“It’s like a Rhetorical Groundhogs Day”: Microaggressions, Marginality, and the Graduate Student Experience in STEM

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Abstract

This study explores graduate students of color in Science, Technology, Engineering, and Math (STEM) at the University of Illinois at Urbana-Champaign experiences with race and gender based microaggressions. To maintain global standing and provide support for a growing workforce, strengthening the STEM pipeline for underrepresented minorities is integral. Advance training such as graduate education is an important component of this effort. Graduate education, for many, represents years of hard work and a show of strength, a path that few are able to travel and complete. Devoted to training the next generation of scholars for the professional role, the academic department sits at the apex of the graduate student experience, an environment, in STEM, that is not culturally diverse. Graduate students of color who persist have endured a variety of race and gender related barriers. In this qualitative inquiry, it was found that graduate student experiences were consistent with previous research on racial and gender based microaggressions. Of all microaggressions perceived, microinvalidations were communicated as most prevalent.
Section I: Introduction

America currently stands at a crossroads in the sciences and engineering. There are currently more jobs in the workforce in the Science, Technology, Engineering, and Technology (STEM) than there is a diverse pool to fill them. Accordingly to the National Academy of Sciences (2011) report of expanding underrepresented minority participation, minorities are the most rapidly growing population in the United States, yet are seriously underrepresented in STEM. In order to compete in a global economy it, is important that we discuss strategies and barriers to college completion in the STEM disciplines for this population. Currently, underrepresented minorities make up approximately 29% of the United States population, yet only 9% of college degree earners (National Academy of Sciences, 2011). This number decreases as you move through the academic pipeline to graduate education.

Graduate education prepares individuals to address complex problems that require advanced training beyond the bachelor’s degree. It is estimated that students enrolled in graduate education make up about 3% of the K-20 population across the country. (Wendler, Bridgeman, Cline, Millett, Rock, Bell, and McAllister, 2010). It is necessary to preserve the nations’ graduate population given the increasingly complex technological society in which we live. The abundance of research that has developed on strengthening the K-16 (STEM) pipeline indicates that this is a national priority deserving full attention.

The percentage of African American, Hispanic, and Native American/Pacific

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1 While there is no common definition of what degree programs are considered STEM, I use the list of academic degree programs list provided by U.S. Immigration and Customs Enforcement (ICE). This list of degree programs has been determined to include the most critical areas of national need in the
I Islander students who are obtaining doctoral degrees has mostly remained stagnant over a ten-year period, from 10% in 2001 to 11.2% in 2011. When disaggregated, the numbers vary by population (African American 4.9% to 4.8%, Hispanic 4.7% to 6.07%, Native American/Pacific Islander .40% to .29%). Even with a slight increase amongst Hispanic populations, the total numbers of doctoral recipients of color drastically lag behind other groups. The lack of African American, Hispanic, and Native American students completing doctoral degrees in STEM fields is of major concern. With respect to Science, Technology, Engineering, and Mathematics (STEM) disciplines, 15,910 U.S. citizens received doctoral degrees in 2011, with doctoral students of color receiving approximately 10% of degrees awarded in this field. Disaggregated data presents a diversity of results in STEM as well (African American 4.5%, Hispanic 5.4%, Native American/Pacific Islander .29%) (National Science Foundation, 2012).

During the spring of 2013, 9,409 doctoral and masters’ students were enrolled at the University of Illinois Urbana-Champaign (UIUC). Of the 9,409 students, 7.5% are graduate students of color and 2.0% are graduate students of color in STEM degree programs (Department of Information Management, 2012). Compared to peer institutions\(^2\), retaining graduate of students of color and specifically graduate students of color in STEM is a priority. The Higher Education Opportunity Act of 2008, which is a reauthorization of the Higher Education Act of 1965, defines ethnic underrepresentation in STEM as African American, Hispanic, Native American, and Pacific Islander (United States Department of Education, 2008). For the purpose of this research project, these

\(^2\) Compared to other peer institutions, University of Wisconsin- Madison (11.2% graduate students of color) (Office of The Registrar, 2012) and Purdue University-West Lafayette (10.1% graduate students of color)(Purdue Graduate School, 2013).
populations will be subsequently referred to as “students of color”.

Given the doctoral student attrition rate of 50% (Gardner, 2008) and increasing attention to global competition in STEM disciplines and diverse workforce preparation, critical attention needs to be placed on practical strategies that support the retention and graduation of graduate students of color in STEM. Although many factors contribute to attrition in graduate education, much of the literature has identified lack of socialization to the graduate role as a major cause (e.g., Baird, 1993; Tinto, 1993; Gardner, 2008). Studies that have focused on socialization (Baird, 1993; Nettles & Millet, 2006; Gardner, 2008) identify positive interactions with faculty and peers as a key component of the socialization process that reduces attrition.

Studies show that negative interactions and practices enacted by White faculty and peers such as withholding course materials, making racist comments in class, and restricting students of color from study groups have historically sent a message that this group is not welcome (O’Connor, 2002). These are negative and invalidation experiences that could be perceived as microaggressions. Sue (2010) describes microaggressions as “the everyday verbal, nonverbal, and environmental slights, snubs, or insults, whether intentional or unintentional, that communicate hostile, derogatory, or negative messages to target persons based solely upon their marginalized group membership” (pg, 3). Students of color who experience microaggressions often feel disconnected from the department and experience negative feelings about their overall experience in graduate education.
This discussion will begin with a review of graduate student persistence and previous research on students of color in STEM in graduate education. A review of the literature on coping with climate will be followed by a look at microaggressions and the existing research on how microaggressions manifest themselves and impact the lives of students of color.

Section II: Literature Review

Graduate Student Persistence

Several scholars have sought to define and understand the role of persistence in the lives of graduate students (Baird, 1993; Tinto, 1993; Gardner, 2008, 2011; Rapp & Golde, 2008). I will use the definition by Kowalik (1989) who defines persistence as “the ability and desire of students to move forward in their academic programs through the successful completion of their degrees.” Tinto’s longitudinal model of doctoral student persistence allows the integration of both the organizational and psychological view of doctoral student persistence over time (Kowalik, 1989). Tinto (1993) asserts that a large proportion of early departure is reflected by the inability of students to make the adjustment to graduate life. This model argues that what a person perceives is real, has real implications and possible consequences. Both social and intellectual experiences are essential to enhancing persistence (Tinto, 1993; Lovitts, 2001; Gardner, 2008, 2010). Scholars have since built upon his work to include students of color, however Tinto is considered to be one of the seminal works on how we understand student persistence.

This philosophy can be extended to both Masters and Doctoral students as it is critical for all graduate students to be socially and academically integrated into the community in which they aspire (Flynn, Harper, & Sanchez, 2011). Unfortunately, for
students from traditionally marginalized racial groups, this transition or place can be seen as unwelcoming and isolating, reinforcing negative societal messages as they look to find place in the academic community. In a study of identity formation in graduate students of color in STEM research laboratories, it was found that identity formation exists as a result of academic and social integration (Malone & Barbarino, 2008). For graduate students of color, feelings of isolation and marginality can inhibit research identity development and create unwelcome feelings.

The history of graduate students of color in STEM on Predominantly White Campuses (PWI’s) has been one marred with struggle and success (Grant & Simmons, 2008). Isolation from peers and feelings of uncertainty are all factors that historically resulted in negative perception by faculty (King, 2005). In her study of 40 doctoral students, Gardner (2008) found that students of color repeatedly commented about their lack of integration and feelings of isolation. An African American woman, who went from industry and returned to receive her Ph.D. in chemistry, remarked on the challenge of navigating a difficult departmental climate and ended her interview with “I just hope I can make it out of here without too many scars” (Gardner, 2008, p.132).

Current literature on graduate students of color has identified faculty and peer support and feelings of marginalization and isolation within the academic department as influencing persistence and socialization for the professional role (Gardner, 2008; Gardner, 2009; Simpson, 2008; Johnson, Morelon-Quainoo, Santigue, & Winkle-Wagner, 2010; Tai & Wyss, 2010). An awareness of the environmental factors that exist for graduate students of color and how they perceive those factors is integral to transition and persistence in graduate school (Simpson, 2008).
Climate and Coping

When engaged in discourse around persistence and graduate students of color, it is a disservice to neglect the importance of climate and how it contributes to their experience (Flynn et al., 2011). Glick defines climate as “a broad class or organizational and perceptual variables that reflect individual and organizational interactions” (Glick, 1985). How students cope with a challenging climate can be the difference between successful socialization into the graduate role and leaving a program. Coping has been defined as constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are deemed as taxing (Folkman & Lazarus, 1984).

Previous research highlights the importance of socialization into the academic department for graduate student success (Gardner, 2008, 2010; Stein and Weideman, 2006). Weideman and Stein (2006) explored the relationship between perceived characteristics of the faculty and peer climate in doctoral student academic departments. They discussed ways academic departments socialize graduate students to both their student and scholarly roles. It was discovered that socialization of doctoral students has less to do with formal structure or goals of a department than with the general climate established by contact between faculty and students inside and outside of the classroom (Stein & Weideman, 2006). Additional research indicates both masters and doctoral students will perceive a department to be supportive when there is a positive and welcoming environment (Gardner, 2009; Rapp & Golde, 2008).

Findings indicate that graduate students of color in higher education settings are aware that their race and gender may be a negative influence to their experience (Sule, 2009). This feeling of marginalization often results in graduate students of color
experiencing feelings of isolation amongst peers at PWIs (Sule, 2008). Specifically in STEM disciplines at PWI’s, graduate students of color are involved in STEM cultures that are largely White, international, and male (Gardner, Lott, & Powers, 2008). Practices experienced by graduate students of color in STEM that result in feelings of marginalization are defined as racial and gender based microaggressions.

**Microaggressions**

Microaggressions can communicate to people from non-dominant groups that they are inferior (Donovan, Galban, Grace, Bennett, & Felicie, 2012). These brief exchanges are often difficult to detect, but carry health and psychological consequences for the people they impact (Lewis, Mendenhall, Harwood, & Huntt, 2012). Unintentional insults can communicate that an environment may not be welcoming, whether the offender realizes it or not.

People of color often report frustration or low self-esteem when dealing with microaggressions (Sue, Capodilupo, & Holder, 2008; Torres et al., 2010). Gomez et al. (2011) found that graduate teaching assistants of color who had experienced microaggressions in the classroom, felt like failures and many chose not to pursue teaching full-time following those experiences. Similarly, in a study of 17 African American women on a large college campus, Lewis et al. (2012) found that women who participated in the study self protected when dealing with issues of frustration and low-self esteem as a result of microaggressions. Similarly, Donovan et al. (2012) found in a study of microaggressions in the lives of Black women that deliberate offenses such as microassaults significantly contributed to depressive symptoms.
For these women active coping strategies that were used to combat racial and gendered microaggressions provided an outlet to stand up and fight back against injustice. Torres et al. (2010) found that “active coping served to ameliorate the experience of having one’s personal ability underestimated or ignored” (pg, 1095). How students cope with a microaggressive climate can be the difference between persisting to graduation and dropping out of a program. Providing context to microaggressions experienced in the STEM pipeline, Guzman, Trevino, Lubugin, and Aryan (2010), found that doctoral students of color experience a specific set of microaggressions. This includes discouragement, questioning ability and qualifications, assuming ethnic/racial expertise, academic invalidation, social networking, and ethnic/racial invalidation, themes that communicate demeaning assumptions and reinforce the belief that a student does not belong in the STEM community.

In 2007, the University of Illinois at Urbana-Champaign (UIUC) began a series of meetings and forums, including a benchmark of several peer institutions, to review campus conduct creating a campus wide program reinforcing the university commitment to appreciation and support of diverse students. In June of 2007, the name “Inclusive Illinois” was adopted and began what has now been almost six years of events, meetings, newsletters, and conferences designed to promote a supportive climate and build a community of understanding (Inclusive Illinois, 2007). It is in this spirit that the current study adds to the body of literature addressing graduate students of color in STEM at UIUC’s experiences with racial and gender based microaggressions. Furthermore, it is through this work that I deconstruct the experiences of diverse graduate students in the
STEM community and add to the ethnography of student experiences, of which this work has been charged. To that end, I address the following questions:

a) Are racial and gender based microaggressions perceived within the STEM community? If so, to what extent?

b) How do graduate students describe microaggressive acts? Is it consistent with the literature on race and gender based microaggressions?

c) How do graduate students of color in STEM at UIUC negotiate issues of race and gender within the STEM community?

d) How might graduate students of color in STEM who experience acts of microaggressions cope with or resist negative messages? Are these mechanisms perceived as helpful?

**Conceptual Framework**

**Sue’s Microaggressions**

Building on the work of Charles Pierce et.al (1977) who coined the term “racial microaggressions”, Derald Wing Sue, developed a framework to address the psychological impact of everyday bias and discrimination experienced by those in marginalized groups. Microaggressions are hidden messages that invalidate group identity and dismiss the perceptions that what marginalized groups feel is real. Most often, hidden messages are delivered by those who are unaware they perpetuate inequities that have lasting deleterious psychological impact for those who experience them. In addition, previous research indicates, as marginalized groups become targets; acts of oppression through microaggressions can be more harmful than hate crimes (Sue, 2010).

Sue posits that microaggressions can be experienced in everyday encounters. People who experience them may not recognize that it has happened or they may feel that something is not right, however, are unable to articulate what it is or how to
conceptualize it. Sue et al. (Summer, 2008) describe three forms of microaggressions: microassaults, microinsults, and microinvalidations.

Microassaults have been described as the most overt form of microaggressions (Sue et al, Summer, 2008). They include the most deliberate offenses such as calling someone a “nigger” or “faggot” These actions are intended to offend.

Microinsults and microinvalidations are prejudiced and racial biased behaviors expressed towards others (Sue et al, Summer, 2008). These are often not expressed intentionally and are ambiguous leaving the offended individual questioning the actions that has just taken place. Microinsults are demeaning verbal or non-verbal actions that are rude and insensitive. They often demean a person’s racial identity or ethnic heritage (Torres, Driscoll, & Burrow, 2010). This includes phrases such as “You are a credit to your race” (Sue et al, 2008). Microinvalidations “exclude, negate, or nullify the psychological thoughts feelings and experiences of people of color” such as being told that we live in a colorblind society (Sue et al, 2008 pg, 331). There are several forms of microaggressions, however, this study will address racial and gender based microaggressions both separately and as intersecting identities.

Racial Microaggressions

Sue argues though there is a decline in overt forms of racism in society, expressions of racism have transformed into a contemporary crafty form that perpetuates the dominate ideology and hides cultural assumptions within policies and practices (Sue, 2010). He describes racial microaggressions as very closely related to aversive racism. Aversive racism, manifest itself in the dominant group who strongly believe they are good and moral and would never discriminate against someone because of their race.
However, scholars have argued (Dovidio & Gaertner, 2000; Sue, 2010) that it unlikely that anyone born in the United States is immune from inheriting racial biases. The illustration of categories associated with Sue’s Racial Microaggressions Framework can be found in Appendix A.

**Gender Microaggressions**

Similar to racial microaggressions, gender based microaggressions can be subtle or overt. Men who mean well often perpetuate them and exhibit unintentional behaviors that place women at a disadvantage or stereotype them (Sue, 2010). This can include being overlooked, dismissing accomplishments, getting unwanted stares, and sexual objectification. Just as in racial microaggressions, gender microaggressions can be environmental, verbal, or nonverbal. Sue has identified nine themes: sexual objectification, second-class citizenship, use of sexist language, assumption of inferiority, restrictive gender roles, denial of the reality of sexism, denial of individual sexism, invisibility, and sexist humor/jokes. Together these send hidden messages that women are second-class citizens and are not worthy of equal treatment (Sue, 2010).

**Reflexivity**

As an African American female doctoral student studying graduate students of color in Science, Technology, Engineering, and Math (STEM), I am very close in academic credentials and academic milestone to the population in which I have chosen to study. In my professional role as Director of Multicultural Programs in the College of Agricultural Sciences at a large PWI in the northeast, I was charged with not only recruiting but also providing support to underrepresented graduate students. During my tenure, I provided support to students who in most cases found that they were the only
face of color in the department and subsequently struggled with finding a space within
this new community. In addition, there were instances when students of color
experienced situations that could be considered racial and gender based
microaggressions. They were left feeling isolated, invalidated, and working to find
coping mechanisms to help persist through the program.

Even though I am no longer in this role, I carry these memories, and it’s hard to
walk away from it completely, as I find it a source of motivation to press on. I see this
project as catalyst to share the stories of students, by exerting power through research
(Pillow, 2010) and expose struggles experienced by graduate students in STEM that
aren’t always discussed. I believe that when we understand the subconscious ways that
our actions may invalidate and alienate, steps towards change can occur.

Section III: Methodology

Method

This study is a general qualitative inquiry about graduate students of color in
STEM. Qualitative inquiry provides a voice for seldom-heard individuals in educational
research. The approach of this study will reveal the common themes based on Sue’s
microaggressions taxonomy among graduate students of color whose personal narratives
expose the effects of the climate they encounter within the STEM community.

Participants

Graduate students of color in STEM were identified from the University of
Illinois at Urbana-Champaign (UIUC). UIUC is a large, land grant Carnegie Research I
institution in the Midwest. UIUC founded in 1876, is a PWI, located in the mid-west
region of the United States of America. Situated in the twin cities of Urbana and
Champaign, UIUC boasts a very rigorous research agenda, which attracts a variety of students from across the world. Through the use of qualitative inquiry, I hope to invoke critical thought amongst graduate student service professionals and faculty at PWI’s who are charged with providing programs and services to support retention for graduate students in STEM.

**Data Collection**

Purposeful criterion sampling was used to recruit participants for the study (Creswell, 2008). Graduate students students of color in STEM were identified though educational equity representatives in addition to emails sent over college electronic lists. Furthermore, participants were recruited through electronic mail listservs for professional groups that have a proportion of graduate students of color at UIUC. The letter was sent to the Black Graduate Student Association (BSGA), Minorities in Agriculture, Natural Resources, and Related Sciences (MANRRS), Graduate Organization of Latino Students (GOLS), Society for Advancement of Chicanos, and Native Americans in Science (SACNAS), National Society of Black Engineers (NSBE).

After contact through email, the following pre-interview questions were asked to determine study eligibility.

a. Do you classify yourself as African American, Hispanic/Latino, Native American or Pacific Islander?

b. Are you a graduate student in one of the following colleges here at UIUC? ACES, Engineering, Liberal Arts and Sciences, Graduate School of Library and Information Sciences, or the College of Medicine?

If the potential participant answered yes to both questions, a day, time, and location convenient for the participant to interview was set. A semi-structured interview protocol was adapted from (Mendenhall et.al) and used to interview seven students. In addition,
participants were asked about climate in the STEM community, experience with peers in the STEM community, and perception of overall experience as a graduate student of color. Participation was voluntary and no one received compensation for his or her time. Each interview lasted from 35-70 minutes and was audio recorded. After transcription, the audio recordings were destroyed.

**Analysis**

Data was coded for themes that add depth and additional understanding about the participant’s experiences. Repetition was used in coding for themes. It is one of the recommended techniques (for it’s simplicity and ease of use) to use for novice researchers (Ryan and Bernard, 2003). Themes came from the data as well as an understanding of the conceptual framework. Each transcript was read over twice, and repetition was used to identify themes in the text. As similar concepts emerged, they were clustered and counted. Similar concepts came together to form themes. During each interview, prompts were included in the protocol that engaged participants in member checking.

**Findings**

Based on the analysis of the interviews conducted, I was able to identify three main themes (Perceptions of Racial and Gender Based Microaggressive Acts, Negotiating Issues of Race and Gender, and Coping with Negative Messages) acts, that connect with and draw from the literature on racial and gender based microaggressions as well as address the research questions presented earlier in this paper. Below a description of each theme and quotes from the participants that support are provided.
Perceptions of Race and Gender Based Microaggressive Acts

Microaggressive acts refer to the ways in which students have experienced overt and subtle forms of racism within the STEM community. The themes identified are consistent with Sue, Capodilupo et.al (2007), who proposed a taxonomy of racial and gender microaggressions: microassaults, microinsults, and microinvalidations. Consistent with the literature, most participants identified and provided examples of subtle forms of microaggressions. In their taxonomy, race and gender are treated as separate but equally important forms of discrimination. Scholars (Collins, 1990; Lewis, et.al, 2012) on the experience of women of color have argued that discrimination is not experienced separately (race and gender) but as intersecting identities, with no form of oppression given dominance over the other. In the analysis, themes and findings are treated as manifestations of intersecting identities and in that, providing space and addressing gaps in Sue’s work.

Microassaults

Often conscious acts of overt form of discrimination, microassaults can occur verbally and non verbally. These attacks occur when the perpetrator has some form of protection, such as social media (Sue, 2010). In technological spaces, which offer a degree of anonymity, Katrina, an African American female, describes her experience in a field where she is automatically assumed to be white and male. Within her work with online communities, racial slurs and derogatory images are a constant.

“A lot of times it’s, so some of the research I do, I study [technology], a lot of the interaction is computer mediated. There is not a discounting who I am; there is an assumption that I am a white male in these spaces. So it’s always: “dude” or “bro” and throw around the “n word” a lot, which is interesting. It’s an assumption that everyone in that space is male or white unless you say so. I spend time correcting people and its fine, but default tends to male.”
She then went on to bring up the deliberate racism through images, in which white students feel free to express acts of overt race and sexism even after she has revealed her racial and gender identity.

“They are equal opportunity racist, so they offend other groups as well, they are equal opportunity. Initially it was off putting. One person for instance has as their footer, I love all you “ N-word” and there is a picture of this black dudes head and a white person hugging it. It’s so weird because the head is sort of blown up, so everywhere he posts it’s there. Originally it was weird. Now I am getting used to it. It’s not just black people they talk horribly about Jewish people, bad about everyone who is not white.”

Blatant forms of racism in the form of microassaults, while disturbing, have been found to be easier to deal with by marginalized groups since the intention is clear, and recipients felt better prepared to deal with the actions (Salvatore & Shelton, 2007).

Microinsults
Messages that convey to graduate students that they are not welcomed are amongst the most common form of microaggressions experienced participants. These insults conveyed stereotypical beliefs held by individuals and participants perceived this as insulting messages. Some participants described feeling insulted when well-intentioned individuals who may at times try to be friendly or helpful, but in doing so reinforced stereotypes that made participants feel uncomfortable. This includes being told not to make trouble as the only graduate student of color in the department, assumptions about food or music preferences that are stereotypically attributed to certain racial groups, and lack of peer and faculty support in academic spaces. Tammy describes a time when she was invited to a function within the STEM community and assumptions made about food were reinforced.

“One time [person in STEM] asked me to bring some fried fish to his house, because we were, he had a lunch at his house and I went because it was with the research group. He was like, “I’m surprised you didn’t bring some soul food over.” That is what he said. And I was like, “Well, next time,” I brought cupcakes, because I wasn’t going to cook. I
didn’t feel like it anyway, but I was just like, “[said with sarcasm] Well, next time I guess I’ll bring some macaroni and cheese…In my head, but that is something that he said that was slightly ignorant, and they [others] were like, “Where’s the fried okra?”

Similarly, among African American female participants, assumptions about music and questions about hair were perceived as insulting. Both Tammy and Lisa describe feeling frustrated when those in the STEM community would make assumption based on gender and racial stereotypes.

“[Tammy] Always bringing up random black artists or rappers and they’re talking to me, kind of expecting me to know who it is. And I do, because I haven’t had any problem, I’m very much immersed in the African American culture, but kind of like, “Yeah, that one rapper that talks about this, do you know who that is?” Asking me questions like that. And again, the change in tone when people are talking to me as far as trying to sound more black when they have a conversation with me. Asking about my hair is a big, well, not big, but it’s happened more than once. No one touched it though. You know they’re quick to touch your hair. No one touches my hair.”

“[Lisa refers to the things she is asked] “Do you listen to hip hop music, is rap your favorite kind of music?” Mostly things culturally related; music I listen to, or I think is the most common one. And then there’s the joking “do you love chicken?” kind of thing, those kind of irritating questions.” [Thinking of another instance] “One time, I came in with my braids and he asked questions about my braids, whether I had an Afro once the braids were out. And it’s not the fact that he asks those questions, I don’t remember exactly how he worded it. It was more in the wording of the questions and not necessarily the statements. I mean, not exactly the content. It was more of the wording that kind of didn’t sit well with me.”

It is important to note that participants describe doing their best to not portray a communication style that would reinforce stereotypes about people of color. None of the participants expressed that they have been told anything negative about their communication style, however, they actively make sure that nothing is done to portray a communication style other than what is considered to be “normal”. It is as if stereotypes and expectations have been so previously ingrained that participants have been trained already in oppressing themselves. Maria a Latina graduate student describes holding herself back from emotions that could be viewed in a negative light.
“A lot of times I hold myself back from my feels and being loud because I can be loud and being angry or sad. Those are restricted or forbidden in theses spaces. The other day when I found out my program was cut I put it on Facebook. “Just found that [program] was cut and I am angry and mad” and I was thinking that maybe I shouldn’t have put it up there but no...we need to let ourselves be those things. I think it feel censored your emotions feel censored. I don’t realize until I am back with my family how loud I can be”.

Similarly, Tammy also holds purposefully holds back her personality in order to avoid stereotyping.

“I try to hide my communication style as an African American woman, so they don’t really know how I really talk. Cultural values, they never come up in discussion. And that’s probably because I’ve limited my interactions to strictly professional, so I don’t really allow for those conversations to take place.”

**Microinvalidations**

Sue (2010) considers microinvalidations to be potentially the most damaging form of microaggression because they deny the reality of others. Participants perceived invalidation through power and privilege as a result of Anglo centered courses, consistently challenged on research choices that were not of the dominant ideology, and the lack of faculty available to serve on committees. Among the most salient and oppressive for Maria, a Latina was her experience of bridging the humanities with technology and feedback received from faculty. It has come to a point where she is tired of consistently feeling the need to defend the inclusion of Latino history in the technological narrative.

“[In relation to her work bridging STEM and culture] I’m not using certain types of methods like data mining massive questionnaires, so what I do it critique things, and deconstruct things and I am also interested in oral histories, they are not seen as valuable because there is not a science to it. That has been a shocker coming into STEM. I am told, at least within research methods that my work isn’t productive and I’m not curing cancer, or all these other things people are doing in the sciences.”

“We started to call it “Rhetorical groundhogs day” because this class that I am in. Every week, we have to try to convince the students in our class that qualitative research matters. They don’t think it’s a way to be impactful so it’s groundhogs day because every week we are having same conversation.”
Maria is very committed to her work and sees that her work is valuable, however, peers and others within the STEM community question her choices on a daily basis. She perceives her environment to be hostile and one that communicates she does not belong.

“There are whole email fights...if you don’t have more than one faculty to work with here, then why did they let you in, in the first place? Why are you here? The invalidation goes hand in hand because my works in on Latinos in technology. So those are wrapped into each other so I am taking it personally. I am trying to write an unwritten history and then I have to talk to [person in STEM], I have to talk about my work and every individual meeting, he is just like, I dread it because he has no idea how...he is a (STEM person) so to try and transfer these things and prove my work is valid is very difficult. He is the one who said when I was look at racist responses well Just find 30 more examples and you prove that racism is going on. It’s that kind of little stuff over and over again; it makes me question my work.”

Lisa has also experienced feeling invalidated when others communicate that African Americans are abnormal in STEM.

“I’ve heard some people say, I’ve heard the standard, “oh, it’s unusual for an African-American to be in STEM,” especially a lot of students ask me what made me interested in STEM because in their mind, they don’t see many African-Americans, so every time they see one, it’s kind of like, wow, there’s an African-American in STEM again, or kind of thing. But sometimes I get the question, “why choose STEM?” And it’s with that tone, you know. I try not to let it get to me, and of course, you can’t let your emotions get the best of you, but it’s irritating at times, it does.”

These types of invalidating experiences send clear messages that people of color in STEM are abnormal and are detrimental to the well being to those who experience it.

**Negotiating Issues of Race and Gender**

For participants in this study, the majority of them went into STEM fields due to increase job prospects and higher earning potential over time. As students of color, their position as a graduate student, often the first in their family, was a position of honor. The lack of diversity in STEM, the need to fill the gap, and dispelling stereotypes about people of color all motivated and meant a great deal to those interviewed. However, this
same motivation came with a need to not fail, the burden to perform that was either self-directed or reinforced by those in positions of power. Rachel, a doctoral student, described her feelings as a Native American student and what that meant to her in graduate school.

“For me it makes me proud that I can be a Choctaw student at UIUC. Having that heritage and legacy, I can say I am Choctaw and I can be here getting rewards, and reflecting well on the tribe and bringing it back for their benefit”

Tammy, spoke of the burden to perform that has been reinforced by a faculty member, and felt afterwards that she could not be herself but conform and be careful not to ruin things for other students of color who came behind her.

“The most challenging was when I first got here and my advisor told me that he had never worked with a black woman before, and to really just make sure that I don’t ruffle any feathers in my department, ever. And that was a really strong moment because, from then, I felt very, like I couldn’t make any, I couldn’t defend myself, because I would be misinterpreted, and I felt like that was a really stifling statement, and that was my first week here.

Issues of Race and gender for some students were often mitigated with supportive advisors who assisted students in the transition to graduate school and continue to be supportive and helpful through out their time at UIUC. For those students, it was easier to be one of few students of color when they felt appreciated and part of the team.

*Coping with Negative Messages*

Professional and social organizations that support and encourage graduate students of color were at the forefront of strategies to resist racist and sexist environments. For students who participated in these organizations, it served as a place to vent and discuss negative experiences with other students who could empathize and understand the experience. The organization for students of color also served as a social
space, to let go of tension experienced in the department and to have fun without centering on discrimination. Katrina, an African American female, described the importance of finding a safe space as a way to cope with microaggressive messages:

“Even we get together for social things we grips about professional things. We discuss issues that arise about being a student of color and why it’s frustrating and what that means, sometimes you feel like you are the only one. So it’s nice to see other students of color”

Other coping strategies discussed by participants includes campus counseling, developing mentor relationships with faculty of color in other departments, talking to family members, and prayer. These were all found to be helpful by participants in resisting negative messages and navigating what is perceived to be a hostile climate. Students who experienced sever microaggressive climates describe organizations for graduate students of color as the only spaces they have been able to foster and build community at UIUC. Outside of these spaces, participants have been willing to get to know other graduate students within their field; however, they have been unable to find space in what they consider to be a hostile climate. Tammy, described her attempt to engage with peers in her department.

“I and some of my cohort went out to a bar. I don’t drink beer. I think beer is nasty, so that was already kind of odd, the fact that I was the only person not drinking beer. Then, I thought I was trying to make a connection to other people. Almost all white. I am the black person in my entire department. So trying to kind of make connections with them and even do things outside of school because I know I’m going to need to make some connections when it comes to class, and I exchanged numbers with a girl and never heard back from her, and they don’t even speak to me now”

This is consistent with O’Conner (2002), who found that Practices enacted by White faculty and peers such as withholding course materials, making racist comments in class, and restricting graduate students of color from study groups have historically sent a message that this group is not welcome. Similarly, Katrina describes the social space
within the STEM community that privileges graduate students with certain interests.

These are considered barriers to feeling a sense of belonging and building community.

“One of the things that the department does...they have a lot of student orgs and a lot of ways to engage that tend to leave you out if you don’t like weird stuff. If you don’t like to play...so the person who fits in really well drinks, playing dungeons and dragons, rock band, enjoying spelunking and rock climbing on the weekend. There are certain things that are valued a lot that push people out without intending to. They invite everyone, but there are no alternatives, a lot of socializing takes place around things that may not be of interest to everyone. Makes it harder to make friends, socialize, and be a part of the community”.

Participants who experienced the most severe forms of microaggressions describe the motivation to leave and never return as a coping mechanism. Consistently resisting negative stereotypical messages has left them drained and either ready to graduate and leave or to finish coursework and leave. Maria, a Latina female, avoids spending additional time with those in the community; it has become exhausting for her.

“They have a student hang out one night a week, they have the heavy sciences people and so students who aren’t doing big data or heavy info science work don’t feel welcome there. So I stay away because it’s hostile, I am taking classes faster so that I can move from there because I can move after my exam. Besides connecting to the professors that I need to connect to, there aren’t things that I want to go to in my department.”

Discussion

The purpose of this study was to understand graduate students of color in STEM experiences with racial and gender based microaggressions. I explored the discriminatory experiences in the STEM community that could be perceived as microaggressions. The findings of this study are consistent with previous research and themes of microaggressions. Themes of this study included 1) Perceptions of Racial and Gender Based Microaggressions, 2) Negotiating Race and Gender, and 3) Coping with Negative Messages.
Living with consistent messages that tell students that do not belong in the STEM community or at the institution can have long-term psychological effects on the students who experience them. This has inhibited the socialization process of the students interviewed. Most students interviewed avoid gatherings in which they may potential have to deal with hostile environments. Furthermore, they expressed an interest in leaving after graduation or preliminary exams and never returning. For students who are comfortable in the STEM community, positive connections with advisors and peers help to mitigate any negative experiences they may have had. Resistance coping strategies include finding social support amongst other students of color and seeking out the support of family and friends.

Limitations

The experiences of seven graduate students of color in STEM who have experienced microaggressions in STEM do not represent the experiences of all students of color. Furthermore, there are regional, institutional type and size differences and STEM departments that impact the type of climate experienced by students. In addition, there are potential issues when utilizing qualitative research such as authenticity of stories. Relying heavily of self-reported information, participants may be reluctant to share specific circumstances if a story is too horrible to tell or if they fear the information has the potential to get back to the department (Creswell, 2008).

There are inherent differences in how graduate students deal with stressful situations and every student that participated in this study did not believe they experience microaggressions within the STEM community. The time allotted to complete this study was short, and provided more time, a second interview with participants as well as a
larger number of participants would have provided greater context to the narrative. Since this project is connected with EUI and there is no anonymity of institution, research questions were altered and removed to decrease potential harm to participants. This also in turn limited the findings that I could report as well. Responses that could potentially identify participants were not mentioned in the findings above.

**Contribution to Practice**

It is important that we explore the ways in which institutions can assist in fostering a sense of cultural belonging and empower students to persist through providing culturally competent graduate student services. To that end, I expect that the results of this study challenge dominant ideology about graduate student services and interacting with graduate students of color. Future studies will look at graduate student policy as a potential form of environmental microaggressions.
References


*Directions for Higher Education*, 101. 55-64. Indianapolis, IN: Wiley


RUNNING HEAD: “IT'S LIKE A RHETORICAL”


O’Connor, C. (2002). Black women beating the odds from one generation to the next:


RUNNING HEAD: “IT'S LIKE A RHETORICAL”


RUNNING HEAD: “IT'S LIKE A RHETORICAL”


http://www2.ed.gov/policy/highered/leg/hea08/index.html#ipeds


http://www.inclusiveillinois.illinois.edu/History.html

Appendix A

Categories and Relationship of Racial Microaggressions (Sue, 2010, pg 29)