Research Article

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Intersectionality in Career Aspirations: The Role of College Experiences and Gender Among Black and Latinx Students Pursuing Health Professions

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Abstract: This study investigates gender disparities in college experiences and health career aspirations among Black and Latinx college students. Utilizing data from the 2015 Freshman Survey and the 2019 College Senior Survey, this study explores how college experiences shape healthcare career aspirations for both male and female college students within this population. This study employed logistic regression analysis to identify college experiences that affect healthcare career aspirations for male and female students in this group. The study contextualizes its findings within the existing literature, highlighting the pressing need to enhance the representation of practitioners from diverse backgrounds to better address health disparities and social determinants affecting Black and Latinx communities.

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Promoting diversity in higher education and healthcare is essential for building a diverse workforce. However, previous research presents mixed findings, despite empirical evidence supporting the need to increase the representation of underrepresented minority healthcare professionals (Rainey, 2001). A diverse healthcare workforce is crucial for addressing health disparities and ensuring culturally competent care (Grumbach & Mendoza, 2008; Okoro et al., 2020). Nevertheless, Black and Latinx[1] students are underrepresented in many healthcare professions, especially in high-ranking roles such as physicians and medical researchers, while they frequently occupy low-ranking roles are which often more physically laborious (Balderas-Medina Anaya et al., 2022).

Addressing this disparity requires a deeper understanding of the intersectional barriers faced by Black and Latinx students in health professions, as well as the strengths and resilience strategies that empower them to persist in the field. While much of the existing literature emphasizes barriers to entry into the field, this study shifts focus from a deficit-based perspective to one that highlights resilience, community support, and institutional transformation (Vaccaro et al., 2019; Wilbur et al., 2020). Specifically, Black and Latinx students pursuing healthcare careers navigate systemic inequities by leveraging cultural identity, peer networks, and activism to create spaces for belonging (Swede & Bouklas, 2018). Rather than reinforcing the “merit” narrative, which suggests that Black and Latinx students lack the qualifications or aspirations for careers in healthcare, this study underscores their dedication to the field and their significant contributions to reducing social disparities.

Students from underrepresented backgrounds often require access to early exposure programs, career mentorship, and research opportunities—critical resources for professional advancement (De Jesús et al., 2014; Park et al., 2022). Beyond individual identity factors, the career aspirations of Black and Latinx students are influenced by structural conditions such as socioeconomic inequities, under-

[1] *Latinx* is a gender-inclusive term used in the U.S. to refer people of Latin American descent.

resources educational environments, and systemic racism within academic and professional pipelines (Snyder et al., 2018a). These barriers are compounded by persistent gender disparities in the healthcare field, where women—particularly Women of Color—remain significantly underrepresented in leadership and specialized roles. Experiences of discrimination and exclusion in academic settings further discourage students from pursuing healthcare careers, especially in fields where they rarely see themselves reflected (Serafini et al., 2020). Despite these obstacles, many students demonstrate resilience by leveraging mentorship, social support, and institutional programs designed to foster equity and inclusion, ultimately sustaining their professional goals in the face of adversity.

Diversity in the healthcare workforce is essential for improving health outcomes, enhancing patient-provider communication, and addressing health disparities among underserved communities (Lopez et al., 2021). A representative healthcare workforce is essential for delivering culturally competent care and rebuilding trust in systems that have historically marginalized communities of color, yet discriminatory practices in medical research, education, and hiring continue to disproportionately impact Black and Latinx professionals—particularly women—limiting their access to high-ranking and higher-wage positions in the field (Balderas-Medina Anaya et al., 2022). Despite the recognized need for diversity, there remains a scarcity of empirical research of the factors shaping healthcare career aspirations among racially underrepresented minorities in higher education. To address this gap, this study investigates how gender and college experiences influence healthcare career aspirations among Black and Latinx undergraduates. Specifically, it explores whether specific collegiate experiences are significant predictors of pursuing a healthcare profession and whether these predictors vary by gender. By examining these intersectional dynamics, the study extends existing scholarship on diversity in healthcare professions and provides new insights into the career development of underrepresented students.

Black and Latinx students encounter compounded barriers at the intersection of race and gender, which shape their career pathways in distinct ways. For

instance, women of color are disproportionately underrepresented in high-status healthcare roles, while men of color often face harmful stereotypes that limit their perceived suitability for caregiving professions. Recognizing these intersecting dynamics is essential to understanding and addressing inequities in healthcare workforce development. As such this study also aims to explore the challenges that Black and Latinx students face and the strategies they employ to succeed, emphasizing the importance of institutional and systemic support in fostering their aspirations. Specifically, this study addresses the following research questions:

1. How do perceptions of healthcare career aspirations vary by gender among Black and Latinx college students?
2. What college experiences contribute to predicting healthcare career aspirations among Black and Latinx college students? How do these predictors vary based on gender within this population?

Although we posed similar questions regarding the college experiences of White students, we intentionally chose not to highlight or compare their experiences with that of Black and Latinx students. Our goal is to center and amplify the experiences of Black and Latinx undergraduates on their own terms, rather than positioning their journeys in contrast to a dominant normative group. Comparative frameworks often risk reinforcing stereotypes or deficit-based narratives by implicitly framing students of color as lacking or deviant. By focusing exclusively on Black and Latinx students, we aim to expose the systemic barriers they face and highlight their resilience and strengths within higher education and healthcare pathways. Examining equitable and inclusive career pathways—defined as the educational, experiential, and institutional processes that guide students into and through healthcare professions—is essential for advancing representation and retention in the workforce. Expanding research on disparities in pathways to healthcare professions and the factors affecting career development among underrepresented professionals is crucial (Balderas-Medina Anaya et al., 2022). By shifting the discourse from barrier to resilience, this study highlights the agency of Black and

Latinx students in overcoming systemic inequities and advancing diversity in healthcare.

Positionality

Given the focus of this study, it is important to consider how racial and ethnic identities of researchers conducting quantitative research may influence the interpretation and analysis of data. As researchers, our diverse identities, perspectives, and lived experiences shape our approach to examining the healthcare career aspirations of Black and Latinx students within broader systemic and institutional contexts. Our positionality underscores our commitment to equity and inclusion in higher education, particularly for underrepresented populations.

As the first author and a first-generation Latina Woman of Color, my research and service concentrate on dismantling systemic barriers that limit educational and career opportunities for marginalized students. I emphasize increasing access to STEM fields and health professions. My colleagues—one specializing in college access and student development and the other focusing on academic environments and retention strategies—enhance this study with their expertise.

Our collective experiences and scholarly contributions strengthen our shared commitment to equity. We acknowledge our positions within academia and the privileges they confer while remaining dedicated to addressing systemic inequities and advocating for meaningful change that supports the aspirations of Black and Latinx students pursuing healthcare careers. Therefore, we intentionally capitalize the terms “Women of Color”, “Men of Color,” “Black”, “Latinx” and “Women” to honor their origins rooted in political solidarity. These terms capture the shared experiences of racial and gender oppression while affirming the collective resistance and coalition-building among diverse communities (Matos & Sanbonmatsu, 2024). By making this linguistic choice, we recognize the strength of these identities as tools for advocacy, empowerment, and systemic change.

At the time of writing this article, federal funding for diversity, equity, and inclusion (DEI) initiatives across sectors are under attack. This jeopardizes financial support for programs designed to increase representation in higher education and

professional fields, including STEM and medicine. As such we hope that this study will contribute to the literature and discourse that challenge the misconception that meritocracy alone can create equitable pathways for the future healers of our nation.

Background and Literature Review

Gender and Racial Disparities in Healthcare Careers

Discriminatory practices in medical research and education continue to disproportionately affect Black and Latinx professionals, particularly Women, limiting their representation in high-ranking, higher-wage healthcare positions (Balderas-Medina Anaya et al., 2022). Both Men and Women of Color remain underrepresented in the healthcare field, with Women of Color experiencing the most significant disparities related to race and gender (Ong et al., 2018; Rodriguez et al., 2022). Black healthcare workers and Women across racial groups are more likely to remain in lower-ranking positions due to the persistent occupational stratification by race and gender, reinforcing systemic inequities in the workforce (Himmelstein & Venkataramani, 2019). Despite increasing workforce diversity, underrepresented minority workers remain concentrated in entry-level healthcare roles with lower education requirements, limiting opportunities for career advancement and perpetuating disparities in the healthcare system (Dill et al., 2016; Lett et al., 2019; Snyder et al., 2018a; Wilbur et al., 2020).

Healthcare professions requiring advanced degrees—including physicians, podiatrists, audiologists, veterinarians, and chiropractors—continue to have the lowest representation of people of color (Lett et al., 2019; Salsberg et al., 2021; Snyder et al., 2018b; Wilbur et al., 2020). In contrast, occupations requiring lower levels of education and lower-paying—such as home health aides, licensed practical nurses, and direct patient care workers—are disproportionately occupied by people of color (Salsberg et al., 2021; Snyder et al., 2018a). This stratification reinforces structural inequities in educational and disparities in healthcare workforce mobility, highlighting the need for sustained efforts to expand access to education,

mentorship, and professional development opportunities (Grumbach & Mendoza, 2008; Wilbur et al., 2020).

Systemic Barriers and Challenges Faced by Black and Latina Women in Healthcare

Black women in the U.S. have faced systemic exclusion from both quality healthcare and services to professional opportunities within the healthcare field. Today, Black women in the U.S. continue to face disproportionately high rates of maternal mortality and breast cancer mortality, reflecting persistent racial disparities in healthcare access and outcomes (Chinn et al., 2021; Okoro et al., 2020; Okoro et al., 2022; Sacks, 2018). Historically, racial segregation and exclusionary professionalization policies barred Black women from medical schools and nursing programs, with discriminatory practices persisting well into the 1960s (Dill & Duffy, 2022). The legacy of these exclusionary policies continues to shape systemic barriers that hinder Black women's entry into and advancement within the healthcare workforce. Despite these challenges, Black women have made substantial contributions to the healthcare industry, comprising 6.9% of all healthcare workers and 13.7% of those in direct patient care roles (Dill & Duffy, 2022) Additionally, Black women represent nearly 25% of licensed practical nurses and nursing aides, reflecting their over-representation in long-term care settings (Dill & Duffy, 2022). However, intersectional barriers—including race and gender discrimination, socioeconomic challenges, and implicit bias—continue to restrict their career mobility and access to leadership roles (Baughman & Smith, 2012; Dill et al., 2016; Okoro et al., 2020; Okoro et al., 2022; Sacks, 2018; Snyder et al., 2018a). Without targeted interventions, these barriers perpetuate occupational segregation, limiting Black women's ability to advance into higher-paying decision-making positions in medicine and healthcare administration. Addressing these disparities requires comprehensive policy reforms, expanded mentorship opportunities, and institutional support systems designed to foster equitable representation in healthcare leadership (Lett et al., 2019; Wilbur et al., 2020).

Similarly, Latina women also face systemic exclusions at all levels in healthcare. Among physicians Latina women remain critically underrepresented, comprising only 2.4% of the U.S. physician workforce despite accounting for over the 9% of the total U.S. population. This highlights the urgent need for increased representation of Latina women in higher-paying decision-making positions in medicine and healthcare administration (Balderas-Medina Anaya et al., 2022). Structural barriers—including limited access to financial and educational resources, biases in medical school admissions, and underrepresentation in mentorship networks—have hindered Latina students' ability to pursue careers in medicine (Himmelstein & Venkataramani, 2019; Lett et al., 2019; Smith, 2023). Despite these challenges, Latina physicians play a vital role in delivering culturally competent care, particularly for Latinx communities where language barriers and healthcare disparities persist (Rodriguez et al., 2022). However, the continued lack of institutional support, targeted recruitment efforts and leadership pathways further marginalizes Women of Color healthcare professionals (Hynson et al., 2022).

Black and Latinx women have a significant presence in the healthcare workforce despite systemic obstacles. Despite these obstacles, Black and Latina women have made significant contributions to nursing throughout history (Woo, 2023) and are critical in healthcare education and advocacy (Edwards, 2021). Gendered racism and historical mistrust contribute to health disparities among Black and Latinx women (Rosenthal & Lobel, 2020).

The Healthcare Workforce and the Role of Black and Latinx Men

While Women of Color face barriers to career mobility in healthcare, Black and Latinx men also experience unique challenges that restrict their representation in higher-paying medical roles and leadership positions. Understanding the experiences of Black and Latinx men in healthcare professions is crucial to addressing healthcare disparities and expanding access to culturally competent care.

Despite the barriers, Men of Color contribute significantly to advancing health equity. Black and Latinx men in healthcare professionals also play a key role in reducing health disparities, as research indicates that doctors of color are more likely

to accept Medicaid patients and practice in underserved communities—countering the notion that Black and Latinx individuals lack the motivation or capability to enter these fields (Vichare et al., 2024). Yet, Men of Color often face systemic racism, discrimination, and hiring biases that hinder their professional advancement (Serafini et al., 2020; Smith et al., 2023).

While Women of Color face well-documented barriers to career mobility, Black and Latinx men experience distinct challenges that restrict their access to higher-paying roles and leadership positions. Research shows that Black men are three times more likely—and Latinx and other minority men 1.5 times more likely—than their white counterparts to work in direct care positions (Dill et al., 2016). While essential to the healthcare system, these roles are typically lower-wage and offer limited opportunities for upward mobility (Dill et al., 2016; Snyder et al., 2018a). Despite these constraints, Men of Color are more likely to serve Medicaid patients and work in underserved communities, making vital contributions to health equity (Vichare et al., 2024).

However, systemic racism, hiring discrimination, and implicit bias continue to impede their advancement (Serafini et al., 2020; Smith et al., 2023). Unlike Women of Color—who tend to remain in the healthcare workforce despite limited mobility—Men of Color are more often pushed out or stalled early in their careers. Understanding the distinct, gendered barriers that shape the professional trajectories of Black and Latinx healthcare workers is essential to developing more equitable policies, recruitment strategies, and retention practices across the sector. Efforts to increase workforce diversity face societal expectations, discrimination, and lack of support networks (Wilbur et al., 2020). Addressing these disparities requires comprehensive strategies, including raising wages, providing career advancement opportunities, and implementing culturally responsive education and training (Wilbur et al., 2020).

The Role of College Experiences in Shaping Healthcare Career Aspirations

Educational inequities at the K-12 level have significantly contributed to the lack of diversity in the healthcare workforce. Minority and low-income students often

face underfunded schools, fewer STEM opportunities, and a lack of early mentorship, all of which limit access to careers in healthcare (Grumbach & Mendoza, 2008). Even for those who persist into college, systemic barriers— including racial bias in student-faculty interactions, and limited access to career guidance—continue to affect Black and Latinx students' ability to pursue healthcare professions (Park et al., 2022; Witherspoon et al., 2019).

Research shows that Black and Latinx students disproportionately rely on community networks and affinity groups rather than traditional career advisors for guidance in healthcare professions (Cabell & Medina, 2023; Smith, 2023). Furthermore, Black students do not benefit from faculty mentorship to the same extent as their White counterparts due to racial bias and discrimination (Park et al., 2022). Establishing structured career pathways and increasing mentorship programs is essential to improving workforce representation and retention in healthcare careers (Snyder et al., 2018b).

Structural barriers within both educational and healthcare systems continue to discourage Women of Color—particularly Black and Latinx students—from pursuing high-paying, prestigious medical careers (Smith et al., 2023). Institutional racism, implicit bias, and limited access to supportive academic environments disproportionately impact their progression through the pre-med pipeline.

A growing body of research on pre-med pathways reveals systemic inequities contributing to attrition and underrepresentation. Notably, undergraduate research experiences—particularly those introduced early in a student's academic journey—significantly improve persistence in STEM fields and increase the likelihood of medical school admission (Vincent-Ruz et al., 2018). However, these opportunities are often more accessible to students from privileged backgrounds, reinforcing inequities in the pipeline (Michalec & Hafferty, 2023). Community colleges are an important entry point for many Latinx pre-med students. Nevertheless, these institutions frequently lack the tailored advising and support systems needed to navigate the path to medical school (Talamantes et al., 2014).

Moreover, while research suggests that pre-med students tend to report higher STEM identity compared to peers in other STEM majors (Dou et al., 2021), attrition remains high: only 16.5% of students who enter college to pursue medicine complete the required coursework (Zhang, 2011). Together, the literature highlights persistent structural inequities that affect the educational trajectories, career aspirations, and professional advancement of Black and Latinx students—particularly Women of Color—within the U.S. healthcare system. Despite a growing body of literature, there remains a need for research that centers on the lived experiences of underrepresented students and identifies the systemic changes necessary to diversify the healthcare workforce.

Theoretical Framework

The theoretical framework in this study incorporates several critical perspectives to examine healthcare career aspirations among Black and Latinx college students in the United States. The study integrates four key frameworks—Intersectionality Theory, Social Cognitive Career Theory (SCCT), Critical Race Theory, and Astin's Input-Environment-Output (I-E-O) Model—to provide an understanding of the structural and experiential factors that shape the student career aspirations into healthcare professions.

Intersectionality (Crenshaw, 1991) serves as a guiding framework to underscore the multifaceted nature of identity and power dynamics that shape individuals' healthcare career aspirations. Specifically for Black and Latinx students, their career development is shaped by their race, gender, and how these identities intersect within systemic structures of inequality. This theory helps us understand that the experiences of marginalization are interconnected rather than isolated.

The social cognitive career theory (SCCT) informed the investigation by highlighting how college experiences shape career aspirations, particularly for marginalized groups (Lent et al., 1994). SCCT is particularly relevant for understanding the career decision-making processes of marginalized students, whose access to resources, mentorship, and affirming academic environments may differ substantially from those of their more privileged peers. SCCT provides a

valuable framework for analyzing how college experiences—such as faculty support, internships, and involvement in preprofessional organizations—foster or hinder students' aspirations toward healthcare careers.

Critical race theory (CRT) was employed as a lens to understand the systemic racism and discrimination impacting career trajectories. By applying CRT, this study critically examines the structural barriers that limit access to high-status healthcare professions for Black and Latinx students and challenges deficit-based narratives that attribute underrepresentation to individual shortcomings rather than institutional exclusion.

Astin's (1984) input-environment-output (I-E-O) model provided a comprehensive explanation of how student input characteristics, college environment, and social contexts impact healthcare career outcomes of students, particularly for underrepresented minorities. The I-E-O model is instrumental in longitudinal studies of educational outcomes, as it accounts for individual and contextual factors that influence student development. In this study, the I-E-O model guides the selection of variables from the CIRP surveys and helps frame the impact of environmental factors—such as belonging, racial climate, and faculty belief—on underrepresented healthcare students' career aspirations.

By integrating these critical perspectives, the current study aimed to uncover the complexity of gender, race, and institutional factors in shaping healthcare career aspirations among Black and Latinx college students. The study sought to inform interventions that promote equity and diversity within the healthcare workforce and to advance our understanding of the underlying mechanisms of health disparities. By employing this multifaceted theoretical framework, the study contributes to the broader discourse on diversity and inclusion within the healthcare industry and offers insights that can inform policy and practice.

Methods

Data Source Sample

This study used data from the 2015 Freshman Survey and the 2019 College Senior Survey, both surveys of the Cooperative Institutional Research Program (CIRP) (Higher Education Research Institute, n.d.). CIRP, a national longitudinal study of U.S. higher education, is overseen by the Higher Education Research Institute at the University of California, Los Angeles. The 2015 Freshman Survey served as a pretest for a longitudinal evaluation of college impact on students, capturing information from full-time, first-year students entering their 1st year before significant exposure to college experiences. This initial survey compiled data on student background information and precollege characteristics. Subsequently, the 2019 College Senior Survey was administered to the same cohort after their 4th college year, exploring aspects such as undergraduate academic performance, student–faculty interaction, peer interaction, extracurricular activities, and engagement with diversity.

Variables

The logistic regression model of the current study used a single dependent variable and multiple independent variables. We included the following variables in this study's analysis and logistic regression model.

Dependent Variable

The primary focus of this study centered on the dependent variable related to students' healthcare career aspirations post-graduation to determine whether students are inclined to pursue a healthcare profession after completing their undergraduate education. The study encompassed various healthcare professions, including medical doctors (MD or DDS), health professionals, nurses, and mental health providers. The survey instrument used in this study provided students with a comprehensive list of race and ethnicity categories for self-identification, including "Hispanic," "Asian," "African American," and others. However, the absence of clear conceptual and operational definitions of race in quantitative research (Irizarry, 2015)

necessitated a grouping strategy to capture a sample of Black and Latinx students. In this study, we combined the “Hispanic” and “African American” identifiers to create the race variable and referred to these students as Black and Latinx students. Out of the sample of 5,258 undergraduate participants, 367 students identified as Black and Latinx, and 84 expressed their aspirations to pursue a healthcare career. The sample consisted of 118 male and 249 female participants.

Independent Variable

Tables 1 and 2 summarize definitions and coding schemes of variables used in this study. The first block in the regression analysis included a single variable: *faculty belief in my potential to succeed academically*. This variable measures the extent in which the students agreed with the statement that their faculty believe in their ability to succeed academically. The second block in the regression analysis comprised two CIRP constructs: *a sense of belonging* and *negative cross-racial interactions*. The sense of belonging construct was a continuous variable used to gauge the degree to which students perceive social and academic integration on campus. Negative cross-racial interactions measure students’ experiences with tension, hostility, or threats, based on race, as well as cautious interactions, academic challenges, and social engagement across racial backgrounds.

The final block of the regression model includes two variables: *joined a preprofessional or departmental club*, which captures whether students participated in academic or career-related student organizations, and *participated in an internship program,* which measured involvement in experiential learning opportunities outside the classroom.

Table 1

Variable Definitions and Coding Schemes

Block	Variable	Coding scheme
Dependent variable	Healthcare career aspiration	Binary: 1 = No Aspiration, 2 = Aspiration
Block 1	Faculty believe in my potential to succeed academically	Please indicate the extent to which you agree or disagree with the following statements: 1=Strongly Disagree 2=Disagree 3=Agree 4=Strongly Agree
Block 2	Sense of belonging	CIRP Construct
	Negative-cross racial interaction	CIRP Construct
Block 3	Joined a preprofessional or department club	Since entering this college, have you: 1=No 2=Yes
	Participated in: an internship program	Since entering this college, have you: 1=No 2=Yes

Table 2

Items Included in CIRP Constructs

CIRP construct	Items included	Coding scheme
Sense of belonging	If asked, I would recommend this college to others I feel a sense of belonging to this campus I feel I am a member of this college I will give this college money as an alum	Three-point scale: 1 = Low, 2 = Average, 3 = High
Negative cross-racial interaction	Had tense, somewhat hostile interactions Felt insulted or threatened because of your race/ethnicity Had guarded, cautious interactions Studied or prepared for class	Three-point scale: 1 = Low, 2 = Average, 3 = High

Analysis

This study used chi-square analysis to examine the disparities in healthcare career aspirations based on gender among Black and Latinx students to address the first research question: *How do perceptions of healthcare career aspirations vary by gender among Black and Latinx college students?* The statistical significance of associations was evaluated through chi-square statistics, degrees of freedom, *p* values, and Cramer's V, offering insights into the effect size of the observed disparities.

Separate binary logistic regression analyses were conducted for each gender to investigate how college experiences predict healthcare career aspirations among Black and Latinx students. Table 2 examined various college experiences as independent variables while considering healthcare career aspirations as the dependent variable in these analyses. We reported the results using regression coefficients, Wald statistics, odds ratios (i.e., Exp[β]), and overall model fit statistics such as -2 Log-likelihood, χ^2, and *p* values. To provide nuanced insights into the patterns within Black and Latinx women and Black and Latinx Men, we conducted subgroup analyses. This methodological approach enabled us to comprehensively understand gender and racial disparities in healthcare career aspirations and the crucial role of college experiences in shaping these aspirations.

Results

Gender Differences in Healthcare Career Aspirations among Black and Latinx Students

The findings in Table 3 demonstrate that there were no significant differences in healthcare career aspirations based on students' gender ($\chi^2 = 2.55$, $p > .005$) within Black and Latinx college students. Among the Black and Latinx female student participants ($n = 249$), 25.3% ($n = 63$) expressed aspirations to pursue healthcare careers after graduation, while among their male ($n = 118$) counterparts, only 17.8% ($n = 21$) expressed such aspirations; however, this finding was not statistically significant. The chi-square analysis did not reveal significant associations between

the variables; however, it is important to note that a lack of significance does not indicate the absence of association (Castillo & Gillborn, 2022). Given the literature emphasizing the presence of gendered discrimination, particularly in higher education, the absence of significant findings raises important considerations (Garcia & Flores, 2024; McGee, 2016; Ong et al., 2018; Salami et al., 2021; Suárez-Orozco et al., 2015). The absence of significance warrants further examination to explore underlying patterns, which we conducted logistic regression analyses.

Table 3

Chi-Square Analysis of College Experiences Differ Career Aspirations in Healthcare Fields Differ by Black and Latinx Students' Gender

Gender	Not aspiring	Aspiring	χ^2	*p*
Female[a]	186 (74.7%)	63 (25.3%)	χ^2=2.55	.005
Male[b]	97 (82.2%)	21 (17.8%)		

Note. [a]*n* = 249, [b]*n* = 118; Cramer's V is .11, a small effect.

The logistic regression analysis to examine which college experiences contributed to the impact of Black and Latinx women' healthcare career aspirations; Table 4 summarizes the findings from the logistic regression analysis.

Table 4

Binary Logistic Regression on College Experiences for Black and Latinx Students Aspiring Healthcare Careers by Gender

Question	Black and Latinx Women			Black and Latinx Men		
	β	Wald	Exp (*β*)	*β*	Wald	Exp (*β)*
Faculty believe in my potential to succeed academically	-.654*	.50	.52	.022	.002	.978
Negative Cross-Racial Interaction Score	-.038	.25	.96	.047	.97	.954
Sense of Belonging	.049*	.60	1.05	.018	.250	.982
Joined preprofessional or departmental club	1.48**	8.22	4.40	.39*	.58	4.03

Participated in an internship	-1.04**	.22	.35	.422	.627	.656

Note. **p<0.01, *p<0.05.

Sense of Belonging among Black and Latinx Women

Research indicates that a strong sense of belonging is essential for individuals—particularly women and Women of Color—to excel academically and professionally (Walton & Cohen, 2011). Sense of belonging was a significant predictor of healthcare career aspirations for Black and Latinx female students in this study, β = 0.049, $p < .05$, Exp(β) = 1.05 (Table 4). The beta coefficient indicated that a one-unit increase in the sense of belonging is associated with a 0.049 increase in the odds of healthcare career aspirations. The odds ratio related to this predictor was approximately 1.05. Considering this finding, tailored support initiatives are crucial, particularly given prior research highlighting the lack of diversity in representation and structural inclusivity among Women of Color (Vaccaro et al., 2019). Conversely, the lack of a sense belonging can negatively affect their self-assurance, drive, and overall well-being, impacting their career aspirations and long-term commitment to the field (Good et al., 2012).

Faculty Belief in Students' Potential among Black and Latinx Women

Findings from this study highlight the need to provide targeted support to Black and Latinx women during their internships, as negative experiences can have detrimental effects on their future trajectories. The results indicated that "faculty belief in my potential" was a significant negative predictor in shaping healthcare career aspirations for Black and Latinx female students, β = 0.654, $p < .05$, Exp(β) = 0.52. The negative beta coefficient revealed that for each one-unit decrease in faculty believing the student's potential, the odds decreased by 0.654. These results implied that a diminishing perception of faculty support and belief in students' academic potential was associated with lower odds of expressing aspirations toward healthcare careers. The odds related to this predictor were approximately 0.52. Faculty who believed less in their academic potential were slightly less likely to

aspire to healthcare careers. This negative beta suggested, within the studied population, there was an adverse effect on healthcare career aspirations when there was a decline in perceived faculty support or belief in academic potential.

Impacts of Negative Internship Experiences among Black and Latinx Women

Studies have revealed distinct variations in internship experiences based on students' racial backgrounds, particularly among Black and Latinx cohorts (Binder et al., 2015; Park et al., 2020). The analysis of this study revealed that participation in an internship was a negative statistically significant predictor affecting healthcare career aspiration for Black and Latinx women students, $\beta = -1.04$, $p < .001$, $Exp(\beta) = 0.35$. The beta coefficient interpretation implied that the odds of healthcare career aspirations decreased by 1.04 for every one-unit increase in internship participation. Indicating the odds ratio associated with this predictor was approximately 0.35.

Negative internship experiences can be particularly harmful to Black and Latinx women, highlighting the need to examine the role of racial discrimination as a mediating factor that can have long term effects on career retention (Park et al., 2020). This finding further highlights that Black and Latinx students who experience exclusionary practices during internships are less likely to persist in healthcare professions (Snyder et al., 2018a). Studies also show that racially diverse interns are often assigned fewer challenging projects, limiting their opportunities for growth and reducing their confidence in their career aspirations (Browne et al., 2024). Internship experiences are critical to healthcare careers, yet Black and Latinx women often encounter distinct challenges and racialized barriers during these experiences.

Predictors Influencing Career Aspirations Across Gender

This study found that participation in preprofessional clubs was a significant predictor of healthcare career aspirations for Black and Latinx students regardless of gender. In the logistic regression analysis for Black and Latinx students, $\beta = 1.48$, $p < .001$, $Exp(\beta) = 4.40$. The interpretation of the beta coefficient ($\beta = 1.48$) indicated that for each one-unit increase in participation in preprofessional clubs, the odds of healthcare career aspirations increase by 1.48. This result implied that Black and

Latinx women students who engaged in preprofessional clubs were more likely to express healthcare aspirations than those who did not participate. The odds ratio associated with this predictor was approximately 4.40. They showed that the odds of aspiring to healthcare careers were about 4.40 times higher among students involved in preprofessional clubs than among those who are not.

Therefore, a third logistic regression analysis examined college experiences that contribute to healthcare career aspirations for Black and Latinx Men (see Table 4). Similar to their female counterparts Black and Latinx Men joining preprofessional clubs ($\beta = 1.39$, $p < .05$, $\text{Exp}[\beta] = 4.03$) emerged as a positive and significant predictor for healthcare career aspirations among Black and Latinx Men. Regardless of gender, participating actively in preprofessional clubs appeared to increase the likelihood of Black and Latinx aspiring to healthcare careers after completing college.

By engaging with peers and professionals in these clubs, Black and Latinx students can gain insights into various career paths, access resources for academic and professional growth, and establish connections that can potentially lead to internships, research opportunities, or job placements (Graham et al., 2023; Johansson et al., 2023; Smith, 2023).

Limitations

This study enhances our understanding of how gender and college experiences influence healthcare career aspirations among Black and Latinx students. However, several limitations must be acknowledged.

The scope of healthcare careers analyzed—focusing on roles such as medical doctors, nurses, mental health providers, and general health professionals—does not fully encompass the evolving complexity of the healthcare sector. Emerging roles, such as healthcare technologists, physician assistants, and public health analysts, were not included, and these are increasingly vital to the workforce. This exclusion may limit the generalizability of the findings across the full spectrum of healthcare careers.

The quantitative framework of the study, while grounded in robust statistical analysis, inherently limits the ability to capture the nuanced experiences of

marginalized students. The reliance on institutional survey data from the CIRP dataset presents challenges in how race and gender were categorized. For example, the use of binary gender markers excludes non-binary and gender-expansive identities, which limits the analysis's inclusiveness. Similarly, race was defined using aggregated labels for Black and Latinx students, overlooking meaningful differences based on ethnicity, nationality, generational status, and cultural identity. As prior scholarship has noted, racial categories in quantitative research often act as social constructs related to systems of power and hierarchy rather than fixed indicators of identity (Irizarry, 2015; Omi & Winant, 2015).

The study did not consider intersecting factors such as immigration status, language fluency, sexual orientation, or first-generation college status. These intersecting identities significantly influence students' educational trajectories and healthcare career aspirations (Cuellar, 2021; Rodriguez et al., 2022), and their exclusion limits the depth of the intersectional analysis.

Lastly, while logistic regression analyses were used to identify significant predictors of healthcare career aspirations, caution should be exercised when making causal inferences. The study identifies associations rather than causation. Future research would benefit from longitudinal designs or path analyses to examine developmental trajectories and mediating factors.

Future research should integrate more inclusive survey instruments, disaggregate identity data, and employ qualitative methods to capture better the complexity of Black and Latinx students' experiences in healthcare education pathways.

Discussion

Underrepresentation and Occupational Segregation

Black and Latinx women remain significantly underrepresented in many healthcare professions. They are also disproportionately concentrated in lower-paid occupations within the healthcare sector. While these women are overrepresented in physically demanding, entry-level roles—such as nursing, home health aides, and

orderlies—they are scarce in higher-paying professional positions like physicians, dentists, and pharmacists (Okoro et al., 2020). Even when Black and Latinx women do enter health fields, they frequently face a “glass ceiling” that hinders their advancement into leadership roles (Okoro et al., 2024). The U.S. healthcare system, shaped by historical injustices and systemic biases, presents persistent barriers that prevent these women from climbing the professional ladder (Okoro et al., 2022; Okoro et al., 2024). As a result, Black and Latinx women are not only fewer in number in prestigious healthcare jobs, but they are also less likely to hold decision-making positions, reflecting ongoing occupational segregation.

Intersectional Barriers and Bias

In healthcare education and workplaces, individuals who are both racial/ethnic minorities and women often face unique biases related to their intersectional identities (De Jesús et al., 2014; Dill & Duffy, 2022; Dill et al., 2016). Stereotypes and assumptions based on race and gender create distinct challenges for these individuals, requiring them to work harder to overcome prejudiced expectations and demonstrate their capabilities (Okoro et al., 2020; Sacks, 2018; Walton & Cohen, 2011). Negative societal stereotypes particularly burden Black and Latinx women pursuing careers in healthcare, subjecting them to implicit and explicit messages that undermine their ambitions. For example, they are often perceived as less competent or less committed than their white or male peers and may face assumptions that they are more suited for caregiving or support roles than for leadership or specialized positions (Bonifacio et al., 2018; Okoro et al., 2020). These stereotypes manifest in academic settings, where faculty may hold lower expectations for their performance, and in clinical environments, where patients or supervisors sometimes question their authority and expertise (Sacks, 2018; Serafini et al., 2020). Such experiences reinforce feelings of isolation, reduce confidence, and limit access to high-status opportunities—ultimately diminishing their persistence and advancement in healthcare careers.

Discriminatory practices at the workplace manifest in various forms, ranging from subtle biases and microaggressions to overt acts of exclusion and

marginalization. These experiences affect the professional development and aspirations of Black and Latinx women (Balderas-Medina Anaya et al., 2022; Bonifacio et al., 2018; Salami et al., 2021; Suárez-Orozco et al., 2015). Such damaging remarks often include comments that question their qualifications—such as being told they are "only here because of diversity quotas"—or assumptions that they are better suited for nursing or administrative roles rather than physician or leadership tracks. These remarks reflect deeply ingrained prejudices about both the intellectual abilities and appropriate gender roles of Women of Color, which can erode self-confidence and discourage them from pursuing careers in medicine or science.

Moreover, implicit biases in recruitment and training opportunities can systematically marginalize minority women (Armstrong & Jovanovic, 2017). Research indicates that stereotypes influence who is perceived as a "good fit" for competitive academic programs, internships, and leadership tracks, often disadvantaging Black and Latinx women (Suárez-Orozco et al., 2015). These biases are especially harmful when held by individuals in gatekeeping positions—such as admissions officers, faculty mentors, internship coordinators, and hiring managers—who make decisions about access to career-building opportunities. When these gatekeepers rely on biased perceptions, they limit underrepresented students' advancement and reinforce the cycle of underrepresentation in high-status healthcare roles.

Strategies to Support Career Aspirations

Mentorship and Support Networks

Mentorship and professional support are vital for nurturing career aspirations, yet Black and Latinx women often lack access to strong mentoring networks. Research has shown that mentoring relationships are frequently less effective when there is a gender or racial disconnect between mentor and mentee (Bañuelos & Flores, 2024; Dickens et al., 2021). In fields such as medicine and academia, where senior professionals are predominantly white or male, Women of Color may struggle to find mentors who understand their experiences. As a result, many are forced to

seek mentors outside their program or institution due to the scarcity of mentors with similar racial or cultural backgrounds (Balderas-Medina Anaya et al., 2022; Chang et al., 2014; Rattani et al., 2019; Wilbur et al., 2020; Zambrana et al., 2015). The lack of relatable mentors and role models can leave Black and Latinx women without the guidance, sponsorship, or advocacy others rely on for advancement (Zambrana et al., 2015).

Mentors typically provide career advice, networking opportunities, and psychological support, all of which can enhance a young professional's development (Bañuelos & Flores, 2024). The consequences of inadequate mentorship are significant. The disparity in faculty belief in students' potential—particularly based on race and gender—further exacerbates these challenges. Faculty support is crucial for helping students navigate internships, develop practical skills, and expand professional networks. However, Black and Latinx students often receive less mentorship and face lower expectations from faculty compared to their white counterparts, limiting their access to career-building opportunities (Serafini et al., 2020).

When Women of Color establish strong mentorship relationships, the benefits are evident: studies have shown that adequate mentoring and peer support correlate with greater academic productivity, faster promotions, and higher retention rates for underrepresented women in healthcare fields (Russell, 2022; Wheaton & Moore, 2020). Conversely, the absence of mentoring and inclusion in professional networks can lead to feelings of isolation and stagnation. Limited access to influential networks means fewer collaborations, recommendations, and leadership opportunities for these women.

Without intentional support systems, Black and Latinx women face significant challenges in translating their healthcare aspirations into successful careers. It is imperative to develop robust mentoring programs and early-career sponsorship opportunities that connect Black and Latinx women with experienced mentors who can guide their growth. Purposeful mentorship—particularly from mentors of color or allies sensitive to racial and gender dynamics—can help build confidence and open

doors for advancement. Creating formal support networks and leadership development programs is essential for preparing Women of Color for career progression. Institutions may allocate resources for workshops, training, and career development initiatives tailored to the needs of Black and Latinx women, as well as fostering peer support groups and professional associations where they can share experiences and opportunities.

Countering Exclusionary Environments with Cultural Affirmation

Many universities still reflect dominant cultural norms that marginalize minority students. Campuses often pressure students from underrepresented backgrounds to assimilate into Euro-American values and practices, isolating those who do not fit the mold (McGee, 2016; McGee & Bentley, 2017). Such environments can undermine students' confidence, sense of belonging, and academic engagement—factors critical to persistence in high-demand fields like healthcare.

Research has identified campus counterspaces as critical support for marginalized students. Ong et al. (2018) describes these student-created spaces as affirming environments that foster identity development and cultural connection. In contrast, Buckingham et al. (2023) and Gonzalez (2022) note that while dominant institutional norms often reinforce stereotypes, cultural spaces provide a venue for resistance and identity affirmation. Affinity groups, identity-based organizations, and cultural clubs are counterspaces that challenge exclusionary campus climates (Buckingham et al., 2023; Gonzalez, 2022; Ong et al., 2018). These student-led spaces are created by and for people who experience systemic oppression in the broader university context (Harper & Quaye, 2007).

Such culturally affirming environments are linked to increased self-efficacy, academic motivation, and professional ambition—key drivers of student success and long-term career aspirations. For Black and Latinx students in particular, access to these counter spaces can foster a stronger sense of purpose and belonging, helping them remain committed to healthcare pathways despite systemic barriers.

Student affinity groups provide culturally familiar environments where students' heritage and experiences are validated, helping them feel that their cultural communities are respected and welcomed on campus (Gonzalez, 2022). One student shared that cultural clubs allow them to "be myself and express my culture" freely (Gonzalez, 2022). In short, these organizations affirm students' backgrounds, reduce isolation, and create a supportive space that encourages academic persistence and nurtures professional aspirations.

Implications

Theoretical Implications

The use of CRT, the I-E-O model, SCCT, and intersectionality theory underscored the importance of adopting an intersectional lens to understand complex dynamics of gender, race, and social factors that share healthcare career aspirations. Together, these frameworks provide a multifaceted understanding of how systemic forces and individual experiences intersect to shape Black and Latinx students' pathways into healthcare careers. The current study supports the need to address systemic forms of oppression that intersect in the daily lives of Black and Latinx students (Castillo & Gillborn, 2022; Huber, 2022). The intersectional CRT lens highlights the importance of recognizing these students' strengths and resilience, aligning with the strengths-based perspectives that shifts the focus from deficits to assets in how they navigate such challenges.

Social Cognitive Career Theory (SCCT) and the Input-Environment-Output (I-E-O) model provide foundational frameworks for understanding how individual and institutional factors influence students' career development. SCCT, developed by Lent et al. (1994), is grounded in Bandura's social cognitive theory (Bandura, 1989) and emphasizes how personal factors—such as self-efficacy beliefs and outcome expectations—are shaped by students' learning experiences and social supports, which influence their career interests and goals. The I-E-O model, introduced by Astin (1984), conceptualizes student development as a process shaped by Inputs (e.g., personal background characteristics such as race/ethnicity, first-

generation status, and socioeconomic background), Environments (e.g., institutional context, access to mentorship, campus climate, and involvement in student organizations), and Outcomes (e.g., academic achievement, persistence, and career aspirations).

These theories underscore the importance of institutional supports—such as inclusive mentorship, affirming spaces, and equitable opportunities—in promoting healthcare career aspirations, particularly among marginalized students. By leveraging these frameworks, this study examines how educational contexts can be intentionally structured to foster students' strengths and reduce the effects of systemic inequities on their professional trajectories (Raque-Bogdan & Lucas, 2016).

Applying CRT within this integrated framework reinforces that improving career outcomes for Black and Latinx students requires challenging structural inequities in education and the workforce. Accordingly, combining CRT, SCCT, and I-E-O, and intersectionality, emphasizes the connection between broad social factors and individual development. Addressing structural and systemic aspects of education and the workforce requires identifying systemic barriers. It empowers students with the necessary support for student success.

Practical Implications

The insights from this research study have several concrete implications for institutional leaders, faculty, and policymakers committed to enhancing inclusivity, retention, and advancement of underrepresented students. Our evidence points to a critical need for proactive, systemic interventions and that mere rhetoric about diversity is insufficient.

Targeted Support Programs

The study underscores the significance of targeted support programs in promoting inclusivity and equity in higher education institutions. In this regard, colleges and universities can play a pivotal role in shaping the experiences and career aspirations of students from diverse backgrounds by increasing their connections with prehealth advisors, forging partnerships with health education

programs, and collaborating with K–12 institutions (Rios-Fetchko et al., 2024). Researchers have identified targeted support programs at the undergraduate level as a promising strategy for enhancing student engagement and academic enrichment (Chang et al., 2014). To this end, institutions must prioritize increased support for faculty members engaged in club and internship activities, which can foster supportive networks and contribute to students' overall academic success.

In recognition of the diverse forms of research in which faculty members may engage, institutions must also demonstrate their commitment to providing the necessary resources, such as time, space, and supplies, to support such endeavors, including action-based research (Swede & Bouklas, 2018). By embracing these strategies, institutions can effectively promote diversity, inclusivity, and equity in higher education and support the success of underrepresented groups. To support students from diverse backgrounds, higher education institutions and healthcare organizations should develop targeted interventions that address the structural barriers faced by marginalized groups. Expanding mentorship programs, increasing access to financial aid for undocumented students, and incorporating culturally relevant career advising can help promote a more inclusive and equitable healthcare workforce.

Faculty Training and Diversity Initiatives

Targeted faculty development and diversity initiatives are essential for fostering inclusive academic environments supporting underrepresented students' success. Specifically, training programs that address implicit bias, equitable teaching practices, and culturally responsive mentorship are critical in improving faculty awareness and support for marginalized groups. Recent studies have highlighted the persistence of gender biases among faculty—key figures in student support systems—which adversely affect the career aspirations of women in male-dominated fields such as STEM and healthcare (Phelan et al., 2017). In this context, Black and Latinx women continue to be underrepresented in STEM and healthcare education

(Abraído-Lanza et al., 2022; Dickens et al., 2021; Dill & Duffy, 2022; Rodriguez et al., 2022).

Vaccaro et al. (2019) emphasize the importance of intentional institutional structures to support Women of Color across K–20 education systems. These structures include dedicated cultural centers, identity-based mentoring programs, leadership development workshops, and faculty-student affinity groups that foster a sense of belonging and affirm students' cultural identities (Kim et al., 2018; Vaccaro et al., 2019). Such initiatives help reduce feelings of isolation, build academic confidence, and create clearer pathways to leadership roles.

Research shows that higher education institutions should invest in faculty development, diversification of faculty, and training for faculty members interested in experiential and interprofessional educational opportunities, such as internships and culturally responsive approaches (Committee on Barriers and Opportunities in Completing et al., 2016). Despite these promising practices, there remains a need for more comprehensive initiatives that prioritize the individual success of underrepresented women. Higher education institutions, healthcare agencies, and government facilities must collaborate to dismantle systemic disadvantages by investing in inclusive hiring, retention strategies, and advancement opportunities that support Black and Latinx women in the workforce.

Promoting Equity and Diversity in Healthcare Workforce

Addressing the growing shortage of well-trained healthcare professionals requires intentional efforts to diversify the workforce. A representative and inclusive healthcare workforce is essential for improving patient outcomes and ensuring culturally competent care in an increasingly diverse society (Grumbach & Mendoza, 2008; Okoro et al., 2020). However, the underrepresentation of Black, Latinx, LGBTQIA+, rural, low-income, and immigrant populations in healthcare professions remains a pressing national concern.

Recent research has highlighted when and how students are exposed to healthcare career pathways—such as pre-health advising, mentorship, and

experiential learning—shaping long-term career aspirations (Snyder et al., 2018a, 2018b). These early and sustained educational experiences are critical, as they often determine whether underrepresented students are retained and supported through the pre-med and healthcare pipelines.

The persistent underrepresentation of marginalized communities in the healthcare workforce has direct implications for health equity. Populations that lack adequate representation among healthcare providers often experience greater health disparities, poorer access to care, and reduced trust in medical systems. For example, communities of color are disproportionately burdened by chronic illness, maternal mortality, and healthcare discrimination—issues that are exacerbated when providers lack cultural understanding or shared lived experiences.

Developing inclusive and equitable educational and employment pathways that foster the recruitment, support, and advancement of underrepresented healthcare professionals is imperative to mitigate these disparities. By investigating the challenges and systemic barriers faced by these communities—and by centering their lived experiences—researchers and practitioners can develop targeted interventions that promote representation, retention, and equity. Ultimately, a diverse and culturally responsive healthcare workforce is better equipped to meet the complex and varied needs of the nation’s population.

Future Research

While this study focused on the intersection of race (Black/Latinx) and gender in shaping healthcare career aspirations, several avenues for further inquiry remain to expand our understanding of the reasons for the underrepresentation of Women of Color and other minorities in leadership positions in healthcare professions. This study highlights racial and gender disparities in healthcare career aspirations, future research should examine how additional social identities—such as sexual orientation, gender identity, disability, immigration status, nationality, and first-generation college status—shape students' pathways into healthcare careers. Emerging scholarship suggests that LGBTQ+ students, disabled students, and undocumented students

face unique barriers and motivations in pursuing healthcare professions (Phelan et al., 2017). However, these issued need further study.

A timely area of inquiry is the effect of recent policy shifts—notably the elimination of race-conscious admissions (affirmative action)—on the trajectories of underrepresented students. With the U.S. Supreme Court's 2023 decision in *Students for Fair Admissions v. Harvard* effectively banning race-based admissions, universities have moved to "race-blind" processes that many fear will reduce the number of Black and Latinx students in higher education. This shift may have severe consequences for health professions education, where diverse student representation is limited and directly tied to producing a culturally competent workforce capable of addressing health disparities (Grumbach & Mendoza, 2008; Lett et al., 2019). It is critical that future studies evaluate how this changed policy landscape impacts marginalized students' college experiences, access to pre-health pathways, and subsequent professional trajectories in healthcare. This policy shift comes when the nation faces a critical shortage of well-trained healthcare professionals—particularly those prepared to serve in underserved communities and provide culturally competent care (Frogner, 2018; Salsberg et al., 2021).

Additionally, the historical and geopolitical influences on healthcare career aspirations, particularly among immigrant communities, also needs further exploration. For example, the overrepresentation of Filipina/x/o-Americans in nursing can be traced to decades of U.S. imperialism and labor migration policies in the Philippines, which framed healthcare work as an accessible route to economic mobility and assimilation into American society. Similar patterns may exist among other diasporic/immigrant communities, warranting further investigation into how historical legacies, transnational labor networks, and cultural expectations shape healthcare career decisions.

Conclusion

This study enhances our understanding of how college experiences influence Black and Latinx students' healthcare career aspirations while highlighting important

gendered nuances. Our findings confirm that creating inclusive and supportive educational environments is critical for nurturing the ambitions of underrepresented students. Specifically, we show that when Black and Latinx undergraduates benefit from empowering experiences—such as strong mentorship, a sense of belonging, engagement in affinity groups, and quality internship opportunities—they are more likely to sustain or develop aspirations for careers in healthcare. Conversely, systemic barriers, including discrimination and insufficient institutional support, can hinder these aspirations, particularly for women who encounter both racial and gender marginalization. By examining these dynamics, our study provides evidence that targeted interventions at the college level can significantly impact those who ultimately enter the healthcare field. A key implication is that improving diversity in healthcare is not merely a matter of college enrollment; it also depends on the experiences during college—the relationships, communities, and opportunities that shape students' career trajectories.

These insights create an urgent call to action for policymakers and educational leaders. The underrepresentation of Black and Latinx professionals in high-paying and leadership healthcare roles, combined with the urgent need for a diverse workforce to address health disparities, necessitates intentional action. This includes increasing support for affinity groups and identity-based student organizations that offer culturally affirming spaces, strengthening mentorship and peer support programs, and developing institutional initiatives that promote belonging and professional development for marginalized students. Concrete measures should involve funding minority pre-health organizations and cultural centers, enacting policies encouraging inclusive curricula and faculty bias training, and strengthening partnerships among educational institutions, healthcare organizations, and government agencies. These collaborations can establish clear pathways from education to employment through internship pipelines, scholarship-for-service programs, and community health initiatives directly involving students of color. Such comprehensive support will help ensure that talented students from all backgrounds can enter professional fields, thrive in them, and advance within them.

To foster a truly diverse and inclusive workforce, stakeholders must recognize the importance of these collegiate support systems and commit to institutionalizing them. By advocating for affinity groups, mentorship programs, and equitable opportunities, we can empower the next generation of Black, Latinx, and other underrepresented professionals whose contributions will improve healthcare outcomes and beyond. Our communities and industries benefit immensely when all aspiring professionals receive the support they need to achieve their full potential. For the healing of our nation, we must continue to uplift the diversity that defines us, ensuring that the generations we empower today will forge new paths—ones only they recognize. In doing so, they will become the healers of our country, driving change, advancing equity, and transforming our healthcare systems for the better.

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References

Abraído-Lanza, A. F., Echeverria, S. E., Flórez, K. R., & Mendoza-Grey, S. (2022). Latina women in academia: Challenges and opportunities. *Frontiers in Public Health, 10*, Article 876161. https://doi.org/10.3389/fpubh.2022.876161

Armstrong, M. A., & Jovanovic, J. (2017). The intersectional matrix: Rethinking institutional change for URM women in STEM. *Journal of Diversity in Higher Education*, *10*(3), 216–231. https://doi.org/10.1037/dhe0000021

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 25*(4), 297–308.

Balderas-Medina Anaya, Y., Hsu, P., Martínez, L. E., Hernandez, S., & Hayes-Bautista, D. E. (2022). Latina women in the U.S. physician workforce: Opportunities in the pursuit of health equity. *Academic Medicine, 97*(3), 398–405. https://doi.org/10.1097/ACM.0000000000004412

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, *44*(9), 1175–1184. https://doi.org/10.1037/0003-066X.44.9.1175

Bañuelos, M., & Flores, G. M. (2024). 'I could see myself': Professors' influence in first-generation Latinx college students' pathways into doctoral programs. *Race Ethnicity and Education*, *27*(5), 599–619. https://doi.org/10.1080/13613324.2021.1969906

Baughman, R. A., & Smith, K. E. (2012). Labor mobility of the direct care workforce: Implications for the provision of long-term care. *Health Economics, 21*(12), 1402–1415. https://doi.org/10.1002/hec.1798

Binder, J. F., Baguley, T., Crook, C., & Miller, F. (2015). The academic value of internships: Benefits across disciplines and student backgrounds. *Contemporary Educational Psychology*, *41*, 73–82. https://doi.org/10.1016/j.cedpsych.2014.12.001

Bonifacio, L., Gushue, G. V., & Mejia-Smith, B. X. (2018). Microaggressions and ethnic identity in the career development of Latina college students. *The Counseling Psychologist*, *46*(4), 505–529. https://doi.org/10.1177/0011000018776909

Browne, A. P., Smiley, C., & Battle, J. (2024). Latinx Students' Educational Expectations: The Role of Near Poverty Status and Intersectionality. *Journal of Latinos and Education*, 1–15. https://doi.org/10.1080/15348431.2024.2385409

Buckingham, S. L., Schroeder, T. U., & Hutchinson, J. R. (2023). Elder-led cultural identity program as counterspace at a public university: Narratives on sense of community, empowering settings, and empowerment. *American Journal of Community Psychology*, *72*(1–2), 32–47. https://doi.org/10.1002/ajcp.12673

Cabell, A., & Medina, C. (2023). Examining Black and Latinx College Students' Perceived Stress, Resilience, and Networking Efficacy: A Social Capital Perspective. Journal of Educational Studies and Multidisciplinary Approaches, 3(2). https://doi.org/10.51383/jesma.2023.85

Castillo, W., & Gillborn, D. (2022). *How to "quantcrit:" Practices and questions for education data researchers and users*. Annenberg Institute. https://doi.org/10.26300/V5KH-DD65

Chang, M. J., Sharkness, J., Hurtado, S., & Newman, C. B. (2014). What matters in college for retaining aspiring scientists and engineers from underrepresented racial groups: Retaining aspiring scientists. *Journal of Research in Science Teaching*, *51*(5), 555–580. https://doi.org/10.1002/tea.21146

Chinn, J. J., Martin, I. K., & Redmond, N. (2021). Health equity among Black women in the United States. *Journal of Women's Health, 30*(2), 212–219. https://doi.org/10.1089/jwh.2020.8868

Committee on Barriers and Opportunities in Completing 2-Year and 4-Year STEM Degrees, Board on Science Education, Policy and Global Affairs, National Academy of Engineering, & National Academies of Sciences, Engineering, and Medicine. (2016). *Barriers and opportunities for 2-year and 4-year STEM degrees: Systemic change to support students' diverse pathways*. National Academies Press. https://doi.org/10.17226/21739

Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against Women of Color. *Stanford Law Review, 43*(6), 1241–1299. https://doi.org/10.2307/1229039

Cuellar, M. G. (2021). Latina/o students as agents of change: The influence of cultural assets and college experiences. *Race Ethnicity and Education*, *24*(6), 789–809. https://doi.org/10.1080/13613324.2019.1579184

De Jesús, A., Torres, A., & Rivera, C. V. (2014). Pathways to Economic Opportunity: An Overview of Innovative Career Pathway Collaborations for Latinos Into Frontline Health Care Occupations. Hispanic Health Care International, 12(2), 81–89. https://doi.org/10.1891/1540-4153.12.2.81

Dickens, D., Ellis,V., & Hall, N. M. (2021). Changing the face of STEM: Review of literature on the role of mentors in the success of undergraduate Black women in STEM education, *Journal of Research Initiatives, 5*(3), Article 14. https://digitalcommons.uncfsu.edu/jri/vol5/iss3/14

Dill, J. S., & Duffy, M. (2022). Structural racism and Black women's employment in the U.S. health care sector. *Health Affairs, 41*(2), 265–272. https://doi.org/10.1377/hlthaff.2021.01400

Dill, J. S., Price-Glynn, K., & Rakovski, C. (2016). Does the "glass escalator" compensate for the devaluation of care work occupations? The careers of men in low- and middle-skill health care jobs. *Gender & Society, 30*(2), 334–360. https://doi.org/10.1177/0891243215624656

Dou, R., Cian, H., & Espinosa-Suarez, V. (2021). Undergraduate STEM majors on and off the pre-med/health track: A STEM identity perspective. *CBE Life Sciences Education*, *20*(2), Article ar24. https://doi.org/10.1187/cbe.20-12-0281

Edwards, A. L. (2021). Educating During the COVID-19 Pandemic: The Motherwork of Black Women Nursing Professionals. *Families Systems & Health*, 39(4), 599–608. https://doi.org/10.1037/fsh0000642

Frogner, B. K. (2018). The health care job engine: Where do they come from and what do they say about our future? *Medical Care Research and Review, 75*(2), 219–231. https://doi.org/10.1177/1077558716688156

Garcia, K. A., & Flores, G. M. (2024). "Mamá en inglés se dice 'pre-med'": Bilingual Mexican-origin first-generation college undergraduates aspiring for medical

careers. *Race Ethnicity and Education*, 1–21. https://doi.org/10.1080/13613324.2024.2349879

Gonzalez, M. A. (2022). HorCHATa: A Counterstory about a Mexican-based Student Organization as a Counter-space at a Predominantly White University. *Association of Mexican American Educators Journal*, *16*(1), 22–52. https://doi.org/10.24974/amae.16.1.459

Good, C., Rattan, A., & Dweck, C. S. (2012). Why do women opt out? Sense of belonging and women's representation in mathematics. *Journal of Personality and Social Psychology, 102*(4), 700–717. https://doi.org/10.1037/a0026659

Graham, J., Hodsdon, G., Busse, A., & Crosby, M. P. (2023). BIPOC voices in ocean sciences: A qualitative exploration of factors impacting career retention. *Journal of Geoscience Education, 71*(3), 369–387. https://doi.org/10.1080/10899995.2022.2052553

Grumbach, K., & Mendoza, R. (2008). In human resources: Addressing the lack of diversity in the health professions. *Health Affairs, 27*(2), 413–422. https://doi.org/10.1377/hlthaff.27.2.413

Harper, S. R., & Quaye, S. J. (2007). Student Organizations as Venues for Black Identity Expression and Development among African American Male Student Leaders. *Journal of College Student Development*, *48*(2), 127–144. https://doi.org/10.1353/csd.2007.0012

Higher Education Research Institute. (n.d.). *Home of Cooperative Institutional Research Program*. Retrieved May 3, 2023, from https://heri.ucla.edu/

Himmelstein, K. E. W., & Venkataramani, A. S. (2019). Economic vulnerability among U.S. female health care workers: Potential impact of a $15-per-hour minimum wage. *American Journal of Public Health, 109*(2), 198–205. https://doi.org/10.2105/AJPH.2018.304801

Huber, L. P. (2022). Using Latina/o Critical Race Theory (LatCrit) and Racist Nativism to Explore Intersectionality in the Educational Experiences of Undocumented Chicana College Students. In E. Taylor, D. Gillborn, & G. Ladson-Billings,

Foundations of Critical Race Theory in Education (3rd ed., pp. 215–230). Routledge. https://doi.org/10.4324/b23210-23

Hynson, E., Bloomer, J., Samson, Z., Price, K., Tran, D., & Muench, U. (2022). Workforce Trends of Underrepresented Minority Nurses in the United States Over the Last Decade: Progress Towards Equal Representation? *Policy, Politics & Nursing Practice*, 23(4), 215–227. https://doi.org/10.1177/15271544221118319

Irizarry, Y. (2015). Utilizing multidimensional measures of race in education research: The case of teacher perceptions. *Sociology of Race and Ethnicity, 1*(4), 564–583. https://doi.org/10.1177/2332649215580350

Johansson, P., Tutsch, S., King, K., De Alba, A., Lyden, E., Leon, M., & Schober, D. (2023). Barriers and opportunities for promoting health professions careers among Latinxs in the midwest. *Journal of Latinos and Education, 22*(2), 681–695. https://doi.org/10.1080/15348431.2020.1809416

Kim, A. Y., Sinatra, G. M., & Seyranian, V. (2018). Developing a STEM identity among young women: A social identity perspective. *Review of Educational Research, 88*(4), 589–625. https://doi.org/10.3102/0034654318779957

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior, 45*(1), 79–122. https://doi.org/10.1006/jvbe.1994.1027

Lett, E., Murdock, H. M., Orji, W. U., Aysola, J., & Sebro, R. (2019). Trends in racial/ethnic representation among U.S. medical students. *JAMA Network Open*, *2*(9), Article e1910490. https://doi.org/10.1001/jamanetworkopen.2019.10490

Lopez, L., Hart, L. H., & Katz, M. H. (2021). Racial and ethnic health disparities related to COVID-19. *JAMA Network Open*, *325*(8), 719–720. https://doi.org/10.1001/jama.2020.26443

Matos, Y., & Sanbonmatsu, K. (2024). Men of Color, Linked Fate, and Support for Women of Color Candidates. The Journal of Race, Ethnicity, and Politics, 9(3), 600–619. https://doi.org/10.1017/rep.2024.10

McGee, E. O. (2016). Devalued Black and Latino Racial Identities: A By-Product of STEM College Culture? *American Educational Research Journal*, 53(6), 1626–1662. https://doi.org/10.3102/0002831216676572

McGee, E. O., & Bentley, L. (2017). The Troubled Success of Black Women in STEM. *Cognition and Instruction*, *35*(4), 265–289. https://doi.org/10.1080/07370008.2017.1355211

Michalec, B., & Hafferty, F. W. (2023). Examining the U.S. premed path as an example of discriminatory design & exploring the role(s) of capital. *Social Theory & Health*, *21*(1), 70–97. https://doi.org/10.1057/s41285-022-00175-7

Okoro, O. N., Hillman, L. A., & Cernasev, A. (2020). "We *get double slammed!*": Healthcare experiences of perceived discrimination among low-income African-American women. *Women's Health*, *16*, 174550652095334. https://doi.org/10.1177/1745506520953348

Okoro, O. N., Hillman, L. A., & Cernasev, A. (2022). Intersectional invisibility experiences of low-income African American women in healthcare encounters. *Ethnicity & Health, 27*(6), 1290–1309. https://doi.org/10.1080/13557858.2021.1899138

Okoro, O., Umaru, O., & Ray, M. (2024). Women of Color in the Health Professions: A Scoping Review of the Literature. *Pharmacy*, *12*(1), 29. https://doi.org/10.3390/pharmacy12010029

Omi, M. & Winant, H. (2015). *Racial formation in the United States*. Routledge.

Ong, M., Smith, J. M., & Ko, L. T. (2018). Counterspaces for women of color in STEM higher education: Marginal and central spaces for persistence and success. *Journal of Research in Science Teaching*, 55(2), 206–245. https://doi.org/10.1002/tea.21417

Park, J. J., Kim, Y. K., Salazar, C., & Hayes, S. (2020). Student–Faculty Interaction and Discrimination from Faculty in STEM: The Link with Retention. *Research in Higher Education*, *61*(3), 330–356. https://doi.org/10.1007/s11162-019-09564-w

Park, J. J., Kim, Y. K., Salazar, C., & Eagan, M. K. (2022). Racial discrimination and student-faculty interaction in STEM: Probing the mechanisms influencing inequality. *Journal of Diversity in Higher Education, 15*(2), 218–229. https://doi.org/10.1037/dhe0000224

Phelan, S. M., Burke, S. E., Hardeman, R. R., White, R. O., Przedworski, J., Dovidio, J. F., Perry, S. P., Plankey, M., A. Cunningham, B., Finstad, D., W. Yeazel, M., & Van Ryn, M. (2017). Medical school factors associated with changes in implicit and explicit bias against gay and lesbian people among 3492 graduating medical students. *Journal of General Internal Medicine*, *32*(11), 1193–1201. https://doi.org/10.1007/s11606-017-4127-6

Rainey, M. L. (2001). How do we retain minority health professions students? In B. D. Smedley, A. Y. Stith, L. Colburn, C. H. Evans, & U.S. Institute of Medicine (Eds.), *The right thing to do, the smart thing to do: Enhancing diversity in the health professions: Summary of the Symposium on Diversity in Health Professions in Honor of Herbert W. Nickens, M.D* (pp. 1–36). National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK223631/

Raque-Bogdan, T. L., & Lucas, M. S. (2016). Career aspirations and the first-generation student: Unraveling the layers with social cognitive career theory. *Journal of College Student Development*, *57*(3), 248–262. https://doi.org/10.1353/csd.2016.0026

Rattani, A., Felix, G., & Campbell, M. L. (2019). Addressing the absence of Black men in medicine. *Journal of Racial and Ethnic Health Disparities*, *6*(4), 649–651. https://doi.org/10.1007/s40615-018-00545-w

Rios-Fetchko, F., Carson, M., Tapia, M., Fernandez, A., & Coffman, J. (2024). Disparities in pre-health advising across California's public universities. *PLOS ONE, 19*(2), Article e0296741. https://doi.org/10.1371/journal.pone.0296741

Rodriguez, C. I., Jagsi, R., & Mangurian, C. (2022). Rising to the challenge: Strategies to support Latinas and other Women of Color in science and medicine. *Academic Medicine, 97*(3), 331–334. https://doi.org/10.1097/ACM.0000000000004558

Rosenthal, L., & Lobel, M. (2020). Gendered racism and the sexual and reproductive health of Black and Latina Women. Ethnicity & Health, 25(3), 367–392. https://doi.org/10.1080/13557858.2018.1439896

Russell, M. (2022). African American Women Faculty at Predominantly White Institutions (PWIs): Empowering through Mentoring. ADVANCE Journal, 3(1). https://doi.org/10.5399/osu/ADVJRNL.3.1.9

Sacks, T. K. (2018). Performing Black womanhood: A qualitative study of stereotypes and the healthcare encounter. Critical Public Health, 28(1), 59–69. https://doi.org/10.1080/09581596.2017.1307323

Salami, T., Lawson, E., & Metzger, I. W. (2021). The impact of microaggressions on Black college students' worry about their future employment: The moderating role of social support and academic achievement. Cultural Diversity and Ethnic Minority Psychology, 27(2), 245–255. https://doi.org/10.1037/cdp0000340

Salsberg, E., Richwine, C., Westergaard, S., Portela Martínez, M., Oyeyemi, T., Vichare, A., & Chen, C. P. (2021). Estimation and comparison of current and future racial/ethnic representation in the U.S. health care workforce. JAMA Network Open, 4(3), e213789. https://doi.org/10.1001/jamanetworkopen.2021.3789

Serafini, K., Coyer, C., Brown Speights, J., Donovan, D., Guh, J., Washington, J., & Ainsworth, C. (2020). Racism as experienced by physicians of Color in the health care setting. *Family Medicine*, 52(4), 282–287. https://doi.org/10.22454/FamMed.2020.384384

Smith, C. S., Smith, P. D., Perez, H., Ester, T. V., & West, K. P. (2023). Men of color in the health professions: Proceedings from the 2022 ADEA Men of Color in the Health Professions Summit. *Journal of Dental Education*, 87(6), 852–857. https://doi.org/10.1002/jdd.13248

Smith, K. N. (2023). "I am the Face of My Future Generation": Latina First-Generation Undergraduates Aspiring to Careers in Health Care and Medicine. *Journal of Hispanic Higher Education*, 22(3), 361–377. https://doi.org/10.1177/15381927221085681

Snyder, C. R., Dahal, A., & Frogner, B. K. (2018a). Occupational mobility among individuals in entry-level healthcare jobs in the USA. *Journal of Advanced Nursing, 74*(7), 1628–1638. https://doi.org/10.1111/jan.13577

Snyder, C. R., Frogner, B. K., & Skillman, S. M. (2018b). Facilitating racial and ethnic diversity in the health workforce. *Journal of Allied Health*, *47*(1). https://www.jstor.org/stable/48722025

Suárez-Orozco, C., Casanova, S., Martin, M., Katsiaficas, D., Cuellar, V., Smith, N. A., & Dias, S. I. (2015). Toxic rain in class: Classroom interpersonal microaggressions. *Educational Researcher, 44*(3), 151–160. https://doi.org/10.3102/0013189X15580314

Swede, M. J., & Bouklas, T. (2018). Integrating investigative research into the classroom. *Journal of Allied Health*, *47*(4), 300–307. https://www.jstor.org/stable/10.2307/48722112

Talamantes, E., Mangione, C. M., Gonzalez, K., Jimenez, A., Gonzalez, F., & Moreno, G. (2014). Community College Pathways: Improving the U.S. Physician Workforce Pipeline. *Academic Medicine*, *89*(12), 1649–1656. https://doi.org/10.1097/ACM.0000000000000438

Vaccaro, A., Swanson, H. J., Marcotte, M. A., & Newman, B. M. (2019). Insights into the sense of belonging from Women of Color: Interconnections of cultural competence, expectations, institutional diversity, and counterspaces. *JCSCORE, 5*(2), 32–65. https://doi.org/10.15763/issn.2642-2387.2019.5.2.32-65

Vichare, A., Bodas, M., Jetty, A., Luo, Q. (Eric), & Bazemore, A. (2024). A Few Doctors Will See Some of You: The Critical Role of Underrepresented in Medicine (URiM) Family Physicians in the Care of Medicaid Beneficiaries. *The Annals of Family Medicine*, *22*(5), 383–391. https://doi.org/10.1370/afm.3140

Vincent-Ruz, P., Grabowski, J., & Schunn, C. D. (2018). The Impact of Early Participation in Undergraduate Research Experiences on Multiple Measures of

Premed Path Success. *Council on Undergraduate Research Quarterly*, 1(3), 13–18. https://doi.org/10.18833/spur/1/3/12

Walton, G. M., & Cohen, G. L. (2011). A brief social-belonging intervention improves academic and health outcomes of minority students. *Science, 331*(6023), 1447–1451. https://doi.org/10.1126/science.1198364

Wheaton, D., & Moore, L. (2020). ADVANCING Women of Color in STEM through Meaningful Mentoring: Key Observations from the Jackson State University ADVANCE Institutional Transformation Project. *ADVANCE Journal*, *1*(2). https://doi.org/10.5399/osu/ADVJRNL.1.2.5

Wilbur, K., Snyder, C., Essary, A. C., Reddy, S., Will, K. K., & Saxon, M. (2020). Developing workforce diversity in the health professions: A social justice perspective. *Health Professions Education, 6*(2), 222–229. https://doi.org/10.1016/j.hpe.2020.01.002

Witherspoon, E. B., Vincent-Ruz, P., & Schunn, C. D. (2019). When making the grade is not enough: The gendered nature of premed science course attrition. *Educational Researcher, 48*(4), 193–204. https://doi.org/10.3102/0013189X19840331

Woo, J. (2023). Decolonize the history of nursing by magnifying the contributions of nurses of colour. Nursing Philosophy, 24(2), e12434. https://doi.org/10.1111/nup.12434

Zambrana, R. E., Ray, R., Espino, M. M., Castro, C., Douthirt Cohen, B., & Eliason, J. (2015). “Don’t Leave Us Behind”: The Importance of Mentoring for Underrepresented Minority Faculty. *American Educational Research Journal*, *52*(1), 40–72. https://doi.org/10.3102/0002831214563063

Zhang, L. (2011). Does Merit-Based Aid Affect Degree Production in STEM Fields?: Evidence from Georgia and Florida. The Journal of Higher Education 82(4), 389-415. https://dx.doi.org/10.1353/jhe.2011.0024.

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