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More Work, Less Reward: The Minority Tax on US Medical Students

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ABSTRACT

Introduction: Minority tax is defined as the burden of time and resources placed on minority persons to represent and advocate for their communities. We determined whether medical students underrepresented in medicine (URM) or from historically excluded (HE) populations experience a minority tax and characterized its effects.

Methods: This cross-sectional survey of US medical students occurred November 2020 - June 2021. We used Mann-Whitney U tests to compare metrics between URM and HE participants and their peers. The primary outcome was time invested in activism/diversity initiatives versus other work. Secondary outcomes included measures of microaggressions, discrimination, institutional culture, anxiety/depression, mentorship, and sleep. We performed thematic analysis of open-ended questions about participants' experiences with minority tax.

Results: A total 282 students included 39 (13.8%) URM and 150 (53.9%) HE participants. Compared to peers, URM and HE participants invested an additional 36.4 ($p = 0.005$) and 46.8 ($p = 0.006$) annual hours on advocacy and 62.4 ($p < 0.001$) and 41.6 ($p = 0.001$) annual hours on diversity initiatives, respectively. URM and HE participants reported more microaggressions / discrimination, less inclusive environments, and no differences in access to mentorship or sleep. Six themes were evident: (1) URM and HE students feel obligated to do diversity, equity, and inclusion (DEI) work, (2) students doing DEI work experience minority tax, (3) minority tax is negatively associated with wellness, (4) learning environment changes may mitigate minority tax, (5) there is a demand for increased representation and improved DEI education, and (6) an increased DEI budget might reduce the minority tax for students.

Conclusion: URM and HE medical students experience a minority tax that may affect their wellbeing. These findings should serve as a call for action by medical school leaders.

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INTRODUCTION

Medicine has a complicated history with diversity. Only recently have U.S. medical schools seriously invested in diversity, equity, and inclusion (DEI) efforts, with outcome metrics that are slow to improve and evidence of impact that is modest at best [1]. The U.S. physician workforce does not reflect the diverse patient populations it serves, and it may take decades for medical schools to fully correct that disparity [2]. Not surprisingly, this gap is notable among medical school faculty members in particular. Of the approximately 176,000 full-time faculty members in U.S. medical schools, a dishearteningly low proportion are underrepresented in medicine (URM)—only 3.6% are Black or African American and 3.2% are Hispanic, Latino or of Spanish origin [3]. The already low numbers of URM faculty members are further reduced in leadership roles and at higher professoriate ranks [3, 4].

One theory for the disproportionately low number of URM faculty in medical school leadership is 'minority tax' [5]. Minority tax is defined as the burden of time and resources placed on minority persons to represent and advocate for their communities [6]. It is characterized by the synergistic effects of cultural isolation, lack of mentorship, disparities in clinical assignments, and additional responsibilities that hinder career advancement for those who are URM [7]. Combined with the high number of requests to represent URM persons in various workplace initiatives and experiences of discrimination, these stressors reduce time for scholarship and other activities often required for promotion in the professoriate [8, 9].

Though minority tax has been examined previously among faculty cohorts, related studies suggest that the experience and effects of the minority tax may begin as early as medical school [10, 11]. Previous studies have shown that while URM medical

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students report a similar level of interest in academic medical careers, they anticipate more barriers and often report decreased interest upon graduation [10, 12]. URM medical students experience similar challenges as URM faculty members, potentially at the expense of studying, research, and other academic pursuits [11]. In our experience, URM students are also asked to lead diversity efforts at their institutions without adequate administrative support or commensurate compensation of their time. The degree to which a minority tax exists for medical students represents an important gap in the literature.

The objectives of this study were [1] to determine whether URM and historically excluded (HE) medical students experience minority tax, [2] if found, to characterize the minority tax and its association to wellness, and [3] to elicit student recommendations for medical schools to mitigate the effects of a potential minority tax on medical students. We hypothesized that URM and HE medical students would spend more hours per week on diversity efforts, advocacy, or activism than their peers, at the expense of other work.

METHODS

Study design, Setting, and Population

This was a cross-sectional survey of medical students during a data collection period of November 2020 to June 2021. Our roster of eligible participants included all enrolled students at Stanford School of Medicine, University of Oklahoma College of Medicine, The Ohio State University School of Medicine, The Chicago Medical School at Rosalind Franklin University of Medicine and Science, and University of Utah School of Medicine. The total enrollment at the five institutions is approximately 3400 students. Returned surveys with incomplete items were excluded from analysis. The Institutional Review Board of Stanford School of Medicine deemed this study exempt (IRB #55425).

Survey Methods

Our survey instrument was designed specifically for use in this investigation and based on a previously published instrument that assessed for minority tax among medical school faculty [5]. Additional items were added to the tool based on literature review and expert opinion. We created our survey instrument using an iterative editing approach to optimize content and internal structure evidence. This process included extensive testing among the author team for item generation, optimal item phrasing, survey functionality, matching of item content to construct, and overall quality control. We included a mix of suggested and open-response options for items likely to have a high variability of answers to ensure capture of atypical responses (**Appendix A**).

We piloted the survey among the study authors and an additional cohort of 15 medical students prior to distribution. Some evidence of response process validity was obtained by cross-checking these pilot results for consistency. We then sent the survey to eligible participants by email using Qualtrics® (Qualtrics Software Company, Provo, Utah, USA.) A corresponding solicitation letter explained the risks of participation in the study and completion of the survey implied voluntary, informed consent. Targeted reminder emails were sent to non-responders up to 4 times. We offered no incentives. No individual identifying information was maintained, and we specifically avoided including any metrics that could link a response to the University a respondent attended.

Survey Questions

We defined "minority tax" as the cumulative effects of: disproportionate time spent on DEI and advocacy activities; cultural exclusion and isolation (including experiences of discrimination and microaggressions, and low cultural alignment); and a lack of mentorship, while being overrepresented in roles as mentors to others. One dimension of the minority tax is the disproportionate number of hours invested in representing and advocating for URM and HE communities compared to the number of hours invested on these activities by students who are overrepresented in medicine (ORM) or historically included (HI) [6]. To assess whether students of different backgrounds invested their time differently, we queried participants on the amount of time they spent on the following activities: 1) academic coursework, 2) activism and / or advocacy, 3) clinical experiences, 4) community engagement and / or service work, 5) diversity initiatives, 6) income-generating work, 7) research and scholarship, or 8) other. Another dimension of minority tax is explicit exclusion and cultural isolation, therefore we queried participants on their experiences with microaggressions and discrimination. We also included a short set of questions used in previous studies of minority faculty to assess other aspects of culture, including values alignment, moral distress, and feelings of inclusion [5]. Additionally, we used the Patient Health Questionnaire-2 (PHQ-2) to screen for depression and the Generalized Anxiety Disorder-2 item (GAD-2) tool to screen for anxiety, queried students about their mentors and mentees, and asked students about their sleep hours [13].

We also included two open-ended questions. The first item asked participants to share their experiences with minority tax while in medical school, and the second item sought recommendations for institutions to address minority tax among students. Both open-ended questions were optional and presented at the end of the survey, and there was no word-limit for these responses. We de-identified open-ended responses and labeled them with anonymized participant identifiers prior to analysis.

Data Analysis

The minority tax has been previously characterized in URM faculty members using an Association of American Medical College (AAMC) definition for URM that includes Black or African American; Hispanic, Latino, or of Spanish origin; and American Indian or Alaska Native individuals. To assess whether students with other disadvantaged or marginalized identities experience a minority tax, we characterized some participants as HE using definitions from health disparities research [14]. HE included URM students, as well as those who identified as Asian, of Middle Eastern or North African origin, or as a sexual and gender minority (SGM). We considered participants overrepresented in medicine (ORM) if they identified as racial or ethnic categories that were other than Black or African American; Hispanic, Latino, Spanish, American Indian or

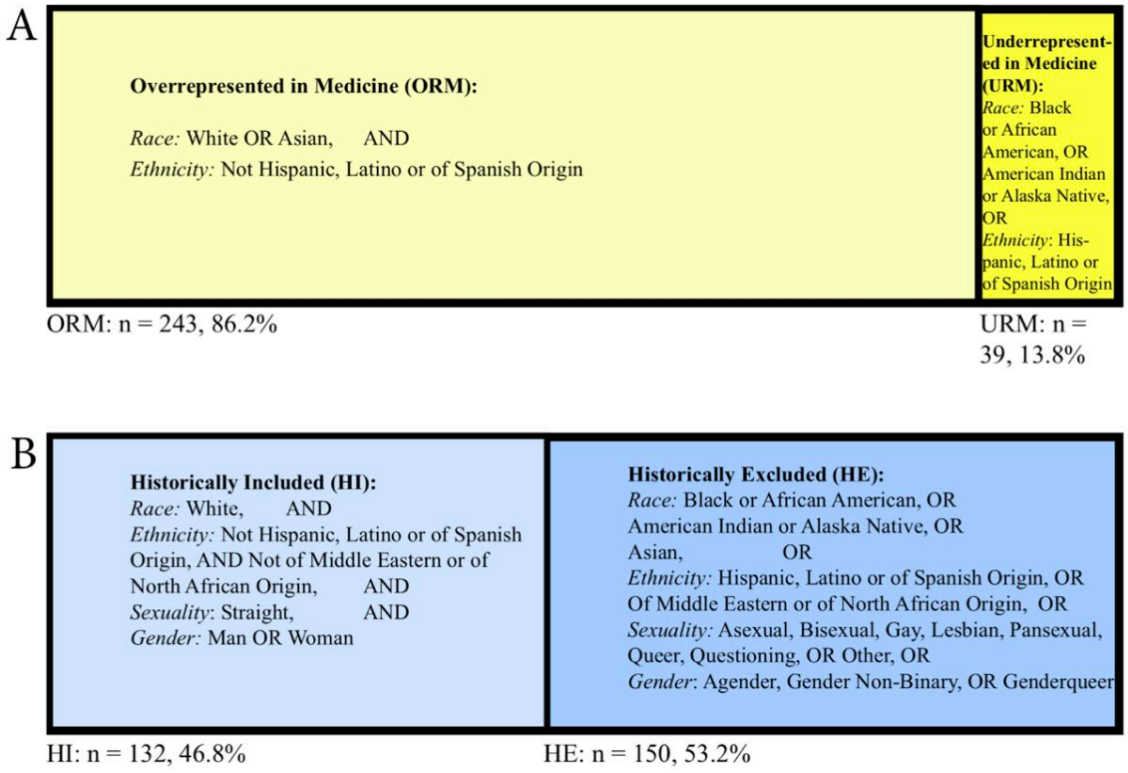

Figure 1: Survey demographics, including characterization of overrepresented in medicine (ORM), underrepresented in medicine (URM), historically included (HI) and historically excluded (HE)

Native Alaskan [15]. We characterized participants as historically included (HI) if they further did not identify as Asian, of Middle Eastern or North African origin, or as sexual / gender minority (SGM) students. (**Figure 1**)

Categorizing students as URM or HE posed a challenge given that identities such as race, ethnicity, and sexuality, are sociopolitical constructs that have shifted over time and without clearly delineated biological basis [16]. To preserve anonymity, participants who selected multiple racial or ethnic categories (e.g., both 'White' and 'Black or African American') or multiple sexual identity categories were reported in demographics data as 'Multiracial' and 'Multiple Identities Selected,' respectively. We identified participants as URM or HE if at least one of their marked identities was consistent with the definition of URM or HE.

We assessed participants' sense of cultural alignment with their medical school using a subset of a previously published survey of faculty members (Cronbach α reliability coefficients: 0.82 - 0.90) [5]. We reverse-coded negatively stated questions in this tool. Responses were summed and scores divided by the number of items in each scale, to be interpreted from 1 to 5 as the original Likert scale. We combined the Likert scale scores to determine one score for total cultural alignment. For all dimensions, a higher score indicated more cultural alignment, and ranged from 1 to 5. For these and other measures, we compared URM to ORM participants and HE to HI participants. Normality testing using frequency distributions, Q-Q plots and Shapiro-Wilk demonstrated that data was non-Gaussian; it was not correctable via logarithmic, square root or reciprocal transformations. As such, we conducted all comparison analyses with Mann-Whitney U tests. We corrected for multiple testing using Bonferroni, with a threshold of $p = 0.025$ for significance. To assess for whether hypothesized dimensions of minority tax affected measures of wellness – including hours of sleep, PHQ-2 and GAD-2 scores – we conducted multiple linear regressions for each of the three outcomes. Quantitative data analyses were performed using RStudio version 1.2.5033 (RStudio Software Company, Boston, Massachusetts, USA).

Using a constructivist paradigm, we also performed a conceptual content analysis of open-ended responses to understand student experiences with minority tax and their recommendations for medical school leaders to address it. We analyzed open-ended responses to the level of a phrase, grouped these responses into loose categories or concepts that were not predefined, and ignored irrelevant words. We then inductively coded for the existence of concepts related to minority tax, not the frequency they appeared in the transcript. Two study team members (MK, SS) agreed on this preliminary coding schema and crafted rules before independently coding the open-ended responses. They then met frequently via Zoom (Zoom Video Communications, Inc, San Jose, California, USA) to discuss code generation and meaning, and they compared all duplicate codes to ensure inter-rater agreement. The final codebook consisted of codes agreed upon between the raters and there were no instances of disagreement that required a third-party adjudicator. Using a consensus approach, we then conducted a team-based thematic analysis in a series of discussions among four of our investigators (BK, MC, SS, MG). Deidentified qualitative data were stored and analyzed using Microsoft Excel 2016 (Microsoft Corporation, Redmond, Washington, USA).

Outcome Measures

The primary outcome measures were the numbers of hours participants spent doing activism/advocacy, diversity initiatives, and other types of work; we compared these among participant groups to assess for the presence or absence of a minority tax in our study population. We hypothesized that URM and HE participants would report more hours spent on activism / advocacy and diversity initiatives compared to their ORM and HI peers. Secondary outcome measures included those related to microaggressions, discrimination, cultural alignment, inclusion, anxiety and depression, mentoring, and hours of sleep. We hypothesized that when compared to their peers, URM and HE students would report more instances of microaggressions and discrimination, less cultural alignment, worse PHQ-2 and GAD-2 scores, less mentors and more mentees, and less hours of nightly sleep.

Finally, to assess for the explicit impact of a minority tax on measures of wellness, we hypothesized that students who spent more hours on DEI or advocacy/activism, experienced more instances of microaggressions or discrimination, reported less cultural alignment, and had less mentors and more mentees would score worse on the PHQ-2 and GAD-2, and report less hours of sleep.

RESULTS

Demographics

Of the 294 submitted surveys, 282 met inclusion criteria. We identified 39 (13.8%) URM participants and 150 (53.2%) HE participants. Of those who met inclusion criteria, 69 (24.5%) completed the optional open-ended questions (**Table 1**). Compared to the total population of U.S. medical school students, we had an overrepresentation of white students (54.6% nationally), American Indian or Alaskan Native students (0.2% nationally), students of Hispanic, Latino or Spanish origin (5.3% nationally) and students that self-identified as Other (1.9% nationally). We had a similar proportion of students identifying as Asian (21.6% nationally). Lastly, our sample had an underrepresentation of Black or African American students (6.2% nationally) and multiracial students (8.0% nationally) [17].

Primary Outcome: Time Investments

URM participants invested an additional 36.4 hours per year (42 minutes per week) on advocacy work than their peers, and HE participants similarly invested 46.8 additional hours yearly (54 minutes weekly). Diversity initiatives tax URM participants an additional 62.4 work hours yearly (1 hour and 12 minutes weekly) compared with peers, and HE participants an additional 41.6 hours yearly (48 minutes weekly). There was no significant difference in total hours worked between URM or HE participants and their peers, suggesting that advocacy and diversity initiatives reduced time spent on other work collectively (**Table 2**).

Table 1: Demographic Information

	Frequency	Proportion
Gender		
Agender	1	0.4%
Gender Non-Binary	1	0.4%
Genderqueer	1	0.4%
Man	112	39.9%
Multiple Identities Selected	1	0.4%
Woman	165	58.7%
Age (in years)		
18 - 21	4	1.4%
22 - 25	156	55.3%
26 - 29	88	31.2%
30 - 34	25	8.9%
35 - 40	7	2.5%
Greater Than 40	2	0.7%
Race		
American Indian or Alaska Native	2	0.7%
Asian	59	21.1%
Black or African American	10	3.6%
Multiracial	19	6.8%
Other	8	2.9%
White	182	65.0%
Ethnicity		
Both Hispanic, Latino or of Spanish origin nor of Middle Eastern or North African origin	1	0.4%
Hispanic, Latino or of Spanish origin	21	7.4%
Middle Eastern or North African origin	10	3.5%
Neither Hispanic, Latino or of Spanish origin nor of Middle Eastern or North African origin	250	88.7%
Year in Medical School		
Pre-Clinical Student	171	60.6%
Clinical Student	100	35.5%
Research Year	9	3.2%
Other	2	0.7%
Sexuality		
Not Sexual Minority (Straight)	223	79.1%
Sexual or Gender Minority (Asexual, Bisexual, Gay, Lesbian, Pansexual, Queer, Questioning, Other)	59	20.9%
Overrepresented in Medicine (ORM) versus Underrepresented in Medicine (URM)		
ORM	243	86.2%
URM	39	13.8%
Historically Included (HI) versus Historically Excluded (HE)		
HI	132	46.8%
HE	150	53.2%

Table 2: Hours Spent on Different Types of Work

Type of Work	Hours Worked Weekly (URM)	Hours Worked Weekly (ORM)	Difference in Hours (URM - ORM)	p Value
Academic	34.7	36.9	-2.2	0.493
Activism and/or Advocacy	1.9	1.2	0.7	0.005 **
Clinical	19.2	14.5	4.7	0.146
Community	2.4	2.4	0	0.955
Diversity Initiatives	1.7	0.5	1.2	0.000 ***
Income Generating	0.5	1.2	-0.7	0.302
Research	3.0	5.4	-2.4	0.372
Other	0.4	0.8	-0.4	0.320
Total Hours	63.8	62.7	1.1	0.870
Type of Work	Hours Worked Weekly (HE)	Hours Worked Weekly (HI)	Difference in Hours (HE - HI)	p Value
Academic	35.8	37.4	-1.6	0.469
Activism and/or Advocacy	1.7	0.8	0.9	0.006 **
Clinical	14.4	16.0	-2.4	0.277
Community	2.5	2.2	0.3	0.806
Diversity Initiatives	1.1	0.3	0.8	0.001 ***
Income Generating	0.9	1.3	-0.4	0.122
Research	5.2	4.8	0.4	0.592
Other	0.8	0.7	0.1	0.274
Total Hours	62.4	63.4	-1.0	0.396

URM: underrepresented in medicine; ORM: overrepresented in medicine; HE: historically excluded; HI: historically included

Secondary Outcomes: Effects of Minority Tax

Both participant groups reported significantly more instances of microaggressions, and URM participants reported significantly more instances of discrimination than their peers (**Table 3**). HE participants reported less self-efficacy than peers, as well as significantly less engagement and less total cultural and values alignment with their schools (**Table 5**). Importantly, however, the average scores on the PHQ-2 and GAD-2 tools did not meet thresholds for further screening of depression or anxiety symptoms. Additionally, while URM participants had similar numbers of mentors and mentees as ORM participants, HE participants reported on average 0.6 more mentors and 0.8 more mentees than HI participants (**Table 4**). No differences were found in hours of sleep, which averaged 7 hours between all participant groups.

In assessing for the effects of minority tax on wellness, we consistently found an effect of total cultural alignment on PHQ-2 and GAD-2 scores. Higher scores on cultural alignment measures (see Table 5 for individual measures of cultural alignment) corresponded to a lower score on the PHQ-2 and GAD-2, indicating the respondent endorsed less symptoms of depression and anxiety, respectively. No significance was found with regards to the impact of minority tax on sleep (**Table 6**).

Experiences and Recommendations

We asked participants about their experiences of minority tax and to make recommendations to address it. Six themes were evident in their responses: (1) minoritized medical students feel obligated to do DEI work, (2) a minority tax is experienced by students doing DEI work, (3) the minority tax negatively affects student mental health, (4) changes to the learning environment can mitigate the effects of minority tax, (5) there is a demand for increased representation and improved DEI education to address minority tax, and (6) increased money budgeted for DEI work would reduce the minority tax for medical students.

(1) Minoritized Medical Students Feel Obligated to do DEI Work

Participants felt pressured by themselves, their school, or their communities to contribute to DEI efforts. One participant noted that there is "always an expectation that [we] do [DEI initiatives] instead of being asked if [we] have the space for that." Often those who asked the participants to do this work did not fully appreciate their efforts. One participant noted they are regularly "asked to do a lot of unpaid DEI work" for their institutions, and others mentioned that their time spent contributing to DEI initiatives "received little recognition" or was "not valued" regardless of the positive impact the work had at their schools. Other participants said that "too much of [the] burden" of addressing inequities was placed on them "and not [on] the institution." Some participants described different pressures such as "the burden of educating others about [their] experiences" as URM students, with one participant feeling "the burden of having to teach others about [their] identity and how to respect [them]." Another participant with intersecting underrepresented identities said that they are "constantly working to educate others, [to] make [their] system better, [to] and mentor others." A participant wrote that "the burden falls on [them] and other LGBTQ+ students at [their] school to fight for changes." A participant who identified as gay and gender non-binary said, "I feel like it is my responsibility to address micro-aggressions and improve the systems we work in, even as those systems actively try to exclude me." One participant said, "I feel I have needed to speak up and be on panels despite time constraints to ensure my people are represented [and] to make sure people who share my identities know they belong." Participants felt that they "become the only mentors for other underrepresented minorities" in medicine, and as a result, they "spend hours mentoring underrepresented minority undergraduate and high school students who look to [them] as the only…student that they can identify with." Many participants who wrote about mentoring others also stated that they "don't mind being a mentor" and that it "has been rewarding." However, they were frustrated that mentoring "[burdens] URM students who are also trying to make it through medical school" and that they "have not had the privilege of having a mentor [themselves]."

Table 3: Instances of Microaggressions and Discrimination Since Starting Medical School

	Instances (URM)	Instances (ORM)	p Value
Microaggressions	7.5	4.3	0.003 **
Discrimination	2.4	1.3	0.006 **
	Instances (HE)	Instances (HI)	p Value
Microaggressions	5.8	3.5	0.008 **
Discrimination	1.7	1.2	0.033

URM: underrepresented in medicine; ORM: overrepresented in medicine; HE: historically excluded; HI: historically included

Table 4: Mentorship

	Total Number (URM)	Total Number (ORM)	p Value
Mentors	2.7	2.5	0.285
Mentees	3.5	2.2	0.201
	Total Number (HE)	Total Number (HI)	p Value
Mentors	2.8	2.2	0.015 *
Mentees	2.8	2.0	0.050

URM: underrepresented in medicine; ORM: overrepresented in medicine; HE: historically excluded; HI: historically included

Table 5: Cultural and Institutional Experiences

Scale 1-5, lesser-greater			
	URM Mean	ORM Mean	p Value
Engagement	3.1	3.3	0.233
Self-Efficacy	3.7	4.0	0.034
Institutional Support	3.5	3.8	0.153
Values Alignment	3.4	3.6	0.095
URMM Equity	3.4	3.7	0.194
Sense of Belonging	4.2	4.2	0.847
Total	3.5	3.7	0.053
	HE Mean	HI Mean	p Value
Engagement	3.2	3.4	0.003 **
Self-Efficacy	3.9	4.2	0.010 *
Institutional Support	3.7	3.8	0.418
Values Alignment	3.5	3.7	0.037
URMM Equity	3.6	3.8	0.099
Sense of Belonging	4.1	4.3	0.027
Total	3.6	3.8	0.004 **

URM: underrepresented in medicine; ORM: overrepresented in medicine; HE: historically excluded; HI: historically included

Table 6: Effects of Minority Tax on Wellness

Wellness	**ΔR^2**	**B**	**SE B**	**β**	**P**
Hours of Sleep	**0.044**				**0.093**
• Constant		• 0.622	• 0.350		• < 0.001 ***
• Hours on Activism/Advocacy		• -0.037	• 0.024	• -0.103	• 0.126
• Hours on Diversity		• 0.047	• 0.026	• 0.115	• 0.078
• Total Cultural Alignment		• 0.209	• 0.092	• 0.145	• 0.023 *
• Instances Microaggressions		• 0.004	• 0.020	• 0.017	• 0.817
• Instances Discrimination		• -0.003	• 0.009	• -0.028	• 0.712
• Number of Mentors		• 0.003	• 0.025	• 0.008	• 0.907
• Number of Mentees		• 0.025	• 0.022	• 0.080	• 0.248
PHQ-2 Scores	**0.217**				**< 0.001 *** **
• Constant		• 4.794	• 0.470		• < 0.001 ***
• Hours on Activism/Advocacy		• 0.050	• 0.033	• 0.094	• 0.124
• Hours on Diversity		• 0.015	• 0.036	• 0.024	• 0.683
• Total Cultural Alignment		• -0.980	• 0.123	• -0.456	• < 0.001 ***
• Instances Microaggressions		• -0.048	• 0.027	• -0.119	• 0.812
• Instances Discrimination		• -0.008	• 0.012	• -0.043	• 0.528
• Number of Mentors		• 0.067	• 0.033	• 0.119	• 0.045 *
• Number of Mentees		• -0.039	• 0.030	• -0.082	• 0.189
GAD-2 Scores	**0.126**				**< 0.001 *** **
• Constant		• 4.870	• 0.615		• < 0.001 ***
• Hours on Activism/Advocacy		• 0.031	• 0.043	• 0.046	• 0.470
• Hours on Diversity		• 0.067	• 0.047	• 0.089	• 0.152
• Total Cultural Alignment		• -0.811	• 0.161	• -0.305	• < 0.001 ***
• Instances Microaggressions		• -0.035	• 0.035	• -0.071	• 0.325
• Instances Discrimination		• 0.018	• 0.016	• 0.082	• 0.258
• Number of Mentors		• -0.011	• 0.044	• -0.016	• 0.797
• Number of Mentees		• 0.010	• 0.039	• 0.018	• 0.786

(2) A Minority Tax is Experienced by Students Doing DEI Work

Many participants reported that their DEI work was "a significant time cost" and took time away from their studies. One participant stated, "sometimes during med school, I [spend] more time on diversity efforts than I [do] on studying for class." Similarly, another participant expressed frustration that they "have to spend extra time and energy just so that [they] can feel comfortable navigating these mostly white, cis, heteronormative spaces and then find extra time and energy to focus on [their] studies". DEI work conflicts not only with academic work but with income-generating work that is a necessity for many students. A handful of participants cited being low-income as a source of additional stress experienced as minoritized medical students. One participant said, "I definitely have to waste a lot of time navigating / worrying about / searching for additional ways to make income since I'm a low-income first-gen student."

(3) The Minority Tax Negatively Affects Student Mental Health

Many participants mentioned the toll that minority tax took on their mental health. "People don't seem to realize that being a minority constantly affects our experience." A few participants mentioned needing to succeed as minoritized students to prove they are qualified to be in medical school. One participant stated, "I feel an added pressure to show up for my race [to] not give anyone a reason to think that I was a charity case for medical school." Similarly, another participant said there is a "feeling of never being able to fail or not do excellent work because it represents a greater failure of the people you inherently represent." Some participants referenced needing to "persevere through more than some of [their] peers" and that "it is very challenging to pull yourself up by the bootstraps" throughout medical school. These participants noted that these pressures were both self- and community-driven. One gender non-binary participant said, "Even simple things like not having a place to use the restroom makes things more stressful [and] not knowing if my identities are affecting my evaluations." Some participants wrote that they experienced "a feeling of isolation and not having many [peers] to relate to" in medical school. When describing a lack of social support due to cultural isolation, one participant said that they "[endure] microaggressive comments alone with no friends with shared experiences to lean on for support." A few participants talked about struggling to identify with classmates: "I feel like I haven't found a group of friends, and I think it's from cultural differences."

(4) Changes to the Learning Environment Can Mitigate the Effects of Minority Tax

Participants recommended several curricular and cultural changes that could improve the learning environment for students and mitigate the minority tax they experience. One participant said, "It's time for [institutions] to move from "we are ready to support diversity" to "here are our college-wide requirements for students to understand diverse experiences." Several participants suggested that institutions should improve curricula to be more inclusive of SGM and URM health. With regards to trans healthcare, one participant stated that they "feel

obligated to try to fix" the curriculum at their school and would like "someone with [actual] community perspective and scientific knowledge to review the lectures and communicate…with faculty, so the faculty members actually understand the correct material." Further, participants shared that students "don't have opportunities through the institution to get exposure to minority groups." A few participants mentioned that institutions should "treat the students as individuals and not a representative member of their race or ethnicity." One participant stated, "At the end of the day, the smallest minority is the individual... viewing students and faculty not merely as members of a group but as complex individuals would help to eradicate the minority tax and promote a more equal environment." Participants recommended that schools provide more "emotional and financial support for students spearheading important diversity initiatives at these institutions." Additionally, participants suggested "academic support" to "acknowledge the deficits that many [URM] walk into medical school with..." and to "help level the playing field [and] provide some sort of equity amongst [their] peers." Increased opportunities to acquire mentors with similar cultural identities and experiences was frequently mentioned. Participants suggested that schools should have "intentional programs in place to cultivate effective mentorship [and to] help reduce cultural isolation..." Multiple participants stated that these mentorship programs should be implemented "early on in the medical school curriculum." One participant proposed that institutions be "more open and willing to discuss pairing physician mentors with culturally-similar backgrounds if it is requested [because] interest in a field alone is not sufficient in mentorship pairing." A frequent suggestion by respondents was that "rather than wait for students to deal with [DEI] issues" institutions should identify and address issues on their own. One student stated, "While it's nice to have schools who are receptive to feedback, it would be better if they act more proactively" because students "shouldn't have to tell [schools] how to make their school more inclusive." Another participant stated, "I wish administration would help more with initiatives instead of being passive bystanders."

(5) There is a Demand for Increased Representation and Improved DEI Education to Address Minority Tax

Participants indicated a need for improved diversity education for faculty and students at their medical schools. Regarding lack of available DEI training, one participant said, "While I genuinely believe the majority of students and faculty [at my school] are willing to learn and be supportive, they don't have opportunities through the institution." Other participants encouraged schools to promote training so that faculty members can "[take] part in educating themselves" and to "provide guidelines for student organizations regarding diversity initiatives...rather than waiting for minority students to step up... to tackle diversity issues." Participants mentioned the need for "stand-in committees that can address issues of racism, sexism, homophobia, etc." and for institutions to "be investing energy and resources into making their medical schools places that ensure all of their students are supported, especially their minority students." Further, many participants agreed that institutions should "stop admitting medical students with the expectation that they are going to educate their peers and make their institutions better." Rather, "...if [schools] want a diverse student body, [they] have to offer a diverse set of services/support for those students." A common suggestion was for medical schools to admit more historically minoritized and marginalized students. Participants indicated the need for "focused entry programs for underrepresented students" and for the "[recruitment] of underrepresented minorities in large batches as opposed to less than five in a given year." One participant stated, "There have to be minorities becoming doctors before there can be more mentors and more advocacy therein." Many participants voiced a need for institutions to cultivate an environment where students and faculty who are not URM can lead DEI initiatives, thereby displacing the burden from minoritized students and faculty. One participant said, "I think diversity and inclusion should involve all medical students [and] should not rest on the shoulders of minority students." A shared sentiment among participants was that DEI work "should not be placed on one individual or one group of individuals alone." Medical school peers and faculty who are in the majority should "...educate [themselves] and be allies, to share some small portion of the 'tax' so that [URM students] achieve their goals without the undue additional burdens society places on them." Many participants recommended that institutions "include more representation in faculty" who "interface with students on a regular basis." One participant said, "If administration is vouching for diversity, then administration should be reflective of this. There is an urgent need for hiring more non-white faculty." Several participants stated that diversifying staff and faculty is "important [because] students [will] have mentors with shared experiences."

(6) Increased Money Budgeted for DEI Work Would Reduce the Minority Tax for Medical Students

Participants described the need for more institutional support of the DEI work and initiatives that minoritized students often lead. Several participants suggested that institutions have a "greater investment in offices of diversity, inclusion, and equity." Participants agreed that students "don't have enough time to learn everything [they] need to, let alone work for free doing what the school should be paying professionals to do." Thus, institutions need to "bring in paid experts/companies instead of relying on students to spearhead [DEI] efforts." Many participants advised institutions to "compensate students for DEI and advocacy work" and to "pay students for their time and effort in educating others." One participant said, "This work can be taxing especially if advocating for one's own needs. Payment would incentivize this work." Another participant recommended "...monetary compensation instead of just putting [minority] students on 'committees' and 'task forces' [because]they're doing work that people who are getting paid can't seem to figure out." Several participants suggested that schools hire staff and faculty "from all areas of diversity, minority and majority included...to head diversity efforts at institutions." Additionally, participants recommended their institutions "have a budget for compensating community members for their time on patient panels..." because "this will allow marginalized people to be able to afford to share their perspectives on healthcare."

Many participants noted that it is important for institutions to "recognize [students] who serve on [DEI] committees." Some suggestions were to create "...awards for [DEI] and/or health care disparities work and research" and to "consider [DEI] work to be equally or more important than research in reviewing tangible career advancement opportunities." Schools were encouraged to "create more paid scholarships, paid positions, and awards for [DEI] and/or health care disparities work and research." Participants recommended that schools "acknowledge that [minority tax] has a tangible impact on [their] stress and functioning" and to "give people credit for [the DEI work] they do."

DISCUSSION

We identified a minority tax experienced by URM and HE medical students in the U.S. through reported differences in their DEI work compared to peers and through students' accounts of the many challenging dimensions of this phenomenon. The defining characteristics of minority tax on students as described our participants can be summarized as: (1) the additional hours worked on DEI initiatives by students at the expense of other work, (2) an underappreciation of time and efforts invested by students in DEI activities, (3) instances of discrimination and microaggressions experienced by students, (4) decreased cultural alignment between students and schools, (5) increased feelings of social isolation by students, and (6) negative effects on student stress, mental health, and wellbeing. The synergistic effects of these stressors affect coursework and burnout. Many of these characteristics are shared by URM faculty who experience minority tax, as well (6).

The minority tax on U.S. faculty members informs our understanding of the tax experienced by students. The current practices of promotions and tenure committees and recent opinion pieces suggest that DEI work by faculty members is less valued than other achievements, despite much of this work meeting Boyer's scholarship criteria for promotion [18]. One proposed way to address this minority tax is to assign value to faculty DEI work, certain clinical activities, and community engagement for promotion considerations [2]. Conceptually similar strategies that value DEI work were desired by participants in our study, many of whom felt disadvantaged by their time spent addressing DEI issues at their medical schools. Participants worried that the additional time committed to DEI work may ultimately disadvantage URM and HE students in subsequent career steps, most immediately in residency applications to specialties that value research and grades above other aspects of a student's application [19]. Such challenges may affect the likelihood that these students pursue careers in academic medicine and may exacerbate underrepresentation in certain fields.

We confirmed that URM and HE students invested more of their time in activism, advocacy, and diversity initiatives compared to their peers, adding the equivalent of two extra 40+ hour weeks annually just for this work. Our participants described feeling obligated to do DEI work, despite experiencing academic and personal distress as a result. This sense of obligation is experienced by URM faculty members, as well. None of the additional types of student work in our survey were disproportionately different between the groups, suggesting that URM and HE students did not divest time from one specific activity to do diversity or advocacy work. The investment in clinical hours was the largest absolute difference between URM and ORM students, albeit not significant, potentially suggesting that URM students feel pressured to work more to avoid biased evaluations. Our participants frequently cited the negative impact of this minority tax on their studies and wellbeing, due directly to hours invested in DEI work rather than their coursework.

We also found that both URM and HE students experience more instances of discrimination and microaggressions than their peers, which is consistent with many prior studies [20]. The number of instances of microaggressions is an insufficient metric for the profound social, emotional, and professional tolls that bias and discrimination have on students. Our findings suggest that URM and HE students experience medical school differently than their peers, requiring additional cognitive effort to navigate training and leading to worse cultural isolation. This isolation is fueled by a lack of URM or HE peers who share their identities, a finding again shared by URM faculty members. Therefore, it is unsurprising that our participants also reported less cultural alignment with their medical schools than their peers, echoed in many comments about the collective impact of minority tax, microaggressions, and discrimination on students.

Interestingly, we found that HE students reported having more mentors than HI students, and that both URM and HE students had more mentees. While we did not assess for a potential cause of this finding, we hypothesize that HE faculty may be attempting to offset the burden of minority tax on medical students; or that medical students may recognize the need for additional support in navigating medical school. In turn, they may pay it forward in their communities. The impact of minority tax on wellness was most evident in the realm of cultural alignment. Students who reported less total cultural alignment scored worse on the PHQ-2 and GAD-2, endorsing more symptoms of depression and anxiety. Measuring "wellness" is difficult, and this survey queried for only two dimensions – hours of sleep and mood symptoms. Future studies that query for wellness more comprehensively may further illuminate the impact that minority tax may have on students' well-being.

Participants recommended that medical school leaders allocate more resources, budget, and staff for DEI education and initiatives. The participants clearly view DEI work as work that other professionals would be paid to do, leading to frustration and resentment for their medical schools. The ideal institutional response to this minority tax is to absolve students of their obligation to do DEI work by hiring qualified staff members to do that work instead. Until then, participants recommended compensation of student work and other means of valuation, as well as a distribution of DEI work to everyone in the school including non-HE individuals. Increased recruitment of diverse medical school faculty members and students was frequently suggested to improve climate and representation, advance DEI mentorship opportunities, and decrease cultural isolation experienced by minority students. Further, study participants

strongly recommended that institutions adopt faculty-led, proactive strategies to identify and address dimensions of minority tax early, rather than awaiting student reports. Some participants believed that medical schools would be able to tackle their DEI issues through deliberate and proactive practices without relying exclusively on student input, time, and advocacy as they have in the past.

There are few intervention studies aimed at mitigating minority tax. Studies that explored disparities in assessments of URM students reinforce the need to prevent additional DEI work demands on minoritized students and faculty. Other interventions include recruiting and promoting underrepresented faculty, and a call for medical schools to take responsibility for perpetuating any differential attainment in their student body [20].

LIMITATIONS

We recognize that the experiences of our team members may have affected the coding process or analysis in our constructivist, interpretive approach. Our study team included three medical students (BK, MK, SS) and four faculty members (SB, SLS, JY, MG) who are URM and/or HE and who each experienced some dimension of minority tax as students; this might have yielded homogenous author opinions about the data. To address this, we conducted a negative case analysis when outlier data were identified, allowed ourselves freedom to adjust any discordant hypotheses, and focused our analysis on what was actually said rather than implications during coding.

Some study limitations common to survey studies and sampling may also have affected the validity and generalizability of our findings. Though we believe our sample of medical schools to be diverse, there were some geographic regions of the US that were not surveyed. We report a relatively small sample size given the collective enrollment of the participating medical schools, and this sample may have been more motivated to participate in the study due to their minority identities. A larger sample size with sufficient power is needed to disaggregate individuals with different identities who are grouped together by URM and HE definitions; this could reveal more specific elements of minority tax experienced by each and more precise interventions to address their unique challenges. The data collection window was the result of each site obtaining IRB approval at different times; while we sampled within one academic year, the short and off-cycle data collection windows at the five sites may have affected the responses we received. Additionally, the survey instrument limited student responses about the different types of work they perform to single categorical responses—for instance, either "community work" or "research," even if an activity could qualify as both.

Our study may have been affected by recall bias, especially given the very personal questions asked of our participants. Microaggressions and discrimination are experiences with an individual, subjective threshold; as such, it is difficult to accurately capture the magnitude of each distinct event or the frequency of events when reflecting on a multi-year time period. This may have skewed the data to include more episodes of discrimination that are of great significance, and may cause underreporting or under recognition of microaggressions. Additionally, our thematic analysis may have been affected by the minority identities of some of our study authors, though we attempted to mitigate this issue as described in our methods. Further, our survey did not capture the quality of mentors reported by participants, only the quantity. Previous research indicated that a lack of quality mentors is an impediment to success in academic medicine, and future studies should query for more nuanced data about mentoring [4].

CONCLUSION

Minoritized medical students in the U.S. experience a minority tax that stems from an underappreciation of the excess time and effort they invest in DEI initiatives at their medical schools. This is experienced in the context of microaggressions and discrimination, lack of cultural alignment with their medical school, and feelings of isolation. Minority tax may be associated with medical student wellbeing and belongingness. These findings should serve as a call for action by medical school leaders who are serious about improving diversity, equity, and inclusion.

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Appendix A: Survey Instrument

Start of Block: Introduction

Intro
Thank you for taking the time to participate in this survey! Approximate time to completion is 5-7 minutes.

Study Information: **We are interested in how students of different backgrounds experience medical school in different ways, as well as how students prioritize their time differently. Any medical student is invited to complete this survey.** Participation in this study involves very minimal risk. You may feel uncomfortable answering some of the questions in the survey - you can decide to skip questions that you do not want to answer and you may withdraw from the study at any time. If you want to stop completing the survey, simply close the survey. **All of your responses will be completely anonymous, and are not linked to your institution or any contact information**. All information will be de-identified when presented or published. Your participation in this study is voluntary. You can decline to participate, to end your participation at any time for any reason, or to refuse to answer any individual question. Refusing to participate will involve no penalty.
If you have any questions about this study, you may contact the investigators, Marija Kamceva (mkamceva@stanford.edu) and Dr. Mike Gisondi (mgisondi@stanford.edu). If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the Stanford Institutional Review Board (IRB) to speak to someone independent of the research team at (650)-723-5244 or toll free at 1-866-680-2906. You can also write to the Stanford IRB, Stanford University, 3000 El Camino Real, Five Palo Alto Square, 4th Floor, Palo Alto, CA 94306.

Please note that you will not be able to return to a page once you have hit "next." *Each page holds approximately 1-5 questions.*
This survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in any open-ended responses.

Consent By checking "I consent", I certify that I have read the above information, that all of my questions about the study have been answered to my satisfaction, and that I agree to participate in this study.

O I consent (1)

O I do not consent (4)

End of Block: Introduction
Start of Block: Section 1: Involvement

Description ***The following 3 questions will query you on how you prioritize and spend your time in medical school.***

Q1 How would you rank the following, in terms of personal priority, in medical school (1 being first or highest priority, 7 being last or lowest priority)?

*(Note: priorities can shift season to season. Reflect on your personal priorities during **the most recent academic school year**.)*
_____ Academic Coursework (including USMLE and/or NBME exam preparation) (1)
_____ Activism and/or Advocacy (2)
_____ Clinical Experience (3)
_____ Community Engagement and/or Service Work (4)
_____ Diversity Initiatives (5)
_____ Income-Generating Work (ie. part-time job) (6)
_____ Research and Scholarship (7)

Q2 How many **HOURS** do you "work" in a typical WEEK (work defined as any non-leisure time, including studying, volunteering, clinical commitment, extracurricular responsibilities, jobs, etc).?

*(Note: priorities can shift season to season. Reflect on your personal priorities during **the most recent academic semester or quarter**. Answer must be numerical.)*

_____

Q3 **Of those working hours**, how many do you spend on the following activities in a typical work week?

*(Note: priorities can shift season to season. Reflect on your personal priorities during **the most recent academic semester or quarter.*** **Total hours must add up to hours recorded on last question.)**
Academic Coursework (including boards preparation) : _____ (1)
Activism and/or Advocacy : _____ (2)
Clinical Experience : _____ (3)
Community Engagement and/or Service Work : _____ (4)
Diversity Initiatives : _____ (5)
Income-Generating Work (ie. part-time job) : _____ (6)
Research and Scholarship : _____ (7)
Other : _____ (8)
Total : _____

End of Block: Section 1: Involvement

Start of Block: Section 2: Demographics

Description ***Please complete this brief set of demographic questions.***
*As a reminder, this survey will collect **no identifying information** (including name, email, IP address, or location). All responses from students at all surveyed medical schools will be pooled together.*

Q5 What year of medical school are you in?

- O Pre-Clinical Student (prior to clerkships) (1)
- O Clinical Student (on clerkships) (2)
- O Research Year, including PhD, MA, etc. (3)
- O Other (4)

Q6 What is your age, in years?

- O 18 - 21 (1)
- O 22 - 25 (2)
- O 26 - 29 (3)
- O 30 - 34 (4)
- O 35 - 40 (5)
- O Older than 40 (6)

Q7 What is your gender? (Check all that apply.)

- [ ] Agender (1)
- [ ] Gender Non-Binary (7)
- [ ] Genderqueer (2)
- [ ] Man (3)
- [ ] Woman (4)
- [ ] Other (5)

Display This Question:

If What is your gender? (Check all that apply.) = Other

Q7a [Optional] Please describe your gender.

(Note: this survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in your responses.)

_____

Q8 Do you identify as transgender?

- O Yes (1)
- O No (2)

Q9 Are you of Hispanic, Latinx or Spanish origin?

- O Yes (1)
- O No (2)

Q10 Are you of Middle Eastern or North African origin?

- O Yes (1)
- O No (2)

Q11 What is your race/ethnicity? (Check all that apply.)

- [ ] American Indian or Alaska Native (1)
- [ ] Asian (2)
- [ ] Black or African American (3)
- [ ] Native Hawaiian or Other Pacific Islander (4)
- [ ] White (5)
- [ ] Other (6)

Display This Question:

If What is your race/ethnicity? (Check all that apply.) = Other

Q11a [Optional] Please describe your race/ethnicity.

(Note: this survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in your responses.)

_____

Q12 What is your sexual orientation? (Check all that apply.)

- ☐ Asexual (1)
- ☐ Bisexual (2)
- ☐ Gay (3)
- ☐ Lesbian (4)
- ☐ Pansexual (5)
- ☐ Queer (6)
- ☐ Questioning (7)
- ☐ Straight (8)
- ☐ Other (9)

Display This Question:

If What is your sexual orientation? (Check all that apply.) = Other

Q12a [Optional] Please describe your sexual orientation.

(Note: this survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in your responses.)

_____

Q13 Do you identify as a person with a disability, disabled, or as differently-abled?

- ○ Yes (1)
- ○ No (2)

Q14 Do you identify as low income?

- ○ Yes (1)
- ○ No (2)

Q15 Do you identify as a first-generation college student?

- ○ Yes (1)
- ○ No (2)

End of Block: Section 2: Demographics

Start of Block: Section 3: Experiences

Description ***The following questions will ask you about your experiences in medical school.*** *Content warning: some questions will query you on your experiences with discrimination.*

Q16 Have you experienced an incident of discrimination based on any of your personal identities since starting medical school?
(This can include race, color, religion (creed), gender, gender expression, age, national origin (ancestry), disability, marital status, sexual orientation, or military status, among others).

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Have you experienced an incident of discrimination based on any of your personal identities since... = Yes

Q16a How many instances of discrimination based on any of your identities have you faced since starting medical school?

0 5 10 15 20 25 30 35 40 45 50

Instances of Discrimination ()	

Instances of Discrimination ()	

Q17 Have you experienced any microaggressions based on any of your identities since starting medical school?
(This can include race, color, religion (creed), gender, gender expression, age, national origin (ancestry), disability, marital status, sexual orientation, or military status, among others).

- O Yes (1)
- O No (2)

Display This Question:

If Have you experienced any microaggressions based on any of your identities since starting medical... = Yes

Q17a How many instances of microaggressions based on any of your identities have you faced since starting medical school?

0 5 10 15 20 25 30 35 40 45 50

Instances of Microaggressions ()	

Q18 Do you have a mentor in medical school?
(Note: Someone you would identify as a mentor, whether or not you were formally assigned a mentor by your institution. Mentoring is defined as the process by which an experienced person provides guidance, support, and encouragement to a less experienced person.)

- O Yes (1)
- O No (2)

Display This Question:

If Do you have a mentor in medical school? (Note: Someone you would identify as a mentor, whether or... = Yes

Q18a How many mentors do you have?

0 5 10 15 20 25 30 35 40 45 50

1 ()	

Q19 Are you a mentor for anyone else?

- O Yes (1)
- O No (2)

Display This Question:

If Are you a mentor for anyone else? = Yes

Q19a How many mentees do you have?

0 5 10 15 20 25 30 35 40 45 50

1 ()	

Display This Question:

If Are you a mentor for anyone else? = Yes

Q19a How many mentees do you have?

0 5 10 15 20 25 30 35 40 45 50

1 ()	

Q20 Please respond to the following statements, on a scale from 1 (strongly agree) to 5 (strongly disagree).

	Strongly agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly disagree (5)
I find my work (academic and extracurricular alike) in medical school to be personally satisfying. (1)	O	O	O	O	O
I feel burnt out by my work in medical school. (2)	O	O	O	O	O
I feel confident in my ability to progress in my career. (3)	O	O	O	O	O
I feel part of a supportive community in medical school. (6)	O	O	O	O	O
My medical school seems committed to my success and professional development. (7)	O	O	O	O	O
My values are well aligned with that of my medical school's. (8)	O	O	O	O	O
My medical school's actions demonstrate that it values diversity. (9)	O	O	O	O	O
I belong in medical school. (16)	O	O	O	O	O

Q21 Have you been involved in any work (advocacy, community engagement, research, or otherwise) related to COVID-19 since March 1, 2020?

O Yes (1)

O No (2)

Display This Question:

If Have you been involved in any work (advocacy, community engagement, research, or otherwise) relat... = Yes

Q21a What type of COVID-19 work have you been involved in since March 1, 2020? (Check all that apply.)

- ☐ Advocacy and/or Activism (1)
- ☐ Community Engagement (2)
- ☐ Education (4)
- ☐ Research (3)
- ☐ Volunteer Work (5)
- ☐ Other (6)

Display This Question:

If What type of COVID-19 work have you been involved in since March 1, 2020? (Check all that apply.) = Other

Q21a2 Please describe what other work you have been involved in, related to COVID-19, since March 1, 2020.

(Note: this survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in your responses.)

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Display This Question:

If Have you been involved in any work (advocacy, community engagement, research, or otherwise) relat... = Yes

Q21b Estimate how many **total hours** you have dedicated to COVID-19 work since March 1, 2020.

(Note: answer must be numerical, in hours).

_____

End of Block: Section 3: Experiences

Start of Block: Section 4: Wellness

Q22 ***The following 2 questions will query you about your general wellness.***
Content warning: some questions will query you on your mood.

Q23 How many hours do you sleep each night, on average?

0 2 4 6 8 10 12 14 16 18 20

Average Hours of Sleep per Night ()	

Display This Question:

If Have you been involved in any work (advocacy, community engagement, research, or otherwise) relat... = Yes

Q21b Estimate how many **total hours** you have dedicated to COVID-19 work since March 1, 2020.

(Note: answer must be numerical, in hours).

_____

End of Block: Section 3: Experiences

Start of Block: Section 4: Wellness

Q22 ***The following 2 questions will query you about your general wellness.***
Content warning: some questions will query you on your mood.

Q23 How many hours do you sleep each night, on average?

0 2 4 6 8 10 12 14 16 18 20

Average Hours of Sleep per Night ()	

Q24 Over the last 2 weeks, how often have you been bothered by the following problems?

	Not all (1)	Several days (2)	More than half the days (3)	Nearly every day (4)
Little interest or pleasure in doing things (1)	O	O	O	O
Feeling down, depressed or hopeless (2)	O	O	O	O
Feeling nervous, anxious or on edge (3)	O	O	O	O
Not being able to stop or control worrying (4)	O	O	O	O

End of Block: Section 4: Wellness

Start of Block: Section 5: Free Response

Thank you for taking part in our survey!
The "minority tax" has been described as the additional set of responsibilities that face underrepresented faculty and students within their institutions; it encompasses the burdens of cultural isolation, lack of mentorship, and being disproportionally tasked with heading diversity efforts at the expense of career advancement, among others.

Ordonez, E. (2020). Opportunity Cost to Advancing Diversity and Inclusion: The Hidden Fees of the Minority Tax. Society of Academic Emergency Medicine: PULSE. XXXV(1), 20-23.

This final set of optional questions will query you on your experiences with the minority tax. Note that this survey is structured to be anonymous. Please refrain from sharing any personally identifiable information in your responses.

Q25 [Optional] What has been your experience with the minority tax, if any?

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Q26 [Optional] What are your suggestions for how institutions can address the minority tax for students?

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Q27 [Optional] Do you have any comments about this survey tool?

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End of Block: Section 5: Free Response