>
<td>Athletic Trainer</td>
</tr>
<tr>
<td>Pineapple</td>
<td>27</td>
<td>Black/African American</td>
<td>Chemistry</td>
<td>Dentistry</td>
</tr>
<tr>
<td>Dragonfruit</td>
<td>21</td>
<td>Hispanic/Latinx</td>
<td>Athletic Training</td>
<td>Athletic Trainer</td>
</tr>
<tr>
<td>Apples</td>
<td>20</td>
<td>Asian</td>
<td>Pre-PA</td>
<td>Physician Assistant</td>
</tr>
<tr>
<td>Banana</td>
<td>19</td>
<td>Asian, White/Caucasian, Native American, Indigenous/Alaskan Native</td>
<td>Biochemistry</td>
<td>Pediatric Surgeon</td>
</tr>
<tr>
<td>Oranges</td>
<td>19</td>
<td>Black/African American</td>
<td>Biology</td>
<td>Physician</td>
</tr>
<tr>
<td>Mango</td>
<td>19</td>
<td>Asian, Hispanic</td>
<td>Biology</td>
<td>Physician Assistant</td>
</tr>
<tr>
<td>Kiwi</td>
<td>20</td>
<td>Hispanic/Latinx</td>
<td>Athletic Training</td>
<td>Athletic Trainer</td>
</tr>
</tbody>
</table>

Instrumentation
The interview protocol consisted of seven open-ended questions (Table 2) focused on the pre-health student’s experiences within their program, their goals as a future healthcare professional, and influences that led them to pursue a healthcare career. The research team developed an interview protocol based on available literature which was reviewed by a panel of experts. Experts were professionals with extensive experience in diversity, equity, and inclusion as well as qualitative inquiry. The experts were asked to comment on the interview question’s content, flow, and applicability to the objectives of the project. The PI conducted four pilot interviews to ensure the clarity and flow of the questions with four individuals who met the inclusion criteria. All pilot interviews were excluded from the final data set.

Table 2. Interview Protocol Questions

Questions

1. Based on your survey I see that you are a ____ major, can you tell me why you chose that major?
   a. What factors, if any, helped you to decide on this major?

2. Tell me about your experience in your current program so far.
   a. What would you change about your experience? What would you keep the same?
   b. Have you been introduced to any immersive experiences, where you can learn more about your chosen profession, while in your current program?
      i. How was this structured? How did you identify the site? Was the opportunity to work with minoritized providers a factor in the selection of that site?

3. Tell me about the relationships with your current professors or advisors.
   a. Based on those relationships so far, what would you change about them? What would you keep the same?
   b. Was working with minoritized professors a factor in selecting this program?

4. Once you have your degree, what are your employment plans and future career goals?
   a. Based on your degree program, will you need to pursue another degree post-graduation? Do you feel prepared for that? Why or why not?
      i. Do you feel there are any barriers preventing you from achieving your goals as a health care provider?
         a. If so, what are they?

5. Prior to college, did you have any encounters with minority healthcare professionals?
   a. If so, when? Tell me about them?
   b. In what ways, if any, did those encounters contribute to your enrolling in school to be a healthcare professional?

6. Do you know much about athletic training?
   a. If so, in your own words could you explain?
      i. Where did you learn about athletic training?
      ii. Have you ever considered becoming an athletic trainer? Why or why not?
      iii. What things are appealing about being an athletic trainer? What things are unappealing?
Questions
b. If not, would you be interested in learning more about athletic training?
   i. Based on what you just learned, would you ever consider becoming an athletic trainer? Why or why not?
   ii. What things are appealing about being an athletic trainer? What things are unappealing?
7. Is there anything else you think I should know about your becoming a healthcare professional?

Procedures
Once participants indicated they wanted to participate, the PI scheduled one-on-one over the teleconferencing software (Zoom, San Jose, CA), using the phone/audio-only feature, and were audio recorded to ensure transcription accuracy. The participant was able to give verbal consent at the beginning of the scheduled interview. The PI conducted all interviews, which lasted from 20 to 30 minutes. Participants were asked to answer open-ended questions relating to their experience as a minoritized student in their pre-health program. The interview was recorded and transcribed by the PI, all and any identifying information was properly stored and protected to maintain confidentiality of each participant. After reviewing the transcripts, the PI sent transcripts to the participants for member checking. This allowed participants to read the transcribed conversation and review it for accuracy. During this time, participants had the opportunity to provide clarifications or updates to their initial responses.

Data Analysis
After member checking was complete, the research team assembled a three-member coding team. We used consensual qualitative research (CQR) to ensure trustworthiness using multiple perspectives to decrease the impact of researcher bias. For the first phase of the coding process, members individually read and analyzed the same four deidentified transcripts and then met to develop an initial consensus codebook consisting of domains and categories. For the second phase of coding, each member read two new and two transcripts from phase one individually to confirm and make edits to the codebook. The members then met to finalize the codebook. In the third phase of the coding process, the PI completed coding of all 10 transcripts and the team verified the coded transcripts. Once the team completed the coding process, an external reviewer confirmed the consensus codebook and coding. Frequency counts were used to determine the incidence of each domain and category across the entire data sample; emergent categories were assigned a frequency classification, either general (10 cases), typical (6-9 cases), or variant (1-5 cases).

Trustworthiness and credibility were established using member checks, multi-analyst triangulation, and auditing.

RESULTS
Three domains emerged from the data: (1) belonging, (2) relationships, and (3) preparation (Figure 1). Table 3 details the frequency count of the domains and their categories.

Figure 1. Experiences of Minoritized Learners in Preparation for Graduate Medical and Health Care Education: Domains and Categories
Within the belonging domain, the minoritized learners described their lived experiences and 3 categories emerged: representation, community, and mental toughness. Regarding representation, participants expressed a sense of belonging or lack thereof based on the representation of minoritized healthcare providers in the healthcare system. Participants expressed their experiences when in a setting that had minoritized healthcare providers, staff, faculty, etc. versus settings they had been in that did not have representation, they expressed a positive experience in the setting with a minoritized healthcare worker. They were concerned about their sense of belonging and the feeling of community in settings that did not have representation of minoritized individuals. Participants expressed that when there was representation of a minoritized individual whether it be a peer, staff member, or healthcare provider they experience a sense of community in that setting as well as comfortability. They also expressed that as a minoritized learner, being mentally tough is important to continuing their education in settings that don’t have much representation. Supporting quotations for the belonging domains are presented in Table 4.

The relationship domain included relationships with minoritized professors, white professors, professors whose race was unknown, and healthcare mentors. Participants largely had positive relationships with professors and expressed a preference for their minoritized professors that they could connect with them differently compared to their white professors. Specifically, they regarded their minoritized professors as individuals who really understood what it was like to go to college and face academic challenges as a minoritized learner. They also regarded their other professors who were not minoritized individuals as supportive, with few describing destructive relationships with faculty. Although few of the participants had a minoritized healthcare mentor, those that did, valued that relationship. Supporting quotations for the relationships domain are presented in Table 4.

Lastly, the preparation domain included the preparation participants had in healthcare based on volunteering, resources, and exposure. Participants described they either did or did not have experience volunteering in the healthcare settings. If participants did have experience volunteering it was in settings that they had to seek out on their own with no guidance from others. Some participants expressed their thoughts on volunteering to gain a sense of what healthcare field they would like to explore. Participants described they did not have much access to resources throughout their educational experience. They also explained there were very little resources that were specifically for minoritized learners. Others described their whether they had been exposed to a minoritized healthcare professional. Supporting quotations for the preparation domain are presented in Table 4.

Table 3. Frequency Table

<table>
<thead>
<tr>
<th>Domains and Categories</th>
<th>Frequency n=10</th>
<th>Assigned Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Representation</td>
<td>10</td>
<td>General</td>
</tr>
<tr>
<td>Community</td>
<td>7</td>
<td>Typical</td>
</tr>
<tr>
<td>Mental Toughness</td>
<td>10</td>
<td>General</td>
</tr>
<tr>
<td>Relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professors – Minoritized</td>
<td>8</td>
<td>Typical</td>
</tr>
<tr>
<td>Professors – White</td>
<td>3</td>
<td>Variant</td>
</tr>
<tr>
<td>Professors – Unknown</td>
<td>8</td>
<td>Typical</td>
</tr>
<tr>
<td>Healthcare Mentors</td>
<td>3</td>
<td>Variant</td>
</tr>
<tr>
<td>Preparation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteering</td>
<td>7</td>
<td>Typical</td>
</tr>
<tr>
<td>Resources</td>
<td>9</td>
<td>Typical</td>
</tr>
<tr>
<td>Exposure</td>
<td>9</td>
<td>Typical</td>
</tr>
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Table 4. Supporting Quotes

<table>
<thead>
<tr>
<th>Category</th>
<th>Supporting Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging – Mental Toughness</td>
<td>“It's still hard, sometimes being in certain classes because I feel even though my professors try to boost an inclusive environment, I don't necessarily feel the same way from my peers. I'm a woman and a woman of color, and so sometimes certain people make me feel uncomfortable in certain spaces, and that tends to happen more often in my science, technology, engineering, and mathematics related courses.” –Apples</td>
</tr>
<tr>
<td></td>
<td>“I'm always proud of myself for sticking through all of this, a lot of times classmates and professors, when they hear my schedule, they're like, I don't know how you do it, that's crazy. It kind of just makes me proud of myself of like how much like how much is on my plate and also being able to manage it all successfully.” –Dragonfruit</td>
</tr>
<tr>
<td>Category</td>
<td>Supporting Quotations</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Belonging – Representation</td>
<td>“I think a lot of it also falls not on just the professor, but the students in the class as well, and just constantly being aware of the fact that a lot of people have been historically underrepresented in science and just making sure that those voices are amplified.” – Apples</td>
</tr>
<tr>
<td></td>
<td>“I have not seen a lot of women or women of color that are in this profession. I always think it's important to have someone that looks like you. As representation, someone who looks like you to take care of your body. So those would be the other factors that helped me decide to be an exercise science major.” – Apples (rev)</td>
</tr>
<tr>
<td>Belonging – Community</td>
<td>“So, my athletic trainer in high school. She was an African American woman, and that's why she had such a huge impact on my journey to become an athletic trainer. She just knew what she was talking about. She was always on her A game. Always just reliable in a way I felt safe. I felt like, if I got injured or anything, that she would know the right things to do to get me back healthy. She is probably my ideal person. She's the one that has gotten me on this journey.” – Papaya</td>
</tr>
<tr>
<td></td>
<td>“My two professors are members of the National Athletic Trainers Association Ethnic Diversity Advisory Committee. I definitely want to become a member of that committee, and with that, I would like to pick an area to work in that does have quite a bit of diversity. It's not a big factor to me, but in a way, it does make me comfortable.” – Dragonfruit</td>
</tr>
<tr>
<td>Relationships – Professors – Minoritized</td>
<td>“One of the ways that I got more involved in the department was because I tried to involve myself in affinity groups, for people from marginalized backgrounds, who are also interested in science, technology, engineering, and mathematics and in that way, I was able to build connections with professors from backgrounds more similar to mine, which is really nice.” – Apples</td>
</tr>
<tr>
<td></td>
<td>“I would say it's definitely stronger relationships and they provide safe space for sure. With all of us being minorities we can relate.” – Dragonfruit</td>
</tr>
<tr>
<td>Relationships – Professors – White</td>
<td>“I actually did it on my own, because I didn't know what I wanted to do with life. I didn't know where I wanted to go, so I just reached out to one of my instructors on campus. I had a sat down with them, and I just remember them pushing me away from the path of where I wanted to go. I was explaining that I wanted to become a medical doctor, because physical therapy wasn't what I wanted to pursue. It didn't have what I wanted in a healthcare field. I remember saying well, it's a lot easier, and you know GPA isn't high and such.” – Pineapple (rev)</td>
</tr>
<tr>
<td></td>
<td>“As for my white professors it's not like a difference between them because all the professors are very open and very good here. But you feel more comfortable talking to a professor that's a minority, rather than your white professor because they probably won't get it.” – Grapes</td>
</tr>
<tr>
<td>Relationships – Professors – Unknown</td>
<td>“I was unsure of continuing the program, and even college in general, so I feel the reason why I got interested in it more was because my advisor helped me, and at that time, too, I was a little bit in clinical experience. So, talking to other people had helped as well.” – Dragonfruit</td>
</tr>
<tr>
<td></td>
<td>“One of my professors that I do have a relationship with knew the football head athletic trainer, and they were looking for volunteers. So right now, I’m currently volunteering with the [mid-Atlantic University] football team. It's been very cool. She knew that I wanted to work with football in the future when I become an athletic trainer, so I’m so grateful that she introduced me to the experience that I am getting with this hands-on opportunity with [mid-Atlantic University] football.” – Papaya</td>
</tr>
<tr>
<td>Relationships – Professors – Healthcare Mentors</td>
<td>“Yes, because I have had a lot of experience with the football team, and I have gained my mentor, who, I feel is kind of like pushing me into the right, you know, steps into the right journey of getting to grad school, so I can get my athletic training degree. So, I feel she's helping me a lot with the steps for after graduation.” – Papaya</td>
</tr>
</tbody>
</table>
MINORITIZED LEADERS IN GRADUATE MEDICAL AND HEALTH CARE EDUCATION

<table>
<thead>
<tr>
<th>Category</th>
<th>Supporting Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preparation</td>
<td>“She gives me advice when I need it. I can text her and reach and know that she will respond. I go to her for guidance and know that she’s there to help when I need it.” –Grapes</td>
</tr>
<tr>
<td>Preparation – Volunteering</td>
<td>“I’ve had some opportunities where I can engage in research, or outside of college. I’ve had some shadow experience, but I’ve realized that I want to be a physician’s assistant, and there’s not many resources up for free for physician assistant students at my school.” –Apples</td>
</tr>
<tr>
<td>Preparation – Resources</td>
<td>“This past summer was probably the most impactful for me. I had a research opportunity where I worked in a real lab setting. That was my first experience and I really liked it. It kind of changed my career outlook. I definitely saw the impact it has on the medical field alone.” –Oranges</td>
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<td>Preparation – Exposure</td>
<td>“I wish there were more resources or more information, and I sometimes I feel like I’m winging it. Which can be a little difficult.” –Apples</td>
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<td>“I wish there were more resources or more information, and I sometimes I feel like I’m winging it. Which can be a little difficult.” –Apples</td>
</tr>
<tr>
<td></td>
<td>“So, my first shadowing experience was with a physical therapist. I just remember just going in there and shadowing, and I just didn’t get enough of what I wanted from the field. I also got a little bit discouraged because it was mainly a lot of white males in there, I was the only black male in there, and I got a bit discouraged and just saying like, well like, maybe this field isn’t for me maybe I’ll go try something else.” –Pineapple</td>
</tr>
<tr>
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<td>“Well, I learned about athletic training because I was in high school, and I was at the time taking a medical interventions class. In that class we would focus on different health care careers. They were all different careers that I had never heard of. We came across athletic training. It was a really small unit, but I was like oh that’s really cool.” –Dragonfruit</td>
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**DISCUSSION**

The purpose of this study was to explore the experiences of minoritized students from pre-medicine and healthcare professions in pursuit of their healthcare-related degrees, including athletic training. Our findings indicated that minoritized learners seemed to have different experiences than their counterparts who are not of the minoritized population. This supports the work of previous researchers who stated minoritized students have different educational experiences than their white counterparts, which could be due to failure by not promoting diversity in the education system. We identified three domains in which participants described their experiences while trying to continue their education, belonging, relationships, and preparation.

**Belonging**

Participants in our study described various experiences related to belonging while pursuing higher education. Belonging is a subjective feeling of value and regard that results from a mutually beneficial relationship with an outside reference point that is based on commonalities in experiences, values, or personality traits. The sense of belonging can be an important factor in the academic success of minoritized students who are seeking higher education in a system dominated by the white majority. Further, this sense of belonging can help students relax and feel more at ease while earning their degrees. However, studies have shown that minoritized students have reported feeling a lack of belonging as a result of microaggressions they have encountered in higher education settings. Participants in our study noted that belonging was a factor in their decision to pursue higher education in healthcare professions. Institutions should focus efforts on increasing a sense of belonging and reducing exclusivity in higher education for minoritized students to help support their goals and careers.

Microaggressions, a sense of not belonging, and systemic racial and ethnic discrimination can all have a negative impact on psychological functioning and impede academic progress. Microaggressions are linked to greater understandings of the influence of unconscious prejudice and inequity systems. Our participant responses showed that minoritized learners appear to value representation in the education and healthcare systems, as it eases their mind while pursuing a degree, knowing it is achievable by someone who looks the same. Based on participant responses it is assumed that a sense of community is built when representation is seen in settings. From our participant responses it could be assumed that when they see someone who looks
like them is achieving success, they believe it is possible for them to do so as well in a career setting that does not often show racial diversity.

Our participants also expressed the need to be mentally tough while trying to further their education. These findings align with previous research on how unpleasant racial experiences are associated with lower levels of belonging and higher levels of emotional distress.\textsuperscript{12} Higher levels of emotional distress may contribute to the notion that minoritized students believe they must be mentally tough in order to finish or get through something that was not specifically designed for them.\textsuperscript{19} Higher levels of mental toughness are required to face these unpleasant experiences without experiencing increased levels of emotional distress. Institutions should focus on providing resources for minoritized students to help develop mental toughness and resilience while also ensuring that students have access and connection to individuals who look like them in their career path.

More access to minoritized providers is essential to the healthcare workforce to allow minoritized patients feel welcome as well as diversify the healthcare system. It can be assumed that with more minoritized healthcare professionals, minoritized learners will see the representation and strive to be a part of diversifying the healthcare system. Studies have shown there is a scarcity of individuals from varied origins and cultural backgrounds in the healthcare industry.\textsuperscript{20} The evidence suggests that those whose backgrounds are not represented may suffer because they lack a voice or an understanding in the healthcare setting.\textsuperscript{11} The description or portrayal of someone or something in a certain way or being of a particular kind is referred to as representation.\textsuperscript{20} Therefore, there should be more representation in the healthcare field. Quotes gathered from participants implies that inclusivity of minoritized groups is not often practiced in their setting. They have voices but those voices aren’t always valued or heard. Representation also must start within the education system to allow minoritized populations to feel comfortable while trying to pursue a healthcare degree. Based on our participant responses it seems representation creates a sense of belonging within communities.

Relationships

Providing career and psychosocial support over time, individuals collaborate professionally to support each other’s success and personal and professional growth of the relational partners. This type of relationship is known as mentoring.\textsuperscript{21} Early student mentoring may be a successful strategy for achieving diversity in the candidate pool.\textsuperscript{21} Varied community’s healthcare demands are more likely to be met if there is a diversified medical group.\textsuperscript{22} Even though the United States is becoming more diverse, the number of doctors and other healthcare professionals from underrepresented racial and ethnic groups is disproportionately low.\textsuperscript{23} One strategy found in the literature to increase physician and trainee retention and experiences in medicine is mentorship.\textsuperscript{24} This strategy aligns with what participants in this study stated, where they believe they would benefit from mentorship or have benefited from mentorship, especially with mentors of the same race.

The single most significant reason why some medical schools have more students interested in the discipline is mentorship.\textsuperscript{25,26} Participant responses indicate that they experienced a meaningful relationship through mentorship, particularly one who is of the same race as they seem to be more relatable. Participants expressed the benefits they experienced with mentorship, those being preceptors, professors, community members, and other healthcare providers they have encountered who provide that mentor relationship. The benefits being, establishing a relationship with someone who they can go to for guidance, support, and comfortability while pursuing their degree. Mentorship is a valuable experience while pursuing higher education and can influence those who are seeking a higher level of learning. Career planning, academic output, professional satisfaction, and most significantly, the pursuit of academic medicine professions is all influenced by mentoring.\textsuperscript{26}

Members of underrepresented communities show strong desires for race-concordance in mentorship.\textsuperscript{24} A recent study found that having a mentor of the same race/ethnicity was extremely significant to 58% of Black and 55% of Latinx students, compared to 9% of Asian and 3% of White students.\textsuperscript{22} According to the same study, as compared to their non-minoritized peers, Asian 34%, Black 5%, Latinx 8%, and White 79% rated having a race-concordant mentor as not all important.\textsuperscript{22} The concept of racial concordance in mentoring is advantageous to underrepresented communities because it demonstrates that there is an individual who resembles them and engaged in the endeavor they desire.\textsuperscript{22} The relationship built with mentors influences students’ decision on the healthcare profession that they want to pursue. Through mentorship, minoritized learners can gain that sense of belonging in the healthcare field, thus adding to more retention of minoritized healthcare workers.

Our participants also highlighted specific appreciation for the professors in their education journey. They expressed their relationships with minoritized professors and how these professors had a positive impact on their educational experience. The literature supports this finding, with a recent study indicating a number of benefits when there are positive relationships between minoritized professors and students, those being support, insight, and positive connections.\textsuperscript{27} For racial minorities in higher
education, who frequently lack access to informal networks and knowledge necessary to succeed in situations where they are underrepresented in both academia and the workforce, these connections are particularly crucial.

**Preparation**

Participants noted that exposure and access to healthcare professions was an important factor in preparing them for their education. Previous research has shown both minoritized and majority faculty members agree that discrepancies in exposure to career possibilities, qualifications for and subsequent recruitment to training programs, and faculty posts are caused by ethnic variances in past educational chances. It is essential for minoritized learners to be exposed to the healthcare field in order for them to gain the appropriate exposure. Gaining exposure early on can potentially change the course of a minoritized learner pursuing a healthcare profession. Minoritized students should be exposed to healthcare earlier on in their education to better prepare them when pursuing higher education.

Many participants were not exposed to healthcare profession early on and noted how not being exposed or having resources created challenges while pursuing their degree. Studies have found that when students are exposed to their desired career field, they tend to be more likely to explore that field based on their knowledge gained. However, time of exposure to healthcare, either in the form of receiving care or knowing a healthcare professional who is minoritized, seemed to vary within the minoritized population. Participants explained that exposure to healthcare resources and careers for minoritized students would have helped them to understand their desired career path sooner. Studies have identified that a major factor to why minorities are not exposed to representation in healthcare is because of a lack of minoritized health professionals. According to research, a variety of factors, such as institutionalized racism, a lack of mentoring, a lack of access to higher education for people of color, and financial instability, may be a casual factor or the lack of diversity in the healthcare field. Further education access and quality of education may play a factor on the types of resources provided to students. Exposure to minoritized providers in healthcare can be vital to underrepresented students pursuing a healthcare related degree and could lead to a more diverse population in the healthcare system. One of the ways that this exposure to healthcare could be enhanced is through shadowing and volunteering opportunities.

Our participants shared their experiences while trying to shadow healthcare providers and mentioned that it was difficult to find the right setting. However, participant responses indicate that shadowing experiences are beneficial for minoritized students pursuing degrees and careers in healthcare. Volunteering was also indicated as beneficial by participants, but volunteering in a healthcare setting for minoritized students can be difficult. This is due to the lack of resources provided to these students as well as the financial burden of higher education. Participants stated that they did not have time to engage in shadowing or volunteer opportunities due to the need to work for school and living expenses, and this finding is supported by other research. Many minoritized students had to work while in school while their counterparts did not have to, impacting their ability to gain experience and volunteer in their desired field. This lack of volunteering might also have consequences for work-related experiences in higher education that directly lead to job acquisition. Internships were linked to both improved academic performance and earning a job offer following graduation. Many employers look for students who have had an internship or some experience in the desired field, and those students are more likely to receive a job. Students with internships also had a slightly higher overall grade point average, graduated slightly younger, and were more likely to be hired compared to students without internships. However, Caucasians were more likely than African Americans to gain an internship, directly influencing the likelihood of securing a job for African American students, furthering the gap within the healthcare system. This may also apply to those who are seeking graduate education, as they may not have as much experience on their resume or high enough grade point averages to achieve their goals, again potentially leading to the gap in healthcare providers. It is vital for minoritized learners to be able to experience internships and volunteer experiences for their desired health field. Institutions should focus on proving equitable opportunities and enhance resources available for minoritized students to support their pursuit of a career in healthcare.

**Limitations and Future Research**

This study is not without limitations. One limitation to this study was recruitment. Due to the difficulty with preliminary recruitment as well as the relatively low number of HBCUs offering healthcare degrees, the initial response was low. To mitigate this, we opened recruitment to minoritized students from all colleges and universities, where we could publicly identify health professions college counselors, across the country to increase the potential sample size. Another limitation is the collection of a representative sample. While our sample size was adequate to reaching data saturation, it is difficult and dangerous to generalize the experiences of an entire community from a subset of a population. Even so, this research was able to gather important information about the lived experiences of minoritized students pursing healthcare education. Future research should focus on minoritized populations’ access to resources and ways to promote the educational environment for those pursuing higher education as well as look into early interventions to expose minoritized populations to healthcare.
CONCLUSIONS

Minoritized learners are interested in healthcare education, but there are barriers to their access to this education. This study identified that representation in healthcare education and the healthcare workforce is important to the advancement of minoritized students in healthcare. To continue advancements in our healthcare system, we must diversify our healthcare workforce starting with the advancement of healthcare education with a specific focus on minoritized students. In doing so, a strong relationship with a professor or mentor is likely to encourage an overall more positive experience in healthcare education. However, participants acknowledged that the lack of resources tailored to them while pursuing a healthcare degree makes their journey more difficult. Colleges and universities must tailor individualized resources to minoritized students to help increase the diversity in the healthcare workforce.

References


