

Journal of International Students
Volume 13, Issue 3 (2023), pp. 236-253
ISSN: 2162-3104 (Print), 2166-3750 (Online)
ojed.org/jis

Microaggressions Faced by International Students in the US with a Discussion on Critical Race Theory

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ABSTRACT

International students make up an increasingly large portion of the US student population, especially among graduate students studying the science, technology, engineering and math (STEM) fields. This article analyzes the microaggression experiences of 22 international students in graduate STEM programs at predominantly white institutions. International students, often people of color, may be subject to facing discrimination within their universities. Our results break down the different types of microaggressions that 14 of our 22 participants reported experiencing from faculty, peers, and students, both on and off campus. These experiences include individuals insulting a participant's country of origin, doubting their academic ability, threatening them, and otherwise discriminating against them. Each event reported by our participants is classified into a type of microaggression and is further discussed using Critical Race Theory to connect how international students' racialized and their intersectional experiences are connected to the larger societal issues of racism in the US.

Keywords: critical race theory, discrimination, international students, microaggressions, people of color, racism

The United States is a top destination for international students (students who migrate to another country to pursue their university studies), attracting almost a

quarter of all international students in the world. The participation of international students (IS) in STEM doctoral programs has more than doubled in the last thirty years, and in 2019 IS earned 38% of all STEM PhDs (NCSE Statistics, 2020). The demographics of IS in the US are very diverse, encompassing hundreds of ethnic and cultural backgrounds. The top ten most represented countries comprise 68% of all international doctoral recipients in STEM, with China being first (35%), India second (12%), and South Korea third (5%) (NCSE Statistics, 2020). The percentage of IS in STEM doctoral programs varies by subject, accounting for 57.2% of doctoral recipients in engineering, 56.4% in mathematics and computer science, and 38.9% in the physical and earth sciences (NCSE Statistics, 2020). These distributions are critical to understanding the variation of experiences an IS may have. Although IS are an increasing student demographic in STEM graduate programs, there are still hurdles to overcome in terms of creating more inclusive environments for IS, many of whom are also people of color (PoC). In order to work towards improving graduate education for IS in the US, their experiences must be heard, analyzed, and understood.

International students often face more hurdles than their domestic counterparts (Tran, 2020), since they must balance their studies while simultaneously adjusting to US social and cultural norms (Mesidor & Sly, 2016). These students face unique challenges that accompany migrating from their countries to the US, such as adapting to English (Martirosyan et al., 2015), assimilating US popular culture, adjusting to social norms, and overcoming cultural barriers (Poyrazli & Grahame, 2007), and more (Sherry et al., 2010). Furthermore, IS are also often subject to discrimination for being PoC. These forms of discrimination, including stereotyping and microaggressions, are particularly evident when IS attend a primarily white institution (PWI) (Harwood et al., 2012; Yeo et al., 2019). IS may also have more diverse identities than their domestic counterparts due to their diverse backgrounds.

There is a need to understand IS' racialized experiences in STEM graduate programs. This research paper applies the theoretical framework of Critical Race Theory to discuss the racialized experiences of IS and how these issues relate to the larger issues of race in the US. The tenets and major ideas of Critical Race Theory are well-equipped to describe students' racialized experiences within potentially negative racial climates at PWIs. As mentioned, many IS are PoC, therefore exposing them to the same types of discrimination and microaggressions faced by domestic PoC in the US. IS also often have more diverse identities than their domestic peers, including different cultural or religious backgrounds, leading them to form unique perspectives and experiences in graduate school.

Research Questions

This study examines the racialized experiences of 22 international student participants in graduate STEM programs. The questions guiding this article are:

- 1) How do international STEM graduate students experience microaggressions at predominantly white institutions?
- 2) What impact do racial barriers have on international students, and how do they relate to Critical Race Theory?

LITERATURE REVIEW

Critical Race Theory (CRT) has its roots in legal studies and was created with the purpose of understanding the relationship between power, race, and racism (Kimberlé Crenshaw et al., 1995). The main function and purpose of racism is to uphold white over color systems that give the dominant group privileges over minoritized groups. The four tenets of CRT are: (1) Racism is ordinary, (2) Civil rights only advance when they align with the interest of the elites, (3) Race is socially constructed from products of social relations, and (4) Unique voices of color must be heard to understand racism (Delgado & Stefancic, 2017). Building on these tenets, CRT covers a broad scope of topics including white privilege, differential racialization, and intersectionality. CRT fundamentally argues against meritocratic and liberalist ideologies and instead acknowledges rooted systemic oppression of racially minoritized groups (Pyle, 1998; Rodriguez et al., 2021).

The first tenet explains that racism is common and continues to thrive in US society. There are a multitude of examples of systemic oppression against PoC, including: police brutality (Chaney & Robertson, 2013), the new Jim Crow state (Alexander, 2011), the wealth gap (Shapiro et al., 2013), and more recently, disproportionate rates of deaths and hospitalizations of PoC during the COVID pandemic (CDC, 2021). The second tenet argues that progress towards attaining the civil rights of marginalized groups has only happened when it aligns with the interests of dominant groups. For example, the over reliance of slavery by the US South led to slower rates of industrialization than the US North saw. Therefore, ending slavery boosted the economy of the country as a whole, clearly benefiting the dominant group and the elites with wealth and power (Bell, 2005). The third tenet states that race is socially constructed through social relations and has no biological significance. This explains the notion that race is not scientifically valid and instead comes from the complex history of interactions between racialized groups. Finally, the fourth tenet points out the unique experiences of PoC due to their experiences of oppression and marginalization. In other words, to study and understand racism, the voices of PoC must be sought out and highlighted.

Building on these tenets, CRT covers a broad scope of topics including white privilege, the Black-white binary, differential racialization, and intersectionality. White privilege encompasses the advantages being white provides in the US which sometimes remains hidden from most white Americans (Wallis, 2016). McIntosh identified a total of 46 privileges that white people have over PoC (McIntosh, 2007). These privileges include: their children being given curricular

materials that testify to the existence of their race; ability to arrange being in the company of their race most of the time; and not having to educate their children to be aware of systemic racism for their own daily physical protection (McIntosh, 2007). We suggest that readers unfamiliar with white privilege look over McIntosh's work for further clarification. Racism has historically been viewed and continues to be seen through a Black and white binary, since until the McCarran-Walter Act in 1952, only immigrants that were legally categorized as white were allowed to enter the US (Bennett, 1966). In the last 70 years, US demographics have drastically shifted from being almost 90% white in 1950 to 62% white in 2020 (Hobbs & Stoops, 2002). Today, 38% of US citizens are PoC, coming from diverse cultural and ethnic backgrounds. The way in which PoC are racially targeted changes over time due to the interests of the white elites. This phenomenon is often referred to as differential differentiation. A current example is the rise in discrimination and hate crimes against Asian Americans since the start of the pandemic, which is attributed to the US publicly blaming China for the pandemic (Tessler et al., 2020). Intersectionality is also central to CRT and recognizes the various ways people can be oppressed simultaneously and the unique perspective they form as a result (Crenshaw, 1989). Intersectionality is very important to this work, and we will expand on it in the next subsection. Overt racism in society is more socially shunned than before but has been supplemented by smaller and more covert kinds of racism called microaggressions. Racial microaggressions are brief, commonplace, subtle insults that are directed toward PoC, may be verbal, non-verbal, and/or visual, and often occur unconsciously (Solorzano et al., 2000; Sue & Spanierman, 2020). Microaggressions can be broken down into three forms: microassault, microinsult, and microinvalidation (see table 1) (Sue et al., 2007; Sue & Spanierman, 2020). Microassaults are verbal or non-verbal explicit racial derogation often made with the intention of harming the victim, likely done in more private (micro) environments, allowing for anonymity among the perpetrators (Sue & Spanierman, 2020). The next two types of microaggressions often happen unconsciously, making them distinct from microassaults. Microinsults are communications conveying rudeness or insensitivity to a person's cultural background. Themes common among microinsults may include treating a PoC like a second-class citizen, assuming PoC have less intelligence, or not respecting PoC's cultural values (Sue & Spanierman, 2020). Microinvalidations involve verbal interactions that exclude, negate, or nullify the feelings or experiences of a PoC. Themes common to microinvalidations may include believing PoC to be outsiders, pretending race doesn't exist (color-blindness), or denial of one's own personal racism (Sue & Spanierman, 2020). The microaggressions faced by our participants will be categorized into these three forms of microaggressions to illuminate the different functions of each form of discrimination.

Table 1: Types of Microaggressions

Type of Microaggression	Definition	Example
Microassault (often conscious)	Verbal or non-verbal explicit racial derogation made with the intention of harming the victim	The deliberate use of racist language in a private conversation
Microinsult (often unconscious)	Communications conveying rudeness or insensitivity to a person's cultural background	A White instructor not paying attention to a student of color asking or answering a question
Microinvalidation (often unconscious)	Verbal interactions that exclude, negate or nullify the feelings of experiences of a person of color	When an Asian American is complimented for their good English, having been born in the US

Intersectionality is another central theme of CRT which we felt should be explained apart because of its vast significance to this study (Delgado & Stefancic, 2017). The term intersectionality was coined by Kimberly Crenshaw in her seminal work where she explored how Black women's experiences with racism and sexism intersect into a unique superposition that cannot possibly be separated as either sexist or racist (Crenshaw, 1991). However, these ideas of intersectionality had emerged earlier in speeches by Sojourner Truth and the Combahee River collective, amongst other spaces and intellectual pursuits (Combahee River Collective, 1978; Truth, 1851). Intersectionality considers how multiple factors of oppression interact and are unique for different people. IS may be oppressed for various factors simultaneously, such as race, religion, gender, and citizenship. These oppressions often interact providing unique experiences which must also be considered when examining the experiences of those oppressed. These experiences are especially important in this work because IS may experience discrimination in different ways than domestic students. For example, Muslim women have unique experiences from non-Muslim women or Muslim men since the oppression for being both Muslim and a woman is a complex superposition of both identities (Collins, 2002).

METHOD AND ANALYSIS

Data Collection and Analysis

Upon approval by the International Review Board, the participants in this study were recruited from two PWIs in the US Mountain West. The institutions selected were similar in size, research funding, and both had medical schools. The researchers recruited participants through STEM-related graduate student organizations, leading to 22 international students being recruited across varying STEM majors. Table 1 details about our participants' majors, years, and degree

levels. Figure 1 describes the students’ geographical locations using United Nation definitions (Division, 2019). Participants were compensated for their time with a gift card. In this study we report on the experiences of 22 IS who identified themselves as people of color. All the interviews were recorded through Zoom for 30 to 90 minutes using a semi-structured interview protocol. The participants were asked to choose a pseudonym to anonymize their identity. The audio from the interviews was then professionally transcribed to be analyzed. The transcripts were initially coded on R using an R-based quality data analysis (RQDA) (Huang, 2016) and then organized using a thematic analysis approach (Boyatzis, 1998) with influences from constructivist grounded theory (Charmaz, 2006).

Table 2: Anonymized Information on Participants

Major		Year		Degree Level		Gender	
Computer Science	16	1st	6	M.S.	9	Male	13
Math	3	2nd	7	Ph.D.	13	Female	9
Physics	1	3rd	3				
Chemistry	1	4th	2				
Biology	1	5th or more	4				

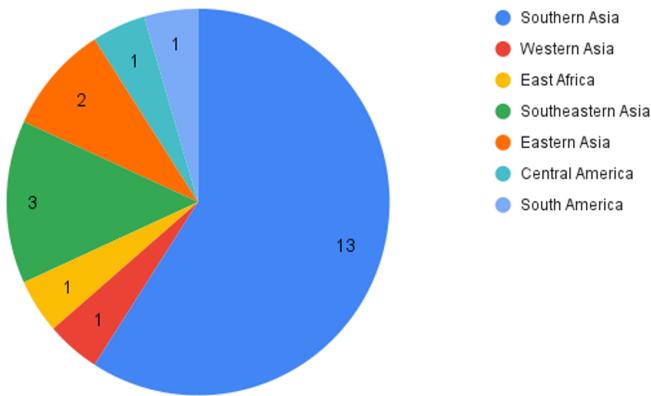


Figure 1: Anonymized Geographical Count of Participants

For the initial analysis, a subset of nine students was holistically coded independently by two researchers. Holistic codes allowed us to label and organize the interview data into relevant topics that would be further analyzed. Once both researchers finished coding the same nine participants, the holistic codes were discussed and agreed upon by both researchers, leading to a final codebook. The final codes were also operationalized, meaning both researchers agreed on how

the codes would be employed. Then both researchers went through all 22 participant transcripts with the final holistic codes independently, meeting frequently to discuss codes and participant experiences. Once the analysis finished, the authors organized the codes into broader themes to capture the essence of the participants' experiences.

This paper discusses one of the themes, how the racial identities of our participants impacted their experiences at PWIs. Since this analysis describes participants' racialized experiences, CRT is leveraged as a lens to classify and discuss those experiences further. CRT allows us to put our participants racialized experiences into context with larger issues of discrimination in the US. Moreover, the type of microaggression a student experienced will be shown for each incident. The type of microaggression labeled depended on the context in which the microaggression occurred and was chosen after discussion among the authors. A visual summary of our research methods design is provided in the diagram below (Figure 2).

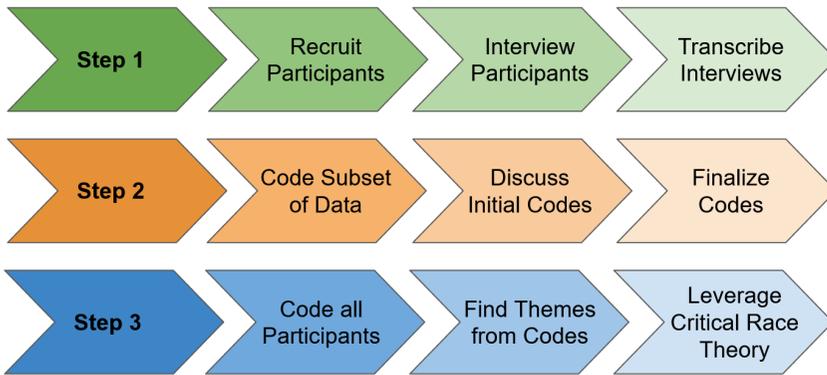


Figure 2: Research Methods Design

Positionality

The first author of the paper identifies as an Afro Hispanic, Puerto Rican, Agnostic, cishet man who grew up and lives in South Florida around communities with people from many cultural backgrounds and identities. The second author identifies as an Egyptian, Muslim, cishet woman who grew up in Alexandria, Egypt and has been at a predominantly white institution in the United States since 2019. The third author identifies as a Hispanic, Atheist, queer man who grew up in Michigan and currently works at a PWI but participates in multicultural communities. Our mixed identities allow us some insight into the unique and varied participants; however, we had to continually reflect on and discuss our identities to ensure a robust and thoughtful research process.

RESULTS

International graduate students are often also PoC, and in the US PoC may be subject to several forms microaggressions and discrimination. While most of our participants reported having a positive experience in graduate school overall, many of their negative experiences involved facing discrimination. Not all students reported experiencing discrimination, and some students did acknowledge that their lack of informal English practice made it hard to know if they had experienced discrimination in social interactions. Eight out of the 22 participants (Ananya, Blue, Darlene, Deepika, Kojima, Ngo, Raj, and Sartaj) did not feel any difference in their graduate school experience due to being PoC, and thus reported all positive experiences and no discrimination. However, six of eight of those students mentioned having many people from their ethnic background in their classes and department, which made it easy to find friendly peers. Also, although they hadn't been discriminated against directly, Ananya and Deepika mentioned they had friends in their graduate programs who had experienced discrimination. The other 14 participants did voice experiences with microaggressions and discrimination while pursuing their graduate STEM degrees. Discrimination was noted to have come from a range of sources, including faculty and advising, peers within the department, undergraduate students, and off-campus.

From Faculty and Advising

Two of our participants reported experiencing discrimination from faculty and advising. Faith recalled a negative experience she had in the beginning of her PhD studies:

... I had one negative experience in the university where I felt the professor was being kind of racist... I was doing a paper summary for a seminar that the professor was leading. The seminar was very small, with only three students and him. It was my first paper to summarize, and I used phrases or sentences from the paper itself. I didn't know that this was unacceptable here in the US and it was some sort of cheating. When he told me about it in an email, I said, "Oh, okay, sorry. I will re-do it. I didn't know this was not okay because this is a paper summary." It was not an official thing, I didn't publish it, I didn't claim it was mine. Then he told me, "No, come to my office tomorrow and I want to see you." I went to his office, and he told me, "I know you are used to low quality standards from the country you are coming from." (Faith)

The white professor microinsulted Faith by saying that her country-of-origin standards are low, when, she simply didn't know the academic norms related to plagiarism. Faith had good intentions and would have happily redone the assignment, but instead the professor scolded her and demeaned her country. Faith explained that she was "constantly trying to prove [herself] as a woman of color" in graduate school. She also described how being a Muslim African woman

impacted the way people looked at and treated her, both on and off campus, due to her hijab.

Hope also described discriminatory behavior from faculty:

My old advisor was very [discriminatory]. I was the only female student in her lab and there were three or four male graduate students. So, it came out like she was always keeping me outside. Like, "Oh, you will not be able to do that", or "Oh, you are busy with something else, your mind is not here." I had published a paper in a top conference. I published a first author paper in my first year of PhD and still she was not happy. She would say "I'm not confident about you, I just think you can leave anytime. I think PhD is not that important for you. For them PhD is very important. But for you it's just your passion." How much more motivation she may expect from me? I left my whole family back home to do my PhD. There were a lot of things going on that whole year, and I found it very discriminatory, so I decided to quit the lab. (Hope)

By questioning Hope's drive and passion, her previous PhD advisor microinvalidated her by questioning her dedication. Hope had described how she initially decided to work with her first advisor because she was a woman and would therefore presumably understand having the complicated personal life of being a wife and mother. The reality ended up being the opposite. Hope mentioned how male peers in her lab (she was the only woman) were given research assistantships while she was the only one that had to work as a teaching assistant, in addition to taking classes and being in the lab. Hope mentioned how she "had to see a psychotherapist, because [she] was so depressed" due to the discrimination and challenges she faced. After realizing that she was being overworked compared to her peers, while being a wife and mother of three children back in her home country, Hope decided to quit the lab and join a new one.

From Peers

Two students, Teresa, and Rodrigo, who did not fit the cultural demographics of their departments, reported experiencing discrimination from their peers and classmates. Teresa describes how her classmates were "jealous" of her:

I got a lot of jealousy from white male and female graduate students because I had a strong background in math. I finished my own assignments, and I didn't have to work there in the office, they were there all the time working together. They would say how I from {country} could have a better background than them. I guess they thought that if you come from a Latin country, you cannot have a strong background. (Teresa)

Teresa's peers microinsulted her by suggesting that her background could not be better than theirs since she is from a Central American country. Teresa found out that her white peers made discriminatory remarks against her because she went on to marry a white man that was part of that white male social group. This excerpt resonates with Faith's experience above because in both situations their place of origin was insulted when people had low expectations from them just because of where they were from.

For Teresa, her peers were covertly talking about her negatively; however, for Rodrigo, his peers were blatantly and overtly racist against him. Rodrigo described:

The bad side is stereotypes, mostly from other grad students. They would make jokes like "Oh, you're escaping the Third World," or "Oh, you're trying to come here to get a Green Card." That sort of stuff. It's kind of small, but it adds up. There are some things like, yeah, I laugh about it. But there are other things I didn't quite like. People like to think that educated people don't make racial jokes, and from my experience it's just not the case. (Rodrigo)

Rodrigo's peers microassaulted him by explicitly treating him as inferior to them because he was from abroad. Rodrigo explains how he tried to be friends with people in his department, but he later realized it was too "toxic" for him. Rodrigo points out that educated people can be as racist as less educated people. This sentiment is backed by the discriminatory experiences our participants endured and reported at their universities. These discriminatory comments reflect common rhetoric propagated through the media and are independent of people's level of education.

American peers aren't the only culprits of discrimination against IS. Alice mentioned that other IS can also be racist:

The reason I reached out was because I found that even within the international students, there is a lot of racism. I really didn't expect that. Of course, I came here to the US knowing that there would be racism, but then I just thought it would come from the natives of the US, but not from other international students. (Alice)

Alice was surprised to experience racism from an international peer instead of a US native. She explained:

[Ethnicity 1] students don't really interact with the other students is what someone from [ethnicity 1] said. The other person I was sitting with, who was [ethnicity 1], but from [another country] asked why she wasn't included in things, and basically, he doesn't really consider her [ethnicity 1]. And so, it started out like that. Then he got into [ethnicity 1] rating [ethnicity 2], he goes on to say "Oh, but I heard there are a lot of {assault} cases and it's not safe for women to go out there. And I heard that you people don't eat [animals], or you worship [animals]." I went, "Wow." (Alice)

There were two types of microaggressions that were made. The first was microinvalidating Jill by not recognizing her ethnicity as the same because Jill was from another region. The second was Alice being microinsulted by being told negative stereotypes about her country.

From Students Taught

International students (IS) may serve as teaching assistants (TA) during their graduate studies. Many of our participants did not instruct students and instead acted as graders. A few of our participants, however, did instruct undergraduate students and some reported experiencing discrimination from white students while being a TA. Nick reported:

The one bad experience I would feel is, working as a [TA]. Sometimes, I work as an instructor and I see that some white kids, especially white male kids, have no respect. I think it is just that the color discrimination by young kids, because I feel like university has students who come from very rich family, I guess. (Nick)

The microinsult that Nick mentioned came from white male students. Nick was not the only participant that reported negative experiences with white male students, which demonstrates the potential implicit biases among some students against PoC.

One of the most troubling stories our participants had recounted happened to Teresa as a TA when she caught a white student cheating on his exam. Here is an excerpt of her story:

The student made a big deal. Then he went to my office three or four times threatening me. One time, he told me that because I am not American, that I don't know what I'm getting into, and that his mom is a lawyer and can kick me out of the country, threatening me there in my office. Another time my boyfriend was there and told him "If you don't leave now, I'm calling the security, University Security Police." Then the mom of the kid contacts me by email and by phone. (Teresa)

The class coordinator supported Teresa in this situation; however, the department chair supported the student. After threats from the student and his parent, the chair overrode Teresa's decision. Teresa also commented, "he was a white student. I don't imagine that happening with a Hispanic or Black student." In this example many injustices exist: first, the microassaults and the multiple threats Teresa had to deal with; second, the microinvalidation from the chair of the department for not believing and supporting Teresa; and third, the lack of support Teresa had from the University in dealing with the student and the student's parent directly.

Off Campus

Ten students reported experiencing some form of microaggression or discrimination off campus. Michael recalls an experience he had while making a stop for gas during a road trip in the US:

Sometimes people look at me and say something racial like, "Make America great again," and stare at me. So yeah, that's one thing that has happened to me a few times. I was driving from Northern California to Southern California, and I had to do a stop in the central part, not sure which place it was, but just to fill gas and someone picked on me at that time saying, "What are you doing here? It's America, make America great again," something again like that. (Michael)

Michael experienced random microassaults from strangers when visiting rural areas of the US, because he looked different and was perceived as an outsider. Rodrigo and Nick reported having similar experiences in more rural parts of the US. Sometimes Americans make stereotypical insults. Peter recalled:

Well, I guess I could hear some people in the [grocery store]. I don't know if this is worth mentioning, but some parents would say to their kids "Oh no, don't go near. They might give you math problems or something". (Peter)

Here, a person microinsults Peter by making a stereotypical remark to her son about not going near Peter because he is Asian and must be interested in math. This type of stereotypical remark is one of the most common stereotypes regarding the Asian community, and in this example, it is used as a microinsult against Peter.

Sometimes, a person's identity involves wearing certain clothes. Such is the case with people from various religions and cultures around the world. Sartaj's religion involves never cutting your hair and using a turban to cover it. Sartaj decided to stop wearing his turban while in the US:

It was a personal choice. I never had an experience of discrimination based on wearing a turban, but people start looking at you differently. When you turn, people look at you differently. I never talked to those people there, that much. That's why I didn't experience any racism or anything, but people ask me what, who I am, why I'm wearing this. I happily explained to them what this is about and everything. That might have led to it, like staying here in a strange place with people looking at you a little bit differently. (Sartaj)

Here, Sartaj mentions cutting his hair was a personal decision, but that people looking at him differently and him feeling like it drew a lot of unwanted attention contributed to his decision. The looks he received from people may have microinvalidated him by making him feel like he didn't belong. Sartaj mentioned that he maintains his other religious practices, except for maintaining his hair. This example directly informs on the cultural assimilation that international students must navigate while forming their identities in the US.

DISCUSSION AND CONCLUSION

Summary and Connections to Other Work

The stories shared here add to the fabric of studies on the microaggressions and racism international students (IS) may face in the US. Our participants reported discrimination coming from faculty, peers and students, as well as from individuals off campus. While the stories reported were often isolated incidents, they may reflect broader social issues and may be common among IS. The microaggressors against people of color may more commonly come from white people, there are some PoC who may exhibit racist behavior. Overall, this article suggests racism may still be commonplace at PWIs and that some international students, as PoC, may also be impacted by this.

Our participants faced various types of microaggressions, including microassaults, microinsults, and microinvalidations. Participants experienced more microinsults and microinvalidations than microassaults, which may reflect that many microaggressions were committed unconsciously. Within our participants' stories, larger themes related to microaggressions in everyday life emerged (Sue & Spanierman, 2020). Themes related to microinsults such as

perceiving PoC to be less intelligent, regarding their home country as having low standards, and being treated as a second-class citizens came up in the stories of Faith, Teresa, Nick, and Sartaj. Faith's professor told her that she is used to low standards, and Teresa's peers' envied that Teresa was smarter than them and thought this was just because she was from abroad. Themes related to microinvalidation such as color-blindness and believing race doesn't play a role in a person's experience, were evident from the stories of Hope, Abe, Teresa, and Alice. Race clearly played a role in the department chair's decision to override Teresa and to allow a white student to break academic policy. In Hope's situation, her former advisor persistently questioned her work ethic even though Hope was performing on par with her peers.

Discrimination against PoC in higher education is well documented and of increasing interest as universities try to improve diversity and inclusion. There are a few investigations into the racialized experiences of IS at predominantly white institutions (Ee, 2019; Gomez et al., 2011; Hanassab, 2006; Kim & Kim, 2010; J. J. Lee & Rice, 2007). IS may face discrimination for other identities besides their race, such as their English accent (Harwood et al., 2012), country of origin (J. Lee, 2006) or religion (Dimandja, 2017). More importantly, the discrimination international students face may negatively impact their mental health (Jung et al., 2007).

A Critical Race Theory Perspective

Critical Race Theory (CRT) provides a unique perspective on the discriminatory experiences of our participants. CRT argues that racism is ordinary and is fundamentally rooted and propagated throughout US society. There are definite connections between the experiences of our participants and the tenets of CRT. The first tenet, that racism is ordinary, was reflected by the number of our participants who experienced discrimination (14 out of 22), adding further evidence of just how ordinary issues of racism may be for international students at PWIs. Experiencing racism was a cultural shock for many of our participants, since their countries are more culturally homogeneous, and race sometimes may not play a factor in their experiences as much as class or gender.

There are elements of the second tenet, interest convergence, embedded in the participant experiences as well. For example, when Teresa caught a student cheating and received threats from the student and his mother, the chair of the department not only failed to support Teresa but also overrode her as the exam proctor to pass the student. The interest of Teresa did not line up with the interest of the white chair in power, and hence, her decision was disregarded so that the white student could pass. Teresa's authority may have been questioned because she was a PoC addressing a white man cheating, which may demonstrate white privilege in the classroom since the white student was allowed to break university academic policies.

The social construction of race, the third tenet of CRT, was made evident by Alice's story of a person from a specific ethnicity not considering another person's ethnicity as valid, solely because they were from another region. The idea of

assigning ethnicity to people may differ by country and is usually politically and socially constructed. This example is so critical because it highlights how ethnicity and race are socially constructed and vary depending on the cultural and political climate of each country. These remarks that Alice recalled may reflect how propaganda from one's own country can have a strong influence on an individual's point of views. Lastly, the unique voice of our participants provided us varying examples of how each experienced discrimination, due to their race and identity, in the US. Their stories were necessary for this work and shed light on the pervasiveness of racism at predominantly white universities.

The intersectionality of our participants' experiences must also be acknowledged, because our participant group encompassed women, men, queer people, multiple national origins, and various religions, among other forms of identity. Several of the participants in this article experienced discrimination for their gender, race, place of birth, or religion. For example, Rodrigo and Teresa both faced discrimination when students microinvalidated their intelligence because they were from a particular country. Another example was how Faith and Hope both said they received more discrimination for being Muslim than for being women of color. Faith mentioned how "you get a look sometimes, especially when you walk in wearing a scarf or looking different," and that "it's not a problem of being black or not, it's just a problem of being different." Faith's words capture the essence of intersectionality. Further investigations into the nuances of our participant's experiences are warranted.

Improving the system

This body of research highlights the need to enact university policies that help facilitate positive racial/ethnic climates (Hurtado et al., 1998; Reid & Radhakrishnan, 2003) that also take into account the cultural differences of international students. Mentors, research advisors (Ku et al., 2008), peers, and student organizations (Gieg et al., 2016) may play a role in helping international students adapt to graduate school in the US. At a broader level, universities can adopt systems to better accommodate international students including providing English language programs and writing support, and hosting cultural and social events (Martirosyan et al., 2019). Many of our participants were able to find these support systems; however, a few were still in search of them. This research, as well as those cited, stresses the importance of promoting cultural awareness and anti-racist ideologies to improve the inclusion of international students at universities, especially at predominantly white institutions.

Besides building university support systems for IS, there is a need to create more opportunities for students to cross cultural, social, and racial barriers, allowing for further assimilation between international and domestic students. Higher education researcher Sylvia Hurtado argues that PWI's may also adopt solutions such as enhancing funding to diverse student organizations, recruiting more students of color, implementing programs to help all members of campus identify and confront prejudices, articulating the value of cross-cultural interactions, and adopting initiatives to increase them (Hurtado et al., 1998).

Limitations and Future Directions

The first limitation of this study was the demographics of our sample, since we had a disproportionate representation of students from one global region and computer science majors. This may have added some bias towards experiences that may be unique to them such as having many peers from their own cultural identity in their programs, which may have made it easier to socialize and to adapt to US graduate school. Another limitation is that two authors were born in the US, which may have limited their perspectives, although the third author was born in Egypt and played a major role in the analysis and the review of this article.

Future direction of this work includes conducting follow-up interviews with our participants to learn more about their intersectional experiences to understand how their unique identities played a role in their education. We will also ask more about their department and university support to gather more information on how they may have impacted their experiences. We are also interested in learning about how their social networks, peers, and mentors played a role in their adjustment to the US as well as their success in the STEM program overall. This information may help future students find their own networks or help universities facilitate the support networks international students need to succeed in graduate STEM programs.

Acknowledgement

The authors would like to thank the National Sciences Foundation Building Capacity in Science Education Research program for supporting this work under grant #2023243. We also want to thank our participants and Susan Williams for editorial support.

REFERENCES

- Alexander, M. (2011). *The new jim crow*. Ohio St. J. Crim. L., 9, 7.
- Bell, D. (2005). *The derrick bell reader* (Vol. 75). NYU Press.
- Bennett, M. T. (1966). The immigration and nationality (McCarran-Walter) Act of 1952, as Amended to 1965. *The Annals of the American Academy of Political and Social Science*, 367(1), 127–136.
- Boyatzis, R. (1998). *Thematic Analysis and Code Development*. In *Transforming Qualitative Information: Vols. x–xi*. sage.
- CDC. (2021). *Hospitalization and Death by Race/Ethnicity*.
- Chaney, C., & Robertson, R. V. (2013). Racism and police brutality in America. *Journal of African American Studies*, 17(4), 480–505.
- Charmaz, K. (2006). *Constructing Grounded Theory A Practical Guide Through Qualitative Analysis*.
- Collins, P. H. (2002). *Black feminist thought: Knowledge, consciousness, and the politics of empowerment*. routledge.

- Combahee River Collective. (1978). *The Combahee River Collective Statement: Black Feminist Organizing In The Seventies and Eighties*. Kitchen Table/Women of Color, 272–282.
- Crenshaw, Kimberle. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics.
- Crenshaw, Kimberle. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241. <https://doi.org/10.2307/1229039>
- Crenshaw, Kimberlé, Gotanda, N., Peller, G., & Thomas, K. (1995). Critical race theory. *The Key Writings That Formed the Movement*. New York, 276–291.
- Delgado, R., & Stefancic, J. (2017). *Critical Race Theory: An Introduction* (Vol. 20). New York University Press. <https://doi.org/10.1017/CBO9781107415324.004>
- Dimandja, O. O. (2017). “We Are Not that Different from You”: A Phenomenological Study of Undergraduate Muslim International Student Campus Experiences. University of Colorado at Colorado Springs.
- Division, U. N. S. (2019). Methodology--standard country or area codes for statistical use (M49).
- Ee, J. (2019). “He’s an idiot!” Experiences of International Students in the United States. *Journal of International Students*, 2013 Vol. 3 (1), 72.
- Gieg, S., Oyarzun, L., Reardon, J., & Gant, J. C. (2016). The impact of student organizations on sense of belonging for international students. *Journal of the Student Personnel Association at Indiana University*, 1–14.
- Gomez, M. L., Khurshid, A., Freitag, M. B., & Lachuk, A. J. (2011). Microaggressions in graduate students’ lives: How they are encountered and their consequences. *Teaching and Teacher Education*, 27(8), 1189–1199.
- Hanassab, S. (2006). Diversity, international students, and perceived discrimination: Implications for educators and counselors. *Journal of Studies in International Education*, 10(2), 157–172. <https://doi.org/10.1177/1028315305283051>
- Harwood, S. A., Huntt, M. B., Mendenhall, R., & Lewis, J. A. (2012). Racial microaggressions in the residence halls: Experiences of students of color at a predominantly White university. *Journal of Diversity in Higher Education*, 5(3), 159.
- Hobbs, F., & Stoops, N. (2002). *Demographic trends in the 20th century* (Vol. 4). US Census Bureau.
- Huang, R. (2016). RQDA: R-based Qualitative Data Analysis.
- Hurtado, S., Clayton-Pedersen, A. R., Allen, W. R., & Milem, J. F. (1998). Enhancing campus climates for racial/ethnic diversity: Educational policy and practice. *The Review of Higher Education*, 21(3), 279–302.
- Jung, E., Hecht, M. L., & Wadsworth, B. C. (2007). The role of identity in international students’ psychological well-being in the United States: A model of depression level, identity gaps, discrimination, and acculturation. *International Journal of Intercultural Relations*, 31(5), 605–624.

- Kim, S., & Kim, R. H. (2010). Microaggressions experienced by international students attending US institutions of higher education.
- Ku, H.-Y., Lahman, M. K. E., Yeh, H.-T., & Cheng, Y.-C. (2008). Into the academy: Preparing and mentoring international doctoral students. *Educational Technology Research and Development*, 56(3), 365–377.
- Lee, J. (2006). International student experiences: Neo-racism and discrimination. *International Higher Education*, 44.
- Lee, J. J., & Rice, C. (2007). Welcome to America? International student perceptions of discrimination. *Higher Education*, 53(3), 381–409. <https://doi.org/10.1007/s>
- Martirosyan, N. M., Bustamante, R. M., & Saxon, D. P. (2019). Academic and social support services for international students: Current practices. *Journal of International Students*, 9(1), 172–191.
- Martirosyan, N. M., Hwang, E., & Wanjohi, R. (2015). Impact of English proficiency on academic performance of international students. *Journal of International Students*, 5(1), 60–71.
- McIntosh, P. (2007). White privilege and male privilege. *Race, Ethnicity and Gender: Selected Readings*, 377–385.
- Mesidor, J. K., & Sly, K. F. (2016). Factors that contribute to the adjustment of international students. *Journal of International Students*, 6(1), 262–282.
- National Center for Science and Engineering Statistics. (2020). *Doctorate Recipients from U.S. Universities: 2019*.
- Poyrazli, S., & Grahame, K. M. (2007). Barriers to adjustment: Needs of international students within a semi-urban campus community. *Journal of Instructional Psychology*, 34(1), 28.
- Pyle, J. J. (1998). Race, equality and the rule of law: Critical race theory's attack on the promises of liberalism. *BCL Rev.*, 40, 787.
- Reid, L. D., & Radhakrishnan, P. (2003). Race matters: The relation between race and general campus climate. *Cultural Diversity and Ethnic Minority Psychology*, 9(3), 263.
- Rodriguez, M., Barthelemy, R. S., & McCormick, M. (2021). Critical race and feminist standpoint theories in physics education research: A historical review and potential applications. *Physical Review Physics Education Research*.
- Shapiro, T., Meschede, T., & Osoro, S. (2013). The roots of the widening racial wealth gap: Explaining the black-white economic divide.
- Sherry, M., Thomas, P., & Chui, W. H. (2010). International students: A vulnerable student population. *Higher Education*, 60(1), 33–46. <https://doi.org/10.1007/s10734-009-9284-z>
- Solorzano, D., Ceja, M., & Yosso, T. (2000). Critical Race Theory, Racial Microaggressions, and Campus Racial Climate: The Experiences of African American College Students. *The Journal of Negro Education*, 69(1/2), 60–73. <https://doi.org/10.1080/095183998236926>
- Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday

- life: implications for clinical practice. *American Psychologist*, 62(4), 271. <https://doi.org/10.1037/0003-066X.62.4.271>
- Sue, D. W., & Spanierman, L. (2020). *Microaggressions in everyday life*. John Wiley & Sons.
- Tessler, H., Choi, M., & Kao, G. (2020). The anxiety of being Asian American: Hate crimes and negative biases during the COVID-19 pandemic. *American Journal of Criminal Justice*, 45(4), 636–646.
- Tran, L. T. (2020). Teaching and engaging international students: People-to-people connections and people-to-people empathy. *Journal of International Students*, 10(3), XII--XVII.
- Truth, S. (1851). *Ain ' t I a Woman ?* May, 28–29.
- Wallis, J. (2016). *America's original sin: Racism, white privilege, and the bridge to a new America*. Brazos Press.
- Yeo, H. T., Mendenhall, R., Harwood, S. A., & Hunt, M. B. (2019). Asian international student and Asian American student: Mistaken identity and racial microaggressions. *Journal of International Students*, 9(1), 39–65.

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