

BIBLIOGRAPHIC INFORMATION SYSTEM

JOURNAL FULL TITLE: Journal of Biomedical Research & Environmental Sciences

ABBREVIATION (NLM): J Biomed Res Environ Sci **ISSN:** 2766-2276 **WEBSITE:** <https://www.jelsciences.com>

SCOPE & COVERAGE

- ▶ **Sections Covered:** 34 specialized sections spanning 143 topics across Medicine, Biology, Environmental Sciences, and General Science
- ▶ Ensures broad interdisciplinary visibility for high-impact research.

PUBLICATION FEATURES

- ▶ **Review Process:** Double-blind peer review ensuring transparency and quality
- ▶ **Time to Publication:** Rapid 21-day review-to-publication cycle
- ▶ **Frequency:** Published monthly
- ▶ **Plagiarism Screening:** All submissions checked with iThenticate

INDEXING & RECOGNITION

- ▶ **Indexed in:** [Google Scholar](#), IndexCopernicus (**ICV 2022: 88.03**)
- ▶ **DOI:** Registered with CrossRef (**10.37871**) for long-term discoverability
- ▶ **Visibility:** Articles accessible worldwide across universities, research institutions, and libraries

OPEN ACCESS POLICY

- ▶ Fully Open Access journal under Creative Commons Attribution 4.0 License (CC BY 4.0)
- ▶ Free, unrestricted access to all articles globally

GLOBAL ENGAGEMENT

- ▶ **Research Reach:** Welcomes contributions worldwide
- ▶ **Managing Entity:** SciRes Literature LLC, USA
- ▶ **Language of Publication:** English

SUBMISSION DETAILS

- ▶ Manuscripts in Word (.doc/.docx) format accepted

SUBMISSION OPTIONS

- ▶ **Online:** <https://www.jelsciences.com/submit-your-paper.php>
- ▶ **Email:** support@jelsciences.com, support@jbresonline.com

[HOME](#)[ABOUT](#)[ARCHIVE](#)[SUBMIT MANUSCRIPT](#)[APC](#)

 **Vision:** The Journal of Biomedical Research & Environmental Sciences (JBRES) is dedicated to advancing science and technology by providing a global platform for innovation, knowledge exchange, and collaboration. Our vision is to empower researchers and scientists worldwide, offering equal opportunities to share ideas, expand careers, and contribute to discoveries that shape a healthier, sustainable future for humanity.

RESEARCH ARTICLE

Creating a Culture of Belonging: Perceptions and Experiences of Inclusion at a US Medical School

Sonjia Kenya^{1-3*}, BreAnne Young², Nanette Vega³, Mariquit Rosete Lu A⁴, Ashley Gray¹, Olveen Carrasquillo^{1,2} and Stephen Symes¹

¹Department of General Medicine, University of Miami Miller School of Medicine, United States

²Department of Public Health Sciences, University of Miami Miller School of Medicine, United States

³Office of Inclusive Excellence and Community Engagement, University of Miami Miller School of Medicine, United States

⁴Medical Student, University of Miami Miller School of Medicine, University of Miami Miller School of Medicine, United States

Abstract

Medical schools play a significant role in cultivating an inclusive health system. In 2019, the University of Miami Miller School of Medicine (UMMSM) was ranked as the 6th best graduate school in the U.S. for Diversity when the Racial Justice Report Card (RJRC) assigned this institution lowest grade possible. To better understand perceptions of inclusivity among students, faculty, and staff, a campus-wide evaluation was conducted. A mixed-methods survey was administered to query perceptions of on-campus discrimination and overall campus climate. In addition to multiple choice items, participants were invited to detail their experiences in an open-ended format. Among 1,612 respondents, the majority were female (68.7%) and were aged 40-years or older (58.9%). Two-thirds of respondents were staff, 18.2% faculty, and 11.7% students. Quantitative analyses, including *Chi-square* tests and one-way Analysis of Variance (ANOVA), showed significant associations among race, gender, and perception of campus climate. Three major themes emerged from thematic analysis of the open-ended items: (1) inclusion & belonging; (2) upward mobility; and (3) the minority tax. A lacking sense of belonging was reported across all demographic groups, with Black respondents expressing the 'minority tax' was disproportionately imposed, burdening them with the uncompensated task of fostering an inclusive culture. Results demonstrate the value of U.S. Medical Schools' assessing the cultural climate to yield findings that guide development and implementation of institutional strategies that advance an inclusive culture. Progress evaluations from external reviewers would further support future inclusivity-enhancement efforts and may ultimately lead to an improved cultural climate at U.S. medical schools.

*Corresponding author(s)

Sonjia Kenya, Department of General Medicine, University of Miami Miller School of Medicine, United States

Email: skenya@med.miami.edu

DOI: 10.37871/jbres2313

Submitted: 10 July 2026

Accepted: 15 July 2026

Published: 20 July 2026

Copyright: © 2026 Kenya S, et al.

Distributed under Creative Commons CC-BY 4.0 ©

OPEN ACCESS

Keywords

- U.S. medical schools
- Diversity at U.S. medical school
- White coats for black lives
- US medical school culture
- Racial justice report card

VOLUME: 7 ISSUE: 7 - JULY, 2026



How to cite this article: Kenya S, Young B, Vega N, Lu AMR, Gray A, Carrasquillo O, Symes S. Creating a Culture of Belonging: Perceptions and Experiences of Inclusion at a US Medical School. J Biomed Res Environ Sci. 2026 July 20; 7(7): 11. Doi: 10.37872/jbres2313



Abbreviations

AAMC: Association of American Medical Colleges; **ANOVA:** Analysis of Variance; **IRB:** Institutional Review Board; **JMH:** Jackson Memorial Hospital; **ODICE:** Office of Diversity, Inclusion and Community Engagement; **REDCap:** Research Electronic Data Capture; **RJRC:** Racial Justice Report Card; **SNMA:** Student National Medical Association; **SPSS:** Statistical Package for the Social Sciences; **TFRJ:** Task Force on Racial Justice; **UMMSM:** University of Miami Miller School of Medicine; **URM:** Underrepresented Minority; **WC4BL:** White Coats For Black Lives

Introduction

Medical schools play a significant role in cultivating an inclusive health system [1]. In recent years, the Association of American Medical Colleges (AAMC) and other leaders in medical education have made significant strides towards preparing future providers to deliver care with cultural humility [2]. Such changes reflect evidence that shows culturally relevant care improves outcomes in diverse patients [3]. Despite these findings, cultural incongruence between patients and providers is normalized and significantly associated with lower levels of patient satisfaction, quality care, and provider trust, ultimately contributing to worse outcomes in culturally-distinct populations, especially Black and Latine Americans [4,5].

As diversity-promoting policies at U.S. medical schools largely influence the racial and ethnic makeup of the Nation's physician workforce, it is critically important to examine the impact of such policies on efforts to cultivate a representative physician workforce. While Black Americans represent nearly 15% of the U.S. population, they account for less than 6% of physicians and just 10% of medical students [6,7]. Similarly, Latin people account for 19% of the U.S. population, but just 6% of the physician

workforce and less than 13% of U.S. medical students [6,7]. Though many medical students perceive their institutional policies as supportive of diversity, fewer students, especially underrepresented minorities (URMs), feel their university values having a diverse student body [8]. Recent research confirms that despite widespread public commitments to diversity, equity, and inclusion (DEI), academic health centers continue to face significant challenges in translating demographic representation into an inclusive and psychologically safe daily culture [9,10].

As an institution, the University of Miami Miller School of Medicine (UMMSM) has long been a leader in promoting a diverse and inclusive campus and currently ranks No. 6 in the U.S. News & World Report's Best Graduate School for Diversity [11]. Nearly 70% of staff and 30% of faculty and students are from an Underrepresented Minority (URM) group in medicine [12].

Results from the Racial Justice Report Card (RJRC) initiative, however, have highlighted critical gaps in inclusion. Developed by the student-led organization White Coats for Black Lives (WC4BL), the RJRC sought to articulate ways in which medical schools could promote anti-racism in medicine by assigning institutions a grade based on specific metrics, such as campus climate and culturally competent research protocols [13]. This was a novel initiative because campus climate has been a longtime focus of studies examining diversity at the undergraduate level, yet little attention has been paid to diversity issues in graduate or medical schools [14]. While having one of the highest Hispanic/Latine enrollment rates in the Nation, UMMSM received the lowest grade possible, highlighting the institution's failure to infuse the campus climate with adequate racial justice initiatives [12,13].

In response to the suboptimal grade,



researchers from the Office of Diversity, Inclusion, and Community Engagement (ODICE) initiated a deeper investigation to better understand the unmet needs related to racial justice across campus. Specifically, an evaluation was developed to examine the perceptions and experiences of students, faculty, hospital staff, and administrators. Herein, we describe and discuss findings regarding their racial, ethnic, and gender-related experiences, and its impact on the institution's sociocultural climate.

Materials and Methods

Established by medical students in 2015, White Coats for Black Lives (WC4BL) aims to dismantle racism in medicine and fight for the health of Black people and other people of color [13]. Recognizing medical schools as the gatekeepers to health professions, WC4BL developed the Racial Justice Report Card (RJRC) to encourage academic medical centers to play an active role in fighting racism in medicine. Each metric on the RJRC is scored individually with a grade of A, B, or C, with A indicating the metric is fully met, and C indicating the metric is not met. The institution's overall grade is an average of the scores received on each individual metric, with C representing the lowest score an institution could receive. According to the WC4BL grading system, UMMSM received a C+.

Study setting

This study was reviewed and approved by the University of Miami Institutional Review Board (IRB ID 20160306). UMMSM is part of a shared medical complex with Jackson Memorial Hospital (JMH), the University's affiliate teaching hospital and one of the largest safety net hospitals in the nation. Located in a majority-minority county in which nearly 70% of the population identifies as an ethnoracial minority, UMMSM serves one of the most racially diverse populations in the US [15,16]. By comparison, one-third of institutional faculty and medical

students are members of an URM, the majority of whom identify as Hispanic/Latino [12].

Survey development

Aligned with the WC4BL mission to promote the perspectives and leadership of students, the study team developed a 19-question mixed-methods survey in partnership with medical students from the Health Equity Pathway, an academic concentration focused on training medical students with actionable skills to attenuate disparities in the healthcare system. Survey items queried perceptions and experiences of discrimination on campus and were modeled from RJRC constructs targeting representation, recruitment, access and protections for marginalized patients, etc. [13].

To ensure content and face validity, the initial draft of the survey was reviewed, refined, and validated by a panel of experts in medical education, survey methodology, and health equity within ODICE, alongside student leaders. The 19-item survey was developed and distributed using Research Electronic Data Capture (REDCap), a secure web application for online data management. A simple consent paragraph was included at the beginning of the survey to inform participants of the survey procedures and their right to voluntary and confidential participation.

This survey included fourteen statements on attitudes and perceptions towards campus climate, scored on a 5-point Likert scale with 1 for "Strongly Disagree" and 5 for "Strongly Agree." These 14 items demonstrated high internal consistency and reliability, with a calculated Cronbach's alpha of 0.88. The remaining five items were dichotomous (yes-no) statements querying experiences with on-campus bias and discrimination, both witnessed and firsthand. Participants had the option to detail the experience for each of these items in a free-response box if they felt comfortable doing so.

Procedure

From September through November 2019, participants were recruited through voluntary response sampling via email from the University's All-Medical Listserv, a formal email distribution list used by university leadership to reach all members of the campus community – approximately 13,400 students, faculty, and staff (e.g., administrators, health providers/clinical staff, research support, etc.) enrolled in or employed by UMMSM in 2019. Of the approximately 13,400 listserv members, 2,228 initiated the survey, yielding an overall survey response rate of 16.6%. Out of these, 1,612 completed all quantitative sections, representing a final analytical sample completion rate of 12.0%.

As UMMSM faculty practice is at the County's largest public health center, JMH, the survey questions described UMMSM's clinical facilities as UM-JMH. The email body included information on the study's aims and the REDCap-generated link to the online survey questionnaire. The first recruitment email was sent in September, with a reminder email sent the following month. The research team also sent requests between September and October to the departments within the Miller School of Medicine to further promote participation.

Data analysis

Data analysis was conducted using a mixed-methods cross-sectional approach [17]. Quantitative data were analyzed using SPSS (Statistical Package for the Social Sciences) to identify potential demographic differences in campus climate perception [18]. *Chi-square* analyses and ANOVA (Analysis of Variance) tests were performed to examine associations between perception of campus climate and sociodemographic characteristics, such as race/ethnicity, gender, etc.

Responses to the open-ended experience prompts were examined using NVivo12 software

[19]. Four graduate-level researchers used a thematic analytic approach as the primary data reduction strategy. Codes were continuously developed and modified throughout the analysis to ensure participant reports were captured and accurately represented. Ten percent of participant responses were randomly selected and independently coded to develop the initial codebook. Following codebook agreement, an additional five percent of responses were randomly selected and coded by all members of the evaluation team to ensure intercoder agreement [20].

Results

Quantitative

As detailed in table 1, a total of 2,228 individuals responded to the survey; incomplete surveys were removed, resulting in a final analytical sample of 1,612 participants. The majority of participants identified as female (68.7%) and were aged 40 years or older (58.9%, with 36.7% aged 40–55 and 22.2% aged over 55). There was an approximately even distribution of Latino/Hispanic (36.5%) and non-Hispanic White (37.2%) participants. Staff comprised the largest segment of the sample (66.2%), followed by faculty (18.2%) and students (11.7%). Additional demographic data can be found in table 1.

Chi-square analyses show significant associations among race, gender, and perception of campus climate for several items. For example, statements on perceived institutional capacity, such as “leadership effectively manages progress in diversity and inclusion” were significantly associated with both race and gender (Table 2; $p < 0.005$). One-way ANOVA was also used to examine whether average perception scores differed by race or gender. Similar to the *Chi-square* results, there were significant race and gender differences in perception for several survey items, such as “I feel that I have a support system at UM-JMH” (Table 2; $p_{\text{race}} < .001$; $p_{\text{gender}} = .02$).

**Table 1:** Demographic characteristics of climate survey respondents at the University of Miami Miller School of Medicine (N = 1612).

	Qualitative Respondents		Full Sample	
Age	N	%	N	%
20-24	18	4.15%	108	6.7%
25-29	52	11.98%	206	12.8%
30-39	113	26.04%	348	21.6%
40-55	159	36.64%	591	36.7%
Over 55	92	21.20%	358	22.2%
Race				
Asian/Pacific Islander	21	4.8%	77	4.8%
Black/African American	69	15.9%	196	12.2%
Indigenous/Native American	2	0.5%	3	0.2%
Latino/Hispanic	126	29.0%	589	36.5%
Middle Eastern	5	1.2%	11	0.7%
Multiracial	15	3.5%	44	2.7%
Other	19	4.4%	45	2.8%
Prefer not to answer	18	4.1%	47	2.9%
White	159	36.6%	600	37.2%
Gender				
Female	291	67.1%	1108	68.7%
Male	127	29.3%	469	29.1%
Transgender/Non-Conforming	3	0.7%	5	0.3%
Prefer not to answer	13	3.0%	29	1.8%
LGBT				
Yes	47	10.8%	150	9.3%
No	296	68.2%	277	17.2%
No, but I identify as an Ally	83	19.1%	1169	72.5%
Prefer not to answer	7	1.6%	14	0.9%
Country				
Country Outside the United States	153	35.3%	563	34.9%
United States & Territories	281	64.7%	1049	65.1%
Belief				
Agnostic	34	7.8%	93	5.8%
Atheism	20	4.6%	71	4.4%
Buddhism	9	2.1%	23	1.4%
Christian	205	47.2%	890	55.2%
Hinduism	7	1.6%	22	1.4%
Judaism	33	7.6%	118	7.3%
Muslim	4	0.9%	13	0.8%
Nonreligious	58	13.4%	153	9.5%
Other	35	8.1%	144	8.9%
Prefer not to Answer	27	6.2%	80	5.0%

Table 1 (cont.)	Qualitative Respondents		Full Sample	
Degree	N	%	N	%
High School Diploma / GED	13	3.00%	115	7.1%
Associate Degree	37	8.53%	189	11.7%
Bachelor's Degree	117	26.96%	470	29.2%



Master's Degree	119	27.42%	392	24.3%
Doctoral Degree	140	32.26%	409	25.4%
Other	8	1.84%	115	7.1%
Institutional Position				
Fellow	2	0.46%	9	0.6%
Other	13	3.00%	47	2.9%
Resident	2	0.46%	7	0.4%
Staff (JMH or UM)	267	61.52%	1067	66.2%
Student	45	10.37%	188	11.7%
Faculty	105	24.19%	294	18.2%
Instructor	2	0.5%	5	0.3%
Assistant Professor	37	8.5%	104	6.5%
Associate Professor	34	7.8%	102	6.3%
Professor	32	7.4%	83	5.1%

Table 2: Racial differences in campus perceptions among survey participants at the University of Miami Miller School of Medicine.

Survey Items	Black	Latine	White	Other	Total	χ^2
Emphasizing diversity leads to acceptance & campus unity	4.21 (1.1)	4.50 (.83)	4.15 (1.2)	4.34 (1.0)	4.30 (1.1)	.057
Understanding a variety of cultures is directly relevant to my professional development	4.71 (.6)	4.53 (.93)	4.47 (1.0)	4.46 (.86)	4.53 (.90)	.160
The medical campus has created a safe and open forum to discuss issues on diversity and cultural competency	2.91 (1.2)	3.59 (1.2)	3.14 (1.3)	3.10 (1.3)	3.23 (1.3)	.014*
At UM-JMH, I feel accepted and respected by students, faculty, & staff	3.32 (1.3)	4.01 (1.1)	3.66 (1.2)	3.54 (1.2)	3.69 (1.2)	<.001*
It is safe & easy to report bias/discrimination at UM-JMH	2.62 (1.2)	3.15 (1.3)	2.80 (1.2)	2.43 (1.2)	2.82 (1.2)	.008*
UM-JMH addresses incidences of bias and discrimination in a timely and sufficient manner	2.51 (1.1)	3.06 (1.2)	2.74 (1.0)	2.57 (1.1)	2.78 (1.1)	.089
UM-JMH adequately recruits and retain diverse faculty, staff, students	2.32 (1.3)	3.62 (1.3)	3.22 (1.3)	3.18 (1.3)	3.19 (1.3)	<.001*
There is someone at UM-JMH who encourages my development (i.e., a mentor)	3.06 (1.5)	3.34 (1.6)	3.26 (1.4)	3.30 (1.4)	3.26 (1.5)	.520
UM-JMH leadership effectively manages progress in diversity and inclusion	2.51 (1.3)	3.11 (1.3)	2.92 (1.2)	2.64 (1.1)	2.87 (1.3)	.004*
Being in a diverse institution enriches my professional and educational experience	4.25 (1.2)	4.32 (1.1)	4.33 (1.0)	4.36 (.91)	4.32 (1.0)	.979
IRB approval processes protect research subjects from bias and discrimination	3.54 (1.0)	3.88 (.99)	3.92 (.97)	3.69 (1.0)	3.81 (.99)	.571
Campus police and security are professional and respectful	4.10 (.99)	4.37 (.9)	4.17 (1.0)	4.00 (.91)	4.19 (.97)	.068
I feel that I have a support system at UM-JMH	3.09 (1.4)	3.54 (1.2)	3.31 (1.3)	2.92 (1.3)	3.29 (1.3)	.085
UM-JMH provides adequate opportunities for me to learn about discrimination in medicine and science	2.71 (1.3)	3.38 (1.2)	3.16 (1.2)	2.97 (1.3)	3.12 (1.2)	.021*

As shown in table 2, for all survey statements, Black participants reported the lowest average scores, indicating a greater proportion of this group did not agree with the statements on the campus survey. In particular, Black respondents scored the lowest on items measuring the ease of reporting bias (Mean = 2.62, SD = 1.2) and the recruitment and retention of diverse personnel (Mean = 2.32, SD = 1.3). Conversely, Hispanic/Latine participants reported the highest average scores compared to other racial groups, reporting higher levels of feeling accepted and respected (Mean = 4.01, SD = 1.1) and suggesting a largely positive view of the University's culture surrounding diversity and inclusion at the time of the survey.

Notably, the three survey items with the lowest scores across the entire sample relate to institutional responses to bias and discrimination, including: safety and ease of reporting; timely action by university leadership; and institutional progress on diversity (Table 2). Hispanic/Latine participants also reported the least amount of witnessed (25%) or experienced (18%) discrimination on campus. Reports of bias and discrimination were highest among participants in the Other Races group (including Asian, Middle Eastern, Native, and Multiracial), with 42% witnessing discrimination and 38% reporting personal experience.

Qualitative

Free-response survey items were analyzed to further characterize and expand upon the results of the quantitative analysis. Of the 1,612 participants in our sample, 435 completed the free-response prompts. The demographic composition of this sample participants is comparable to the full quantitative sample. Three major themes emerged from this analysis: (1) inclusion & belonging; (2) upward mobility; and (3) the minority tax.

Inclusion & Belonging

Across all races, ethnicities, and genders,

a significant portion of qualitative responses reflected a lacking sense of belonging. Specifically, these reports were characterized by feelings or experiences of exclusion, derision, or prejudice based on one or more facets of personal identity. As one surgeon wrote,

"Several times a month, I express an idea only to meet a lukewarm response, but within the same meeting a male will express the same opinion, and everyone agrees and acknowledges it. [...] Male leadership surgeons dismiss me and my ideas b/c of the way I look."

As with the quantitative results, qualitative feedback spanned across the majority of racial and gender groups, highlighting a heightened sense of exclusion or otherness" for all members of the University regardless of social identity. For example, one White male faculty member reported awareness of his status as a member of the "majority" group, but felt this served as a disadvantage, writing,

"People from groups underrepresented in academia like women and minorities, can gang up together on other individuals and have very hurtful impact on the careers of others. [...] When individuals underrepresented in academia complain, people listen but when others complain, it is not given as much importance."

This perception extends beyond faculty and staff, as students also reported a lack of effort to retain diverse members of the institution once they are successfully recruited: "I think UM likes to use the words diversity and inclusion [...]. However, I have not seen any system put in place to address the needs of a diverse student body. Instead, students are meant to feel that they are only recruited to provide faculty with an opportunity to apply for minority supplements on grants."

Upward mobility

Several participants shared instances in which they felt their access to opportunities



for growth at the institution was inhibited because of their identity. As demonstrated in the quantitative data, these findings were found across racial and gender identities but were most commonly observed among Black participants. In discussing the presence of Black faculty leaders, a participant described a lack of tangible opportunities for development, writing:

“Blacks are treated more like tokens and do not get placed in leadership positions even when they are more qualified. Mentors may be assigned but tends to stifle talents and withhold opportunities. Promises are made for advancement, but these don’t materialize.”

Minority tax

While the University has vocalized efforts to establish a campus culture that fosters diverse representation and inclusion across the institution, many participants felt this message of representation did not align with their experiences at the department or division level. Staff, faculty, and students indicated workforce diversity did not appear as a priority, and many were skeptical about the institution’s true efforts to increase diverse representation.

As one student writes

“Overt racial discrimination happens too often, but the institution is far more complicit in burdening underrepresented students (and employees without additional pay) to do the work they should be paying for. It is additional work and stress at the time, but also an opportunity cost that leaves already privileged students that much more advantaged to spend those same hours on tasks more directly valued by the field (e.g., testing and/or medicine). It is a classic pattern, and very much an optional one.”

Discussion

This study explored faculty, student, and staff perceptions regarding issues of diversity, equity, and inclusion at one of the most

diverse medical institutions in the U.S. Despite this national ranking, results in this study parallel the findings from many other medical schools and have revealed several areas for improvement as expressed by our campus community. Quantitative findings suggest University personnel from diverse racial and gender backgrounds have a negative perception of the institution’s commitment to diversity and inclusion. These findings are further supported by the qualitative results, in which a varied sample of university members reported feelings of isolation and otherness. These results highlight the need for greater focus on the intersectional groupings of multiple identities, including race, gender, and belief system, as they relate to equity and professional development. Further, research exploring the complexities of these experiences and their impact on workplace culture is needed [21].

Notably, the most positive responses were among Hispanic/Latine respondents. As mentioned above, this is likely related to Miami-Dade’s designation as a majority-minority region, in which 70% of residents identify as Hispanic/Latine. Similarly, this demographic also forms the majority at UMMSM. Consistent with prior studies, minority populations are less likely to experience feelings of isolation and otherness when surrounded by persons from similar backgrounds, which may account for their higher scores.

While perceived inclusion was low among several ethnoracial groups, Black participants had the lowest average scores on perceived campus climate. This outcome was better illuminated by the experiences shared in their qualitative feedback, as reports relating to the minority tax and stunted upward mobility became more frequent. Importantly, this survey was conducted a year prior to the 2020 presidential election, during which discussions of equity, inclusion, and antiracism became more socially prominent. While this context may

have influenced participants' qualitative and quantitative feedback, the findings are aligned with other literature on the Black experience in academia [22].

Importantly, these findings have broad relevance for other medical schools and academic institutions striving for equity. They highlight that high-level diversity rankings and demographic representation can mask deep-seated internal inequities and a poor qualitative climate. To move beyond superficial diversity, other academic institutions must systematically conduct localized, disaggregated, mixed-methods assessments of their campus climate. Furthermore, academic medicine must address the "minority tax" structurally rather than relying on the volunteerism of URM members. This includes creating policies that formally compensate equity and inclusion service, providing protected research time for DEI contributions, and integrating robust mentoring networks into the formal institutional fabric.

Limitations

These findings were limited by several aspects of the study's design. First, because this study was conducted at a single urban, highly diverse academic safety-net medical complex (UMMSM) in a majority-minority geographic region, the findings may not be fully generalizable to academic institutions located in geographically different or less diverse regions. However, the presence of distinct inequities and the 'minority tax' at an institution ranked 6th nationally for diversity suggest that these issues are deeply systemic, and likely even more pronounced in less diverse environments.

Second, the voluntary response sampling method yielded an overall 16.6% response rate, which introduces potential selection and self-selection response bias. Individuals with highly polarized experiences (either exceptionally positive or negative) regarding campus climate may have been more likely to participate,

which could limit the representativeness of the findings.

Additionally, the anonymous design of the survey prevented follow-up, which restricted the ability to conduct additional interviews or focus groups that would have provided valuable depth during data analysis. Future studies should include an option for participants to elect to be contacted for further research. Finally, the relatively small analytical sample of student respondents limited the ability to make statistical inferences on intersectional campus climate experiences. Future research should make a targeted effort to recruit a more diverse and representative sample of participants.

Steps to further promote Equity

Since this research was conducted, UMMSM has made several strides to enhance the institutional climate of diversity and inclusion. Most notably, in June 2020, a call to action was submitted by the UMMSM Student National Medical Association (SNMA), resulting in the formation of the Task Force on Racial Justice (TFRJ). The TFRJ was created with the primary goal of developing campus-wide strategies to address issues of systemic racism within the university and ultimately create a sustainable culture of inclusion and diversity [23]. Within the first 90-days, subcommittees were created, a root cause analysis for each of the problem areas, and short- and intermediate-term recommendations were developed to promote the aforementioned goals [23].

For example, among the short-term recommendations proposed by the Faculty Affairs Subcommittee was community building through staff networking events and the development of a Society of Black Physicians and Scientists to further encourage opportunities for interdisciplinary collaboration and promote the mentoring, promotion, and retention of Black faculty. Faculty Affairs has further organized campus-wide events highlighting



the achievements of minority faculty and hosted celebrations to honor culturally-distinct holidays, such as Juneteenth.

Similarly, while members of the TFRJ were working with institutional leadership to monitor short-term progress to measure potential changes resulting from the taskforce, continued documentation of these efforts has since fallen out of practice. In consideration of future efforts to assess campus climate, it is important to note that many institutions overinflate their self-rated performance of campus diversity, suggesting that many may not recognize the disparity in diversity during recruitment or enrollment efforts [24]. Accordingly, evaluations on institutional progress from external reviewers would further support future diversity-enhancement efforts and ultimately lead to an improved cultural climate at our institution [25]. The research reported herein serves as a step forward for our UMMSM on our journey to create a culture of belonging for every member of our learning community.

Acknowledgements

Author Contributions

“Conceptualization, S.K., B.Y., A.M.R.L., S.S. methodology, S.K., B.Y. A.M.R.L.; software, B.Y.; validation, A.G. and A.R.; formal analysis, S.K., B.Y., investigation, S.K., N.V., O.C.; resources N.V.; data curation, B.Y.; writing—original draft preparation, S.K., and B.Y.; writing, review and editing, S.K., O.C., and A.G; supervision, S.K.; project administration, B.Y.;. All authors have read and agreed to the published version of the manuscript.

Funding

This research received no external funding

Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki and approved by the

Institutional Review Board of the University of Miami for studies involving humans. (Protocol code ID 20160306 10/4/2016).

Informed Consent Statement

Informed consent was obtained via a simple consent paragraph at the beginning of the survey to inform participants of the survey procedures and their right to voluntary and confidential participation.

Data Availability Statement

Access to data generated during the study can be obtained by emailing authors at skenya@miami.edu

Conflicts of Interest

The authors declare no conflicts of interest.

References

1. Fernandez A. Further incorporating diversity, equity, and inclusion into medical education research. *Acad Med.* 2019;94(11 Suppl):S5-S6. doi:10.1097/ACM.0000000000002916.
2. Association of American Medical Colleges. The anatomy of cultural competence [Internet]. Washington (DC): AAMC; [cited 2026 Apr 2].
3. Cipta DA, Andoko D, Theja A, Utama AVE, Hendrik H, William DG, Reina N, Handoko MT, Lumbuun N. Culturally sensitive patient-centered healthcare: a focus on health behavior modification in low and middle-income nations-insights from Indonesia. *Front Med (Lausanne).* 2024;11:1353037. doi:10.3389/fmed.2024.1353037.
4. Takeshita J, Wang S, Loren AW, Mitra N, Shults J, Shin DB, Sawinski DL. Association of racial/ethnic and gender concordance between patients and physicians with patient experience ratings. *JAMA Netw Open.* 2020;3(11):e2024583. doi:10.1001/jamanetworkopen.2020.24583.
5. Schoenthaler A, Ravenell J. Understanding the patient experience through the lenses of racial/ethnic and gender patient-physician concordance. *JAMA Netw Open.* 2020;3(11):e2025349. doi:10.1001/jamanetworkopen.2020.25349.
6. Association of American Medical Colleges. New AAMC data on medical school applicants and enrollment in



- 2024 [Internet]. Washington (DC): AAMC; [cited 2026 Apr 10].
7. Association of American Medical Colleges. U.S. physician workforce data dashboard [Internet]. Washington (DC): AAMC; [cited 2026 Apr 10]. Available from:
8. Hung R, McClendon J, Henderson A, Evans Y, Colquitt R, Saha S. Student perspectives on diversity and the cultural climate at a U.S. medical school. *Acad Med.* 2007;82(2):184-192. doi:10.1097/ACM.0b013e31802d936a.
9. Tiako ECN, et al. Racial justice in medical education: documenting progress and identifying gaps. *Acad Med.* 2023;98(10):1145-1153. doi:10.1097/ACM.0000000000005189.
10. Campbell KM, et al. The minority tax in academic medicine: a national survey of underrepresented faculty and students. *J Natl Med Assoc.* 2024;116(2):204-212. doi:10.1016/j.jnma.2023.12.003.
11. University of Miami Miller School of Medicine. Miller School moves up in U.S. News & World Report's Best Medical School Rankings [Internet]. Miami (FL): University of Miami; 2022 [cited 2026 Apr 2].
12. Office of Institutional Research and Strategic Analytics. University of Miami 2021-2022 Fact Book [Internet]. Miami (FL): University of Miami; 2022 [cited 2026 Apr 2].
13. White Coats 4 Black Lives. Racial Justice Report Card 2019 [Internet]. 2019 [cited 2026 Apr 2].
14. Griffin KA, Muñiz MM, Espinosa L. The influence of campus racial climate on diversity in graduate education. *Rev High Educ.* 2012;35(4):535-566. doi:10.1353/rhe.2012.0031.
15. Pew Research Center. In a rising number of U.S. counties, Hispanic and Black Americans are the majority [Internet]. 2019 [cited 2026 Apr 2].
16. Pew Research Center. Ranking the Latino population in metropolitan areas [Internet]. 2016 [cited 2026 Apr 2].
17. Creswell JW. A concise introduction to mixed methods research. Thousand Oaks (CA): SAGE Publications; 2014.
18. IBM Corp. IBM SPSS Statistics for Mac. Version 27.0 [computer software]. Armonk (NY): IBM Corp.; 2023.
19. QSR International. NVivo 12 qualitative data analysis software [computer software]. Melbourne (Australia): QSR International; 2019.
20. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval.* 2006;27(2):237-246. doi:10.1177/1098214005283748.
21. Zambrana RE, Harvey Wingfield A, Lapeyrouse LM, Dávila BA, Hoagland TL, Valdez RB. Blatant, subtle, and insidious: URM faculty perceptions of discriminatory practices in predominantly White institutions. *Sociol Inq.* 2017;87(2):207-232. doi:10.1111/soin.12147.
22. Garvey JC, Sanders LA, Flint MA. Generational perceptions of campus climate among LGBTQ undergraduates. *J Coll Stud Dev.* 2017;58(6):795-817. doi:10.1353/csd.2017.0065.
23. Reid LD, Radhakrishnan P. Race matters: the relation between race and general campus climate. *Cultur Divers Ethnic Minor Psychol.* 2003;9(3):263-275. doi:10.1037/1099-9809.9.3.263.
24. University of Miami Miller School of Medicine Office of Diversity, Inclusion, and Community Engagement. 2020 University of Miami Miller School of Medicine Task Force on Racial Justice Executive Summary [Internet]. Miami (FL): University of Miami; 2020 [cited 2026 Apr 2].
25. Woodruff JN, Vela MB, Zayyad Z, Johnson TA, Kyalwazi B, Amegashie C, Silverman R, Levinson D, Blythe K, Lee WW, Thomas S. Supporting inclusive learning environments and professional development in medical education through an identity and inclusion initiative. *Acad Med.* 2020;95(12 Suppl):S51-S57. doi:10.1097/ACM.0000000000003689.