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Gendered Racial Microaggressions, Job-related Burnout and Psychological Distress

Among Asian American Women in the STEM Workplace:

The Role of Perceived Exploitation and Diversity Climate

A dissertation submitted in partial satisfaction of the  
requirements for the degree

Doctor of Philosophy in Social Welfare

by

Michele Josephine Wong

2023

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## ABSTRACT OF THE DISSERTATION

Gendered Racial Microaggressions, Job-related Burnout and Psychological Distress  
Among Asian American Women in the STEM Workplace:  
The Role of Perceived Exploitation and Diversity Climate

by

Michele Josephine Wong

Doctor of Philosophy in Social Welfare

University of California, Los Angeles, 2023

Professor Todd M. Franke, Co-Chair

Professor Brian TaeHyuk Keum, Co-Chair

A rise in reports of Asian American women being brutally attacked and murdered has prompted discussions around the harmful effects of gendered and racialized stereotypes, otherwise known as gendered racial microaggressions, that view Asian American women as submissive and hypersexual objects, deserving of violence, even premature death. Despite the unique risk that gendered racial microaggressions pose for Asian American women, little is known about Asian American women's perceptions of gendered racial microaggressions in mostly White and male dominated fields like the STEM workforce, that has also been known to be a hostile work environment for women of color (Funk & Parker, 2018). While prior research

links workplace discrimination to negative work and health related outcomes, research remains limited in their ability to address the simultaneous experience of racism and sexism for Asian American women. The study employs a theory of racialized organizations to investigate gendered racial microaggressions as a mechanism that maintains gender and racial inequities in the STEM workforce, making Asian American women especially vulnerable to institutionalized inequities (Ray, 2019). This study used the Gendered Racial Microaggressions Scale for Asian American Women (GRMSAAW; Keum et al., 2018) to advance research that investigates how Asian American women experiences of gendered racial microaggressions may increase their job-related burnout and psychological distress. The study aims to: (1) determine if gendered racial microaggressions among Asian American women is associated with job-related burnout and psychological distress, (2) assess whether the relationship between gendered racial microaggressions and job-related burnout and gendered racial microaggressions and psychological distress are mediated by perceived exploitation, and (3) investigate diversity climate as a potential buffer against the negative effects of gendered racial microaggressions on job-related burnout as well gendered racial microaggressions on psychological distress.

The results of the study extend our understanding of how gendered racial microaggressions may pose a unique risk to Asian American women and the work and mental health disparities they face in the STEM workforce. Findings indicated that gendered racial microaggression stress was significantly associated with job-related burnout and psychological distress. Further, perceived exploitation was found to mediate the associations between gendered racial microaggression stress and job-related burnout and gendered racial microaggression stress and psychological distress. Lastly, diversity climate perceptions were not a significant buffer against job-related burnout or psychological distress associated with gendered racial

microaggression stress. However, perceived diversity climate was shown to moderate the association between perceived exploitation and job-related burnout. Specifically, at low levels of perceived exploitation, Asian American women that perceived high levels of diversity climate experienced low levels of job-related burnout. At high levels of perceived exploitation, Asian American women experienced similar levels of burnout across all levels of diversity climate. These findings have important implications for future organizational research, policies and practices aimed to address Asian American women's experiences of gendered racial microaggressions, perceived exploitation and diversity climate perceptions in the STEM workplace.

Keywords: Gendered Racism, Asian American women, STEM, Racialized Organizations, Diversity Climate, Exploitation, Job-related Burnout, Psychological Distress

The dissertation of Michele Josephine Wong has been approved.

Gilbert C. Gee

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University of California, Los Angeles

2023

## **DEDICATION**

To my Po Po and all of the women in my family. It is because of your incredible strength and the full lives that you lead that gives me the courage to do this important work.

To all of the Asian and Asian American women that have had to carry the burden of gendered racism. Your experience matters, you matter. May this work bring us one step closer to changing our narrative, and to rewriting our history.



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Role: Principal Investigator  
Title: Gendered Racial Microaggressions among Asian American Women in the  
Workplace: Perceived Exploitation and Organizational Support for Diversity

2021-22        **Patrick & Lily Okura Research Grant on Asian Pacific American Mental  
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Role: Principal Investigator  
Title: Invisible Bodies: Asian American Women at the Intersection of Racism &  
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<https://www.labor.ucla.edu/publication/profile-of-domestic-workers-in-california/>

## CHAPTER 1: INTRODUCTION

### Statement of the Problem

A rise in anti-Asian hate crimes has brought increased attention to the vulnerabilities that Asian American women (AAW) face. Coinciding with the start of the COVID-19 pandemic, out of 10,370 self-reported hate incidents, AAPI women and girls reported 2.2 times more hate incidents compared to AAPI men from March 2020 to March 2021 (Jeung et al., 2021; Pillai et al., 2021). The gravity of these numbers is brought into stark awareness, as news reports of targeted attacks and murders, like the 2021 Atlanta spa shooting that killed eight people, six of whom were AAW, continues to grow (Lang, 2021; Loo, 2021). These recent events and data have reignited conversations about the harmful effects of gendered and racialized stereotypes steeped in a long history of racialized and sexualized violence directed toward AAW (Lang, 2021). Specifically, stereotypes of AAW as submissive and hypersexual objects places them at increased risk for discrimination and harassment, and more disturbingly violence and premature death (Loo, 2021). Emerging research highlights the significant toll that these oppressive experiences have on AAW's mental health. In particular, Keum and colleagues (2018) developed the Gendered Racial Microaggression Scale for Asian American Women (GRMSAAW) to assess AAW's experience of gendered racial microaggressions (GRM), understood as more subtle, everyday encounters with oppression related to the simultaneous experience of one's race and sex (Crenshaw, 1989; Lewis & Neville, 2015; Sue, Capodilupo, et al., 2007). Initial evidence reveals that GRM stress among AAW is linked to depressive symptoms and suicidal ideation (Choi et al., 2017; Keum et al., 2018, 2022). Despite the unique risk that GRM pose, little is known about how perceptions of GRM may impact AAW in the workplace, particularly in

predominantly White and male dominated STEM fields that can be hostile work environments for women of color (Funk & Parker, 2018).

Asian American women make up almost 3.9 percent of the U.S. population, with an estimated 12.7 million that comprise one of the fastest-growing working-age populations in America (Bleiweis, 2021; Loo & Chang, 2020). According to the model minority myth, Asian Americans are a well-adjusted minority group, whose natural intelligence and strong work ethic have allowed them to enjoy unbounded success (J. Y. Kim et al., 2021; Sakamoto et al., 2012). This seems to be the case for Asian Americans in STEM fields, where they are overrepresented relative to other racial and ethnic minority groups, and to their overall share of the workforce (Funk & Parker, 2018; Iporac, 2020). However, there is evidence to suggest that the supposed advantages that Asian Americans experience, do not translate to the workplace (T. J. Huang, 2020; Tran et al., 2019). Indeed, a growing body of evidence among AAW in STEM fields has demonstrated a lack of occupational success, with AAW citing frequent encounters with gendered and racialized stereotypes and harassment that have made it difficult to advance in their careers (A. R. Castro & Collins, 2021; Ong et al., 2011; J. C. Williams & Dempsey, 2014; L. Wu & Jing, 2011). Extant literature has highlighted how experiences of workplace discrimination and harassment among women of color is associated with negative work and health-related outcomes (Rosette et al., 2018; Hebl et al., 2020; Cortina et al., 2021; Velez et al., 2018). Yet, research has yet to demonstrate how the nuanced oppressions that AAW experience in the workplace contributes to their job-related burnout and psychological distress.

Thus, the present study seeks to contribute to the empirical research on AAW and their work and mental health outcomes by assessing how their perceptions of GRM in the STEM workforce are associated with job-related burnout and psychological distress. Further, this study

will examine the role of perceived exploitation as an explanatory mechanism between GRM and job-related burnout and GRM and psychological distress. Finally, diversity climate will be investigated as a potential buffer against the direct and indirect effects of GRM on job-related burnout and psychological distress.

### **Racialized Organizations, Discrimination and Harassment**

The theory of racialized organizations focuses on the ways in which race is embedded in the foundations, processes, and hierarchies of organizations, and brings to light the various policies, organizational practices, and individual attitudes that maintain racial inequality in the workplace (Ray, 2019). Indeed, even though the Civil Rights Act of 1964 bans discrimination based on race, research has demonstrated that racial and ethnic minorities continue to face higher unemployment rates, lower pay, and are less likely to be promoted to high-level positions (Hebl et al., 2020; M. Kim, 2020). Racial and gendered biases are further reflected in our labor market, with many racial and ethnic minorities overrepresented in low-wage, service sector positions (e.g., homecare workers, janitorial workers, food service etc.), with little potential for advancement (M. Kim, 2020). Yet, in documenting the high levels of discrimination that racial and ethnic minorities continue to face in the workplace (Hebl et al., 2020; Rosette et al., 2018), few studies seek to connect these experiences of discrimination to organizational practices and policies associated with racialized organizations. For example, while prior research has employed the lack-of-fit model and Stereotype Content Model (SCM) to examine how gender stereotypes (e.g., agentic vs. communal; Heilman & Caleo, 2018) and societal stereotypes of common groups (e.g., warmth vs. competence; Fiske, 2018) allow workplace discrimination to persist, what is left out is how these stereotypes serve as a mechanism that reproduces the “unmarked Whiteness of organizations,” that legitimize work hierarchies (Ray, 2019, p. 38).



Applying a racialized organizations approach to assessing the experiences of AAW in the workplace, reveals how AAW may be especially vulnerable to experiences of gendered racism that serve to maintain the racialized structure of the predominantly White and male dominated STEM workforce (Martinez & Christnacht, 2021; Okrent & Burke, 2021).

Despite limited research examining AAW experiences of workplace discrimination, there is evidence to suggest that AAW face unique stressors and vulnerabilities related to gendered racism. For example, research indicates that compared to their nondominant counterparts, East Asian Americans are more likely to be racially harassed (e.g., dominance penalty) at work when they violate prescriptive norms, and display both dominance and warmth (Berdahl & Min, 2012). However, research among AAW find that regardless of behavioral style (e.g., warmth, likability) they face less of dominance penalty, but are considered least fit for leadership (Tinkler et al., 2019). These findings are consistent among Vietnamese American women who report higher levels of discriminatory treatment in denied promotions decisions (Yu, 2020). These studies suggest that perceptions of ascribed submissive, a dimension of gendered racism among AAW may be more salient in discrimination experiences among AAW in the workplace, making it especially challenging for AAW that wish to advance in their careers and pursue high-level positions that value dominance and assertiveness.

Further, experiences of workplace sexual harassment may be especially harmful for AAW that experience gendered racism related to sexual objectification and submissiveness. AAW's perceptions of racialized sexual harassment outside of the workplace context suggest that AAW suffer marginally more post-traumatic stress (PTS) symptoms and significantly more depression and psychological distress compared to their White counterparts, even though they report fewer incidences of sexual harassment (Ho et al., 2012). These findings are in line with

other research among AAW who report more unwanted sexual attention, which was associated with an increase in PTS (Buchanan et al., 2018). Indeed, these experiences of sexual exploitation can be extremely damaging and distressing for AAW who are made to feel like an object instead of being treated as a full human (Chan, 1988). Unfortunately, these experiences of being seen as a sexual object along with expectations to perform as a submissive Asian woman were common among participants in a qualitative study of Asian American female doctoral students pursuing a STEM degree (Castro & Collins, 2020). However, current research remains limited in their ability to assess experiences of gendered racism among AAW, often using separate measures of racism or sexism, or studying the multiplicative effects (e.g., racism x sexism) through statistical analyses (Berdahl & Moore, 2006a; Buchanan et al., 2018; Ho et al., 2012). Thus, this study seeks to contribute to the literature by using an intersectional measure of gendered racism among AAW to identify the unique forms of workplace discrimination and harassment AAW encounter.

Additionally, this study will examine job-related burnout and psychological distress as unique indicators of gendered racism among AAW, as prior research identified these outcomes as the deleterious consequences associated with oppressive work contexts (Berdahl & Moore, 2006a; Velez et al., 2018). Emerging in response to prolonged emotional and interpersonal stressors, job-related burnout is considered a psychological syndrome that consists of: (a) emotional exhaustion, (b) cynicism, and (c) a decreased sense of professional efficacy or accomplishment on the job (Maslach et al., 2001; Maslach & Leiter, 2016). Informed by the Job Demands-Resources (JD-R) model, previous work has conceptualized perceived discrimination as a job demand (i.e., stressor) that exceeds an individual's resources to cope with the demands (Bakker & Demerouti, 2007; Maslach & Leiter, 2016; Volpone & Avery, 2013). Accordingly, gendered racism as a contemporary form of discrimination may serve as a distinct job demand

that overwhelms AAW's available resources, contributing to their job-related burnout. There is some research to suggest that gendered racism related to submissiveness may lead AAW to be assigned heavier workloads (T. J. Huang, 2020; J. Y.-J. Kim et al., 2019). Further, AAW that experience gendered racism related to sexual objectification may experience more emotional exhaustion from being devalued and expected to perform their Asian femininity (Barboza-Wilkes et al., 2021; Noh, 2018). Finally, existing theory and initial evidence that links GRM with depressive symptoms (Keum et al., 2018; Sue, Capodilupo, et al., 2007; Sue et al., 2009), as well as previous work that links GRM and psychological distress among Black women (Lewis et al., 2017; Lewis & Neville, 2015; Moody & Lewis, 2019; A. J. Thomas et al., 2008; M. G. Williams & Lewis, 2019), motivate the study of psychological distress as a key mental health indicator of GRM.

Asian American women also experience unique psychological factors that may shape their perceptions of GRM. In particular, internalized racism may lead AAW to downplay, deny, or even justify and accept GRM related to submissiveness and fetishization as a self-protective strategy (David, Schroeder, et al., 2019; James, 2020). While there is some literature to support the self-protective effects of internalized racism, other research demonstrates high levels of internalized inferiority or internalized negativity to exacerbate the link between racial/ethnic discrimination and mental distress (Garcia et al., 2019; James, 2020; Keum et al., 2022). Similarly, internalized model minority myth stereotypes that emphasize Asian Americans achievement and unrestricted mobility, may also strengthen associations between GRM and mental distress among AAW (Atkin et al., 2018; Noh, 2018; H. C. Yoo et al., 2010). Specifically, a narrative analysis finds that AAW expected to perform well in racist and sexist work conditions are more likely to experience devaluation and depression for being treated as

sex objects rather than being valued for their unique contributions (Noh, 2018). Thus, along with key sociodemographic indicators (age, race/ethnicity, generational status, sexual orientation, and marital status), weekly work hours, and internalized model minority myth stereotypes will be considered as covariates pertinent in shaping perceptions of GRM among AAW, and may affect their experiences of job-related burnout and psychological distress.

### **Perceived Exploitation and Diversity Climate**

Along with shaping work and mental health outcomes, GRM related to sexual objectification and submissiveness may lead AAW to feel devalued and taken advantage of by their organization. Hence, there is reason to believe that the relationship between GRM and job-related burnout as well as GRM and psychological distress, may be explained by AAW's perceptions of exploitation. Emerging evidence on the experiences of perceived exploitation, which refers to one's perception of being intentionally taken advantage of by and to the benefit of their organization, suggests that employees that are prone to feelings of shame and guilt are more likely to report employee burnout, silence and psychological withdrawal (Livne-Ofer et al., 2019). AAW may report more burnout as experiences of sexual objectification can elicit feelings of shame for being victimized and guilt for remaining submissive and allowing themselves to be exploited by their organization (Chan, 1988; Fung, 1999; Livne-Ofer et al., 2019; Y. Wong & Tsai, 2007; You, 1997). Indeed, there is previous work indicating AAW's experience of unwanted attention for looking "exotic," and being treated as "someone else's idea of an Asian woman," may bring up feelings of guilt, self-blame, and helplessness for being a victim (Chan, 1988, p. 37). Further, studies indicate social class exploitation and exploitative leadership among nurses to be linked with depression and psychological distress (Majeed & Fatima, 2020; Muntaner et al., 2015). Taken together, perceived exploitation may be an important underlying

mechanism that can help explain the relationship between GRM and job-related burnout, as well as GRM and psychological distress among AAW.

Recognizing the increased vulnerability that AAW experience in the workplace, it is necessary to consider what factors may help to buffer against the negative effects of GRM. With diversity initiatives becoming increasingly common in organizations, it is crucial to assess whether these initiatives are effective in mitigating the harmful effects of GRM for AAW. Therefore, it will be helpful to examine AAW's perceptions of their organization's diversity climate, defined as employee perceptions that their organization is fair and strives to promote practices that are inclusive and value all demographic groups, especially historically unrepresented groups (Kossek & Zonia, 1993; McKay et al., 2008; Mor Barak et al., 1998; Triana et al., 2010). According to Cox's (1994) Interactional Model of Cultural Diversity (IMCD), organizations that promote fairness and social integration of all employees should also diminish discriminatory treatment, thereby improving employee outcomes (e.g., performance, satisfaction, commitment, reduced burnout; Holmes et al., 2021). Conversely, negative diversity climates that foster a climate of discrimination and exclusion, are more likely to reduce job performance and increase employees' job-related burnout. Indeed, there are studies to suggest that a pro-diversity climate, one that promotes fairness and inclusion and reduces discrimination, may play a key role in buffering against the negative effects of discrimination (Hardeman et al., 2016; McKay et al., 2008; Moon & Christensen, 2020). However, the evidence among AAW remains unclear. Studies indicate a lack of organizational response to racial microaggressions targeted towards Asians, and a lack of mentorship and inclusion that may be attributed to GRM related to submissiveness that lead organizations to overlook AAW's need for support (J. G. Liang et al., 2018; J. "Grace" Liang & Peters-Hawkins, 2017; Shang et al., 2021). Further, Asian

Americans are often not included in organizational diversity efforts (e.g., Diversity, Equity, and Inclusion initiatives), particularly in STEM fields where they are considered an overrepresented majority (Iporac, 2020). Hence, this study contributes to organizational literature on diversity climates by examining their effectiveness in reducing the negative effects of GRM for AAW in the workplace.

### **Study Aims**

This study is guided by two overarching research question: What is the relationship between GRM, perceived exploitation, job-related burnout, and psychological distress among AAW in the STEM workforce? Further, do the direct and indirect relationships vary by diversity climate? To address these questions, this study seeks to address three main aims:

1. To determine if GRM among AAW are associated with job-related burnout and psychological distress;
2. To examine whether the relationships between GRM and job-related burnout and GRM and psychological distress are mediated by perceived exploitation;
3. To examine whether diversity climate moderates the direct and indirect relationships (e.g., mediated by perceived exploitation) between GRM and job-related burnout and GRM and psychological distress.

The purpose of this study is to lay the groundwork for whether GRM serve as a unique stressor among AAW in the STEM workforce, making AAW especially vulnerable to workplace discrimination and harassment. While significant research has documented the harmful effects of workplace discrimination and harassment among racial and ethnic minorities (Cortina & Areguin, 2021; Hebl et al., 2020; Rosette et al., 2018; Velez et al., 2018), few studies have investigated the nuanced oppressions of gendered racism among AAW, represented through

dimensions of GRM (e.g., submissiveness, sexual objectification, assumptions of universal appearance; Keum et al., 2018). Further, this study employs a theory of racialized organizations to conceptualize GRM as a key mechanism in reproducing institutional inequities for AAW, and contributing to their experiences of job-related burnout and psychological distress (Ray, 2019).

### **Significance of the Study**

This study seeks to advance research on workplace discrimination and harassment by highlighting the unique experiences and impact of GRM on AAW in the STEM workforce. Given that STEM fields are often elite White male domains, the STEM workforce can be an especially hostile and unsafe environment for AAW who must endure a culture of racialized sexual harassment (A. R. Castro & Collins, 2021). Research from this study extends the current understanding of the simultaneous experience of racist and sexist discrimination in the workplace for AAW, particularly how GRM related to submissiveness may impede their ability to pursue leadership positions, and how GRM related to sexual objectification may increase their risk for sexual harassment. Rooted in a Theory of Racialized Organizations, Microaggressions Theory, and the Intersectionality Framework, the proposed study will be the first to use an innovative measure of GRM for AAW to investigate how perceptions of GRM are linked to job-related burnout and psychological distress, indicators of oppressive work contexts. Findings from this study have important implications for AAW in the STEM workforce, particularly the development of organizational policies, interventions, tools and training that can highlight and work towards eliminating internal sources of organizational racialization (e.g., biased hiring processes, group-based job demands, lack of incorporation into informal social networks) that rely on GRM to maintain and legitimize racial hierarchies within the workplace.

## CHAPTER 2: LITERATURE REVIEW

### The STEM Workforce

Despite common assumptions that Asian Americans are well represented and thriving in the STEM workforce, Asian American women (AAW) remain underrepresented, and struggle to advance in their careers (Funk & Parker, 2018; Ong et al., 2011; Riegle-Crumb et al., 2020; Wu & Jing, 2011). Data from the National Science Foundation show that Asian women engineers and scientists make up the smallest percentage of tenured or full professors compared to any race/ethnicity and gender (Wu & Jing, 2011). Additionally, similar patterns were found among Asian women managers who are employed as scientists and engineers in the government workforce (Wu & Jing, 2011).

Highlighting the unique challenges AAW face, a growing body of evidence has directed increasing attention towards both racial and gender biases that AAW must confront in the STEM workforce (Castro & Collins, 2021; Funk & Parker, 2018; Malcom & Malcom, 2011; Wu & Jing, 2011). For example, AAW often feel they are held to different standards, made to feel unqualified in their positions, and need to constantly prove themselves to others (Funk & Parker, 2018). In addition, there is evidence to suggest that AAW in STEM face unique forms of discrimination and harassment that are likely tied to gendered and racialized stereotypes of Asian women. In a qualitative study of Asian American female doctoral students that were either recent graduates or currently earning their degree in a STEM field, the participants shared numerous instances of microaggressions and harassment, including frequent bullying, sexual innuendos, and racialized sexual harassment that objectified and demeaned them or their colleagues (Castro & Collins, 2021). Indeed, one respondent discussed her frustrations around frequent remarks she received for not meeting others' expectations of what an "Asian girl" should be (e.g.,



submissive), as well as receiving unwanted attention from other male students that only saw her as a “potential romantic interest,” rather than a fellow scientist (Castro & Collins, 2021).

Additionally, findings revealed how respondents often felt they were outside the bounds of what is considered normal for a scientist (i.e., White males) and American culture (i.e., perpetual foreigner) (Castro & Collins, 2021; Lowe, 1998; Shah, 2019). These experiences likely reflect the predominantly White and male dominated STEM environment that allows for a culture of marginalization and harassment to remain unchecked and normalized (Castro & Collins, 2021).

Together, this evidence suggests that AAW in STEM careers may face high levels of GRM among other forms of discrimination and harassment. However, claims of overrepresentation of Asian Americans in STEM continues to obscure the need to investigate AAW experiences. Further, studies that focus on Asian American women’s experiences in STEM fields, are mostly drawn from student experiences (Castro & Collins, 2021; McGee et al., 2017; Riegle-Crumb et al., 2020). Thus, more research is needed to illuminate AAW’s experiences of GRM in the STEM workforce.

## **Theoretical Framework**

### ***A Theory of Racialized Organizations***

In addition to being the primary means for supporting one’s livelihood, and the place that individuals spend the majority of their waking hours (Kim et al., 2018), the workplace provides a critical context for examining the experiences of GRM among AAW. Far from being race-neutral bureaucratic structures, Ray (2019) argues that “race is constitutive of organizations,” embedded in their foundations, processes, and hierarchies. Given this view, Ray proposes a theory of racialized organizations, with guiding tenets that state how racialized organizations: 1) strengthen or minimize the agency of workers based on their racial group; 2) justify the unequal

allocation of resources so that workers of color remain under-resourced compared to White workers in predominantly White organizations; 3) establish Whiteness as a credential; and 4) separate formal commitments to equity from actual organizational practices (Ray, 2019, p. 26). In conceptualizing the workplace as a racialized site, the theory of racialized organizations helps bring attention to the context within which AAW perceptions of GRM take shape. Thus, rather than considering GRM as solely an individual experience manifesting within a relative vacuum, GRM may be seen as a key mechanism that works to diminish agency among AAW in the STEM workplace. It could in turn determine, for example: how they use their time, shape their actions around who they must defer to, and determine their range of emotional expressions in the workplace (Hitlin & Elder Jr., 2007; Ray, 2019; Wingfield, 2010; Wingfield & Alston, 2014). As reminders of their sexual and racial differences, GRM reinforce AAW subordinate status within the workplace, and constitute a unique stressor that requires further investigation. While there has been extensive research on racial microaggressions (J. Kim et al., 2020; J. Y.-J. Kim et al., 2019; Nadal et al., 2015; Nadal et al., 2014; Sue, Bucceri, et al., 2007; Sue, Capodilupo, et al., 2007; Sue et al., 2009; Torino et al., 2018), research has yet to demonstrate the effects of GRM on AAW in the workplace. The next section will provide a brief review of microaggressions theory (Sue, Capodilupo, et al., 2007), highlighting some key pathways through which GRM can impact AAW work and health outcomes.

### ***Microaggressions Theory***

The workplace provides a key site for exploring AAW experiences of GRM, where certain interactional norms can make it difficult to simply walk away from coworkers and supervisors who contribute to AAW's repeated exposures to GRM (J. Y.-J. Kim et al., 2019; Young-Jin Kim et al., 2018). Compared to more blatant forms of discrimination,

microaggressions are more subtle in nature and, regardless of intent, communicate hostility towards members of the targeted racial group through everyday verbal, behavioral and environmental slights or insults (Jones et al., 2016; Sue, Capodilupo, et al., 2007). This is of particular concern for AAW, as there is evidence to show microaggressions as more commonly experienced by people of color and women than more overt forms of discrimination (Cortina, 2008; Jones et al., 2016, 2017). According to microaggressions theory, there are three forms of microaggressions: microassaults (i.e., explicit racial remarks or slurs), microinsults (i.e., subtle behaviors or comments that seek to demean a person based on their race or other aspect of their identity), and microinvalidations (i.e., comments or behaviors that negate or dismiss the experiential reality of the target's race) (J. Y.-J. Kim et al., 2019; Torino et al., 2018). These covert forms of discrimination have been shown to be just as detrimental if not more so than overt forms of discrimination, as they are often harder to detect and easier to perpetuate in the workplace (Jones et al., 2016; Offermann et al., 2014).

Numerous studies have demonstrated the negative health impacts of microaggressions, showing an increase in stress, negative affect, and symptoms related to depression and anxiety (Choi et al., 2017; Nadal et al., 2015; Nadal et al., 2014; Sue, Bucceri, et al., 2007; Sue et al., 2009; Torino et al., 2018; Young-Jin Kim et al., 2018). Sue (2010) proposes four pathways through which microaggressions can negatively affect individual health outcomes: biological (e.g., physiological responses such as increased blood pressure), cognitive (e.g., depletion of attentional resources trying to discern the meaning of the microaggression), emotional (e.g., anger, rage, hopelessness, depression), and behavioral (e.g., coping strategies or reactions that can help with adjustment or lead to maladaptive responses) (David, Petalio, et al., 2019). Further, growing research on internalized oppression indicate that the targets of microaggressions are

more likely to make internal attributions instead of external ones, and blame themselves for being “overly sensitive” and dismiss the discriminatory behavior of the perpetrators, which can contribute to increased psychological distress (David, Petalio, et al., 2019).

In addition, the negative health outcomes linked to microaggressions are also detrimental for work outcomes. Studies that have examined workplace microaggressions and work-related outcomes find that the emotional and cognitive labor spent on deciphering the intent behind microaggressions, having to modulate one’s emotions, along with determining how to respond to microaggressions can deplete cognitive resources and inhibit job performance (Holder et al., 2015; Jones et al., 2017; Louis et al., 2016; Kim et al., 2018). In addition to the types of microaggressions identified by Sue, Capodilupo, et al., (2007), a study examining microaggressions against Asians in the workplace identified overvalidation as a microaggression based upon ‘positive stereotypes’ (e.g. all Asians are good at math), that leads to seemingly favorable actions towards Asians (J. Y.-J. Kim et al., 2019). For example, Asian participants described incidents with their White supervisor, where they assigned them more work based on the stereotype that Asians are hard workers (J. Y.-J. Kim et al., 2019). However, these stereotypes inadvertently confine Asian Americans to certain roles, and limit their ability to make unique contributions to their organization (J. Y.-J. Kim et al., 2019). Taken together, microaggressions theory helps extend our understanding of how GRM may negatively impact work and health outcomes for AAW. The next section will review the theoretical framework of intersectionality and gendered racism to further ground an understanding of GRM experienced among AAW.

### ***Intersectionality and Gendered Racism***

The conceptualization for gendered racial microaggressions is grounded within a theoretical framework of intersectionality, which describes how interlocking systems of oppression and privilege (e.g., racism, sexism, heterosexism, classism) at the macro structural level result in differential impacts of discrimination or advantage at the micro level of the experiences of individuals who exist within multiple social identities (e.g., race, gender, SES, sexual orientation, and ability) (Bowleg, 2012; Crenshaw, 1989). While Kimberlé Crenshaw (1989) was the first to coin the term in a formative essay discussing the exclusion of Black women from White feminist and antiracist discourse, the framework for intersectionality is rooted in a much longer history of Black feminist scholarship (Collins, 1990; Crenshaw, 1989). With a history in critical race and legal studies, scholarship on intersectionality has generally focused on systems-levels processes. However, scholars in social science fields like psychology, public health, and social work have applied intersectionality to individual-level variables, through the investigation of overlapping forms of oppression (e.g., racism and sexism or gendered racism) on an individual's life experiences (Bowleg, 2012; Cole, 2009; Mehrotra, 2010).

Gendered racism refers to the overlapping experience of both racism and sexism (Essed, 1991). Guided by Essed's (1991) concept of gendered racism and Sue's (2010) concept of racial microaggressions, Lewis, Mendenhall, Harwood, and Huntt (2013) coined the term *gendered racial microaggressions* to describe the, "subtle and everyday verbal, behavioral, and environmental expressions based upon the intersections of one's race and gender" (p. 54). The study of intersecting identities and forms of oppression have been mixed in the field of psychology, with various approaches that include single-axis (e.g., gender and race only), comparative (e.g., Black women compared with White women or Black men), additive (e.g.,

adding together the effects of racism and sexism; Racism + Sexism), interactional/multiplicative (e.g., multiplying the effects of racism and sexism using a statistical interaction term; Racism x Sexism) and intersectional (e.g., measuring the unique overlapping experience of racism and sexism; Cole, 2009; Lewis et al., 2017; Lewis & Grzanka, 2016; Thomas et al., 2008). However, research has yet to demonstrate the direct effects of the subtle forms of gendered racism or GRM among Asian American women in the workplace. The following section will review current conceptualizations of GRM among AAW.

### **Gendered Racial Microaggressions**

The GRM that AAW experience today are tied to a much longer history of exoticization and exclusion that has shaped the discriminatory treatment of Asian American women in the United States (Espiritu, 2008; Matthaei & Amott, 1990; Wu & Chen, 2010). A large body of scholarship from ethnic studies, sociology, and psychology provides important context and historical grounding necessary to understand the origins of the inescapable imagery and stereotypes (e.g. China doll, dragon lady) attached to the bodies of Asian American women (Cheng, 2000, 2019; Espiritu, 2008; J. Lee, 2018; Wu & Chen, 2010). In particular, this literature highlights some of the earliest recorded moments in U.S. history when the Asian female body emerged as ‘other.’

Recorded as the first Asian woman on American soil in 1834, Afong Moy, known simply as The Chinese Lady, was an exoticized and degraded figure displayed as part of an exhibition among “Oriental” objects to paying customers for 50 cents (Cheng, 2019; Zhang, 2015). This image of difference and inferiority continued to play out in United States immigration policies when Congress passed the Page Law in 1875, which restricted the entrance of prostitutes from China and Japan, and was the first exclusionary act focused solely on the morality of Asian

women to determine their entry into the U.S. However, it should be noted that the few Asian women were allowed to enter the U.S. during this time were brought in as indentured prostitutes or servants with few rights or protections, which likely contributed to the sexual stereotypes about Asian women that emerged in the 19<sup>th</sup> century (Espiritu, 2008; Zhu, 2010). During World War II, American troops stationed abroad developed wartime perceptions of Asian women as submissive and sexually available, as many would visit brothels serviced by local working-class or poor Asian women (Lang & Cachero, 2021; Uchida, 1998). The fetishization of Asian women would go on to manifest through gendered and racialized stereotypes like “Dragon Lady,” and “Lotus Flower,” tropes widely portrayed through film and other forms of media in the U.S. and abroad (Chan, 1988; Espiritu, 2008; Uchida, 1998). Sadly, this history of exoticization, degradation, and exclusion continues to shape contemporary perceptions and experiences of discrimination that Asian American women face today. The Atlanta spa shooting that killed eight people, six of whom were Asian American women, is a sobering reminder of the very real-life consequences for Asian American women of racialized and sexualized violence that demand urgent attention (Dewan, 2021; Lang, 2021).

Despite the need to understand the harmful effects of gendered racism among AAW, prior research examining discrimination among AAW remains limited. A study exploring the relationship between perceived discrimination and health outcomes among Asian Americans finds high levels of discrimination associated with poor mental and physical health outcomes, with AAW reporting more negative mental and physical health outcomes at lower levels of discrimination (Hahm et al., 2010). Unable to capture their unique experience of gendered racism using a broad measure of perceived racial discrimination that assesses self-reported frequency of unfair treatment (e.g., with less respect, less courtesy), Hahm et al., (2010) suggest that AAW’s

increased vulnerability may be due to their double minority status. Indeed, much of the prior research exploring experiences of discrimination among Asian American women tend to use single-axis approaches that examine racism, with most studies using the day-to-day discrimination measure that is operationalized as a person's everyday experiences of unfair treatment over the past year (Hahm et al., 2010; Huang et al., 2011; Kim & Noh, 2014; Lee et al., 2021).

However, broad measures of discrimination are limited in their ability to capture the unique experiences of discrimination that Asian American women experience at the intersections of race *and* gender. To address this gap, a growing body of research has begun to apply an intersectional approach to explore the overlapping oppressions of Asian American women. In a multimethod qualitative study investigating the intersectional experiences of discrimination among Asian American women, Muckamala and Suyemoto (2018) identify six themes attributed to the specific intersections of AAW (e.g., exotic, not a leader, submissive and passive, cute and small, invisible, and service worker). To advance the empirical literature on the unique stressors impacting AAW mental health, Keum and colleagues (2018) conceptualized gendered racial microaggressions among AAW, operationalizing four key domains: (a) Ascribed Submissiveness, (b) Assumption of Universal Appearance, (c) Asian Fetishism, and (d) Media Invalidity, which are included as subscales in the Gendered Racial Microaggressions Scale for Asian American Women (GRMSAAW). The following sections will review the overarching themes of: (a) submissiveness, (b) sexual fetishism/exoticization, and (c) restrictive and universal body image assumptions that were conceptualized as the overarching themes of GRM for AAW in the development of the GRMSAAW (Keum et al., 2018).



### *Submissiveness*

Expectations of submissiveness are among the most prevalent gendered racial microaggressions experienced by AAW. Characterizations of AAW as passive, quiet, and meek, may be attributed in part to the phenomenon of Asian “mail-order brides” who are viewed as obedient “Oriental” women that are willing to please (Chan, 1988; Uchida, 1998). Additionally, other scholars have pointed to western discourses that ‘otherize’ and ‘feminize’ Asia, representations that are further displaced onto Asian bodies; such that Asian men are seen as effeminate and Asian women as hyper-feminine. This extreme feminization of Asian bodies marks Asian American women as doubly submissive in western contexts, which may be furthered through Confucian precepts that emphasize obedience among women (Chen, 2007). Commonly reproduced through film and other media depictions, assumptions of submissiveness are often experienced by AAW through GRM in their daily interactions. For example, Mukkamala and Suyemoto’s (2018) qualitative study of AAW’s intersectional experiences of discrimination found that AAW were often expected to remain amenable, docile, and quiet, particularly in relation to their White male friends who would remind them of their place as an Asian woman if they spoke up or tried to assert themselves. Similarly, Pyke and Johnson's (2003) qualitative study highlighted how expectations of submissiveness lead a normally outspoken AAW to not speak up in class because her teacher assumed that she was naturally shy and quiet. These assumptions of submissiveness have important implications for AAW who are expected to remain subservient and self-sacrificial, particularly in the workplace where assertiveness and dominance are valued and seen as a necessary trait for access to and advancement in their careers (Rosette et al., 2018).

### *Sexual Fetishism and Exoticization*

Experiences of sexual objectification and exoticization are also distinct among AAW. As previously described, hypersexualized stereotypes of Asian women may be linked to exclusionary immigration policies, such as the 1875 Page Act, that along with targeting Chinese and Japanese laborers, barred the entry of Chinese women, who at the time were seen as lewd and immoral prostitutes (Cheng, 2019; Espiritu, 2008; Zhu, 2010). The fetishization and exoticization of Asian women (i.e., “yellow fever”) that emerged during WWII was further cemented into popular culture through film and other media depictions during the Civil Rights era as a way for the West to maintain dominance over the East (Espiritu, 2008; Lang & Cachero, 2021; J. Lee, 2018; Uchida, 1998). The highly sexualized “Lotus Flower” or “China Doll” tropes reinforce stereotypes of AAW as sexually subservient, childlike, and meek (Lee, 2018). AAW have also been cast as the “Dragon Lady,” which paints AAW as devious, unfeeling and self-serving, using their sexual prowess to gain power (Lee et al., 2021; Uchida, 1998). This long history of hypersexualization of AAW has serious implications for the kinds of GRM that AAW encounter in their day-to-day. For instance, in Mukkamala and Suyemoto’s (2018) qualitative study of AAW’s experiences of intersectional discrimination, one respondent discussed feeling objectified and fetishized for being Asian, reporting unwanted physical contact from a man who expressed how lucky he was to be with a “beautiful Asian woman,” while another recalled being asked by a White boyfriend if she had a slanted vagina to match her eyes. Seen as objects of sexual desire meant to satisfy the desires of White men, AAW are never allowed to be agents of their own desire, but must remain as White men’s property, ready to accommodate their needs (Nemoto, 2006; Uchida, 1998; Yamamoto, 2000). In the workplace, the fetishization and exoticization of AAW may be especially harmful, as AAW may feel they have diminished

agency depending on their position within the organizational hierarchy, making it difficult to refuse unwanted sexual advances and harassment, particularly from those in positions of power (Ray, 2019; Rosette et al., 2018). These experiences of sexual exploitation may even lead to violence, and can have a profound impact on AAW's ability to feel safe and able to contribute to their organization.

### ***Restrictive and Universal Body Image Assumptions***

Further, limiting assumptions around AAW's appearance and body image may also contribute to AAW experience of GRM. Asian women's bodies are often characterized as thin, petite, fragile, having pale or porcelain skin, jet black hair, and possessing "doll-like" features (Brady et al., 2017; Wong et al., 2017). Considered desirable qualities for Asian women to possess, these features are shown to be important in rating femininity and beauty, and are also associated with submissiveness, naivete, and nonaggressiveness (Hall, 1995; Wagatsuma & Kleinke, 1979). However, as some scholars have highlighted, these stereotypical views of Asian women are ultimately oppressive perceptions that promote assumptions of AAW's powerlessness and childlike demeanor (Hall, 1995). In Mukkamala and Suyemoto's (2018) study, women expressed frustrations about other's expectations and treatment of them based on how they believe AAW should or should not look. Women discussed receiving remarks that would describe them as "tiny" and "cute," while those who did not fit that body image expectation (e.g., large chested) received scrutiny for deviating from the norm for AAW. In other qualitative studies, women described their experiences with racialized expectations of their appearance as infantilizing, limiting, and dehumanizing, particularly as they related to assumptions of submissiveness and sexual objectification (Brady et al., 2017; Smart & Tsong, 2014; Wong et al., 2017). These unrealistic standards for physical appearance place undue

pressure on AAW to conform to these stereotypes that negatively impact their well-being. In addition, these assumptions of universal body image may also play a role in eliciting further harassment in the workplace among AAW who conform to restrictive “doll-like” body standards, as well as those who deviate from the norm. Simply existing in an Asian female body seems to invite unwanted scrutiny and attention that leaves AAW to cope with the additional burden of GRM on top of managing their own work responsibilities.

### ***Differences in Gendered Racial Microaggressions***

Independent of psychological factors, key demographic indicators such as age, generational status, sexual orientation, relationship status, socioeconomic status, and race/ethnicity may also influence AAW’s perceptions of GRM (Keum et al., 2018). Research demonstrates noticeable variations in the association between discrimination and mental health across the life course among Asian Americans, with some studies indicating individuals 60 or older to report greater mental distress associated with racial discrimination, while others show individuals 41-50 years of age reported significantly more discrimination compared to individuals over the age of 51 (Cho et al., 2021; Yip et al., 2008). Hence, it is possible that there will be noticeable variation in the GRM that AAW report based on their age (e.g., older Asian American women may report fewer instances of Asian fetishism). Given that later generations tend to be more immersed in U.S. culture, and therefore more likely to identify and report racism, generational status may also be an important factor in shaping how AAW, particularly later generations perceive GRM (Hwang & Goto, 2009). Along with the interlocking oppressions due to race and sex, sexual minority AAW may experience further oppression according to their sexual orientation (Balsam et al., 2011; Ching et al., 2018; Velez et al., 2019). Marital status may also shape perceptions of GRM, as AAW may receive racism-specific support that can buffer

against the negative effects of GRM, or they may be with a partner that perpetuates GRM towards them exacerbating the negative effects of GRM they experience in the workplace (McNeil Smith et al., 2020). Socioeconomic status (SES; income, education) has also been linked to perceived discrimination in prior studies, where higher income and education are found to have protective effects against discrimination, although findings have been mixed among racial/ethnic minorities who may be more vulnerable to perceived discrimination at high levels of SES (Assari & Moghani Lankarani, 2018; Phelan & Link, 2015; Watson et al., 2002; Williams, 1999). Accordingly, AAW with high levels of SES who are deemed unfit for leadership positions and denied promotions may be more vulnerable to perceived discrimination, particularly as they relate to GRM (Huang, 2020; Tinkler et al., 2019; Yu, 2020).

Further, GRM may also be perceived differently depending on race/ethnicity. For example, assumptions of universal appearance, where the “typical” body image associated with East Asian women (e.g., fair skin, dainty, thin, black hair) may be less relevant for other understudied Asian ethnic groups. Indeed, in a study of body image and eating disorders among South Asian American women, Goel et al., (2021) found ascriptions of intelligence and obedience associated with the model minority stereotype were more representative of their discriminatory experiences than any clear beauty standards or expectations of how they should look. These findings are consistent with other research that has highlighted the salience of the model minority stereotype among South Asians, as well as other concerns of being looked down upon because of their brown skin (Poolokasingham et al., 2014). Even so, the GRMSAAW scale was developed and validated among a diverse sample of AAW, including a considerable number of South Asian and Southeast Asian women, suggesting the measure has broad applicability (Keum et al., 2018). Thus, noticeable variations across AAW are expected in terms of the extent

to which the GRMSAAW scale will reflect experiences of GRM, and the current study will provide an important foundation for understanding their experiences of GRM in the workplace. Hence, collecting data from a diverse sample of AAW will allow for important within-group differences to emerge and to help inform future studies.

### **Internalized Racism and Model Minority Myth Stereotypes**

Despite the centrality of GRM in shaping the experiences of AAW, there are other factors specific to Asian Americans that may influence how GRM are perceived. For example, there is preliminary evidence to support the link between internalized racism and GRM, suggesting that AAW who experience high levels of internalized racism may be less likely to view GRM as negative discriminatory events (Keum et al., 2018, 2022). Internalized racism refers to the acceptance and adoption (conscious or unconscious) of racist stereotypes, ideologies, and values perpetuated by dominant White culture about racial minorities, and can manifest through self-hatred, discrimination, and endorsement of negative or positive stereotypes about one's self or racial group (Choi et al., 2017; David, Schroeder, et al., 2019; James, 2020). Therefore, AAW that believe or accept the stereotypes of Asian women as submissive and hypersexualized objects, may not view GRM as discriminatory and may instead find ways to downplay, deny, and even justify experiences of GRM (David, Schroeder, et al., 2019). In a study examining how internalized racism among Asian Americans may exacerbate the link between GRM stress and AAW's suicidal ideation, findings indicate that while AAW experience an increased risk for suicidal ideation when experiencing low to mean levels of internalized racism related to self-negativity, there was no significant interaction effect at high levels of internalized racism related to self-negativity (Keum et al., 2021). Conversely, there is also research to suggest that internalized inferiority, a dimension of internalized racial oppression, is positively associated

with mental distress, and has been shown to exacerbate the link between racial/ethnic discrimination and mental distress at high levels of internalized inferiority (Garcia et al., 2019). These mixed findings align with a recent review among racial/ethnic minorities that highlights the complexity of internalized racism, which can serve as a self-protective strategy against negative health as well as contribute to worse health by exacerbating the link between discrimination and negative health (James, 2020).

Given the significance of internalized racism, the internalized model minority myth stereotype maybe another salient factor to consider in shaping perceptions of GRM among AAW. According to Yoo et al., (2010) there are two key components of the model minority myth: (a) Asian Americans are more successful than other racial minority groups because they are *the* model minority, and (b) Asian Americans' success can be attributed to their hard work, achievement, and belief in the American dream that rewards individuals based on their strong values and abilities (Kawai, 2005; E. D. Wu, 2013; F. Wu, 2002). Emerging research suggests the model minority myth to be linked to negative mental health effects among Asian American youth and adults (Yoo et al., 2010; Yoo & Miller, 2015; Atkin et al., 2018; Noh, 2018). For example, Asian American adolescents at a predominantly Asian school that experienced greater internalization of the myth of unrestricted mobility, a dimension of the internalized model minority myth stereotype, experienced increased depression and anxiety (Atkin et al., 2018). In a narrative analyses of Asian American women suicide survivors, interviewees describe the unbearable pressure of living up to model minority expectations of educational and economic success, with one interviewee discussing how along with the pressure to perform well at work, racist and sexist work conditions made her feel devalued and depressed (Noh, 2018). Thus, AAW's perceptions of GRM may vary depending on their levels of internalized racism, as well

as internalized model minority myth stereotypes which may exacerbate the relationship between GRM and psychological distress as well as GRM and job-related burnout.

## **Gendered Racial Microaggressions in the Workplace**

### ***Workplace Discrimination***

The majority of women in the American workforce continue to report some form of gender discrimination in the workplace related to unequal pay or promotion, less organizational support, and being treated as less competent than men (Hebl et al., 2020). Perceived workplace discrimination is defined as the perception of unequal or negative treatment of an employee or job applicant based on their social group membership (Dhanani et al., 2018; Hebl et al., 2020; Triana et al., 2015). Workplace discrimination has been linked to several negative workplace outcomes including lower job satisfaction (Lim et al., 2008; Penney & Spector, 2005), increased turnover intentions (King et al., 2010; Lim et al., 2008), and worse job performance, as well as worse physical and mental health (Karlsen & Nazroo, 2002; Lim et al., 2008). Organizational scholars have drawn upon psychological research on gender stereotypes that connect communal traits (i.e., feminine) and agentic traits (i.e., masculine) to various aspects of the workplace to explain the high levels of discrimination that women encounter in the workplace (Fiske et al., 2002; Rosette et al., 2018). Prior research suggests that women who violate prescriptive gender stereotypes (e.g., display more agentic traits), are more likely to encounter backlash, negative evaluations, and diminished status (Rosette et al., 2018; Rudman et al., 2012; Rudman & Glick, 2001; Rudman & Phelan, 2008). Women seeking to advance their careers, particularly in positions that require agentic traits (e.g., leadership positions), may be viewed as unlikeable and penalized in hiring, promotions, salary negotiations and everyday interactions (Amanatullah & Morris, 2010; Bowles et al., 2007; Heilman, 2001; Heilman et al., 2004; J. E. Phelan et al., 2008;



Rosette et al., 2018; Tyler & McCullough, 2009). Further, working mothers tend to be viewed more negatively for needing time off and are subject to worse labor market outcomes (e.g., lower pay, fewer promotions, less training, more on-the-job mistreatment) compared to non-mothers (Budig & England, 2001; Cuddy et al., 2004; England et al., 2016; Miner et al., 2014; Morgenroth & Heilman, 2017). However, much of the workplace discrimination research centers on the experiences of White women, and provide little understanding of AAW's experiences of workplace discrimination, particularly in regards to GRM.

Prior research that examines workplace discrimination among Asian American workers often assess how *others'* perceptions of Asian American workers as unfeeling, obedient, and passive result in their differential treatment in the workplace where social skills and dominance are valued (Berdahl & Min, 2012; Lai & Babcock, 2013; Tinkler et al., 2019). For example, in a study investigating how White evaluators perceive Asian American versus White job candidates for hiring and promotion decisions, Asian American candidates were less likely to be selected or promoted in positions involving social skills (Lai & Babcock, 2013). Further, Berdahl and Min (2012) indicate that East Asian American workers that violate expected norms and display both dominance and warmth, are more likely to be racially harassed at work (e.g., dominance penalty) when compared to their nondominant counterparts. However, a recent study demonstrates that regardless of behavioral style (e.g., warmth, likability, competence), Asian American women face less of a dominance penalty when compared with White women, and are instead perceived as least fit for leadership (Tinkler et al., 2019). Previous studies indicate that the discriminatory treatment Asian American workers face may be attributed to the endorsement of the model minority myth that stereotypes Asian individuals as hard-working high achievers that are highly competent, but lack warmth (J. Y. Kim et al., 2021; Lai, 2013; E. D. Wu, 2013; Yoo et al.,

2010). Regardless, the differential treatment that arises from these negative stereotypes in the form of microaggressions can be especially harmful for Asian Americans in predominantly White workplaces, as research suggests that White individuals, particularly those with high levels of colorblindness, perceive few negative effects of racial microaggressions such as microinsults, microinvalidations, and overvalidation (i.e., positive stereotypes) towards Asian Americans, suggesting that many of these instances remain overlooked (J. Y.-J. Kim et al., 2019).

Indeed, Asian American workers and women in particular encounter unique forms of workplace discrimination, yet few studies examine the perceptions of workplace discrimination among Asian American women and how it shapes their work and health outcomes. Rather, prior work highlights cultural differences (e.g. Confucian values) that limit Asian American representation in senior level leadership and management positions, otherwise referred to as the bamboo ceiling (Hyun, 2009). For example, there is research to suggest that East Asians reach a bamboo ceiling due their low assertiveness, which is deemed culturally incongruent with American leadership norms (Lu et al., 2020). However, Yu (2020) moves beyond cultural explanations to consider how experiences of the bamboo ceiling contribute to Asian American worker's experiences of workplace discrimination. In particular, findings indicate higher levels of discriminatory treatment are perceived in denied promotions decisions among a diverse sample of Asian Americans, noting important variations across subgroups and increased vulnerability among Vietnamese American women (Yu, 2020).

Emerging research among Asian American workers has linked perceived workplace discrimination with poor self-rated health, psychological distress, emotional exhaustion, and lower work engagement (A. B. de Castro et al., 2008; Gardner et al., 2021; Jun & Wu, 2021a; Oh

et al., 2021; Velez et al., 2018). For example, Castro et al., (2008) demonstrate an increased number of health conditions (e.g., hypertension, migraines, back problems) associated with workplace discrimination specific to being Filipino American (e.g., “Since I am Filipino, I am expected to work harder”). While this study is able to link experiences of workplace discrimination to Filipino racial/ethnic identity, research remains limited in identifying how cultural stereotypes like GRM shape AAW’s perceptions of discrimination. Recent studies suggest a need to expand the scope of workplace discrimination research to examine the harmful effects of group specific stereotypes, especially as new forms of racial harassment and prejudice evolve over time (Gardner et al., 2021; Jun & Wu, 2021a). For instance, a study investigating the use of stigmatizing labels for COVID-19, such as “Chinese Virus” and “Kung Flu,” a contemporary iteration of the perpetual foreigner stereotype, find that through decreased interpersonal justice perceptions, Asian American employees report increased emotional exhaustion and lower work engagement (Jun & Wu, 2021a). While workplace discrimination among AAW related to hiring and promotion decisions may result in more experiences of marginalization (e.g., being overlooked and seen as unfit for leadership), AAW are also likely to encounter unique forms of GRM related workplace sexual harassment that can be especially harmful for their well-being and job performance.

### ***Workplace Sexual Harassment***

Workplace sexual harassment remains a common experience in the workplace, with more than half of American women reporting experiences of unwanted sexual advances (Cortina & Areguin, 2021; Feldblum & Lipnic, 2016; Graf, 2018; Ilies et al., 2003; O’Neil et al., 2018). Workplace sexual harassment is defined as demeaning or derogatory behavior based on a person’s sex, and is appraised by the victim as offensive, and threatens their well-being (Berdahl

& Moore, 2006b; Cortina & Areguin, 2021). Sexual harassment can include a range of experiences, such as sexual coercion (e.g., job offer contingent on sexual favor), unwanted sexual attention (e.g., unwanted sex talk, nonconsensual touching, pressure for dates), and gender harassment which demeans and denigrates based on gender or sex, but is not aimed at sexual cooperation (e.g., sexually degrading images or remarks such as lewd graffiti; Cortina & Areguin, 2021). Prior research makes clear the damaging long-term consequences of sexual harassment on women's work and well-being, such as reduced job satisfaction (Houle et al., 2011; Lim & Cortina, 2005; Lonsway et al., 2013; Vargas et al., 2020); organizational withdrawal (e.g., tardiness, absenteeism, turnover; O'Connell & Korabik, 2000; Shupe et al., 2002; Vargas et al., 2020), increased symptoms related to posttraumatic stress, depression, anxiety, disordered eating (Harned & Fitzgerald, 2002; Ho et al., 2012; Reed et al., 2016); and a decreased sense of safety on the job (Clancy et al., 2017; Vargas et al., 2020). However, much of this research has also been based on the experiences of White women, without much consideration for how gender and race intersect to expose AAW to distinct forms of racialized and sexualized harassment in the workplace.

Although research among AAW in the workplace remains limited, there is some evidence to suggest AAW face additional forms of racialized and sexual harassment that are linked to worse mental health (Buchanan et al., 2018; Ho et al., 2012). In particular, a study examining the association among sexual harassment, posttraumatic stress (PTS) symptoms, and mental and physical health, find that although AAW reported less frequent sexual harassment, they suffered marginally more severe PTS symptoms and significantly more depression and psychological distress compared to their White counterparts (Ho et al., 2012). Further, in a study assessing sexual harassment, racial harassment, and well-being among AAW, Buchanan et al., (2018) find

gender harassment associated with more depression, whereas racial harassment, unwanted sexual attention, and sexual coercion were associated with an increase in PTS. Additionally, participants were more likely to experience unwanted sexual attention, which Buchanan et al., (2018) suggest may reflect the endorsement of stereotypes of AAW as sexually available and submissive. As previous work has indicated, the experience of sexual exploitation tied to being an AAW (e.g., being called an Asian doll) is incredibly conflicting and damaging, and can result in feelings of helplessness, distrust, self-blame and low self-worth related to being treated like an object (Chan, 1988).

These findings align with experiences of sexual and racial harassment among other racial minority women, who experience an increase in both the frequency and intensity of harassment, which is also tied to more severe mental health outcomes and negative work outcomes, such as increased turnover intentions and reduced job satisfaction (Berdahl & Moore, 2006b; Cassino & Besen-Cassino, 2019; Krieger et al., 2006; McLaughlin et al., 2012, 2017; Rosette et al., 2018). Despite literature revealing significant vulnerabilities among Asian American and racial minority women, studies remain limited in their ability to assess “racialized sexual harassment” stemming from race and gender-based stereotypes. Instead, most studies use general measures of sexual harassment or racial harassment (Berdahl & Moore, 2006b; Buchanan et al., 2018; Ho et al., 2012). Additionally, research has yet to demonstrate the effects of racialized sexual harassment among AAW within the context of the STEM workplace, which previous work has identified as an elite White male domain steeped in a culture of harassment (A. R. Castro & Collins, 2021).

This study seeks to fill the gap in the literature, by using a truly intersectional measure of GRM that can help identify unique forms of workplace sexual harassment motivated by gender and race-based stereotypes specific to AAW (Keum et al., 2018). Given that stereotypes of AAW

may invite unwanted exploitative and demeaning forms of harassment from coworkers or supervisors who endorse views of AAW as submissive and hypersexualized objects, there is an urgent need to identify these harmful effects on everyday encounters that can prove difficult to avoid in the workplace (Rosette et al., 2018; Y. J. Wong et al., 2021a; Young-Jin Kim et al., 2018). Moreover, AAW may be especially vulnerable to workplace sexual harassment. Compared to other racial groups, evidence suggests significant underreporting of sexual harassment and assault among AAW, that is likely tied to AAW's internalization of their subordinate status to men which can result in their overlooking or denying sexual harassment experiences (Ho et al., 2018; Loo & Chang, 2020). Taken together, the literature highlights important nuances in AAW's experience of workplace discrimination, suggesting that others' endorsement of GRM may contribute to their "relative invisibility" in some aspects of the workplace (e.g., hiring, promotion, leadership), but hypervisibility in other aspects of the workplace (e.g., workplace racialized sexual harassment). Thus, more research is needed to understand the experience of GRM among AAW in the workplace as a unique form of gendered and racialized discrimination and harassment with deleterious consequences.

### **Work and Mental Health Outcomes**

Prior research among women and people of color has linked sexist and racist discrimination and harassment with poor mental health outcomes, including psychological distress, depression, and anxiety (Alvarez & Shin, 2013; Borrell et al., 2011; G. C. Gee et al., 2007; G. C. Gee & Ford, 2011; K. L. Nadal & Haynes, 2012; Paradies, 2006; D. R. Williams et al., 2019; D. R. Williams & Mohammed, 2013). Similarly, indicators of poor work outcomes, such as job-related burnout, low job satisfaction, and turnover intentions have also been linked to sexist and racist discrimination and harassment (Cortina & Areguin, 2021; Harnois & Bastos,

2018; Hebl et al., 2020; Hennein et al., 2021; Rosette et al., 2018; Wadsworth et al., 2007).

However, few studies have examined the work and mental health outcomes associated with the unique interlocking forms of oppression based on the simultaneous experience of racist and sexist discrimination in the workplace. There is some evidence along with prior conceptualization to suggest that job-related burnout and psychological distress are the deleterious consequences linked to multiple forms of oppression in the workplace (Szymanski & Feltman, 2015; Velez et al., 2018; Volpone & Avery, 2013).

### ***Job-related Burnout***

Prior research describes job burnout as a psychological syndrome that emerges in response to prolonged emotional and interpersonal stressors, and is characterized by three key dimensions: emotional exhaustion, depersonalization, and a decreased sense of professional efficacy and accomplishment on the job (Maslach et al., 2001; Maslach & Leiter, 2016). Several organizational risk factors have been identified across many occupations which contribute to job burnout, including workload, control, rewards, community, fairness, and values (Maslach & Leiter, 2016). The or-Resources (JD-R) model posits that job burnout is likely to arise in individuals who experience job demands that are mentally and physically taxing and exceed the resources available to address and cope with the demands (Bakker & Demerouti, 2007; Maslach & Leiter, 2016). Prior research conceptualizing perceived discrimination as a job demand (i.e., stressor), where employees may experience victimization (e.g., microaggressions, abusive supervision) because of their race/ethnicity, finds perceived discrimination to be associated to less engagement and more burnout, which in turn relates to increased absenteeism, intent to quit, and lateness (Volpone & Avery, 2013).

As a distinct form of perceived discrimination, GRM may also be considered as a job demand that overwhelms available resources, and may lead to increased job-related burnout. For instance, a supervisor who endorses model minority stereotypes of Asians as “hard workers” and GRM related to AAW submissiveness, may assign AAW a high workload, assuming that they will accept a heavier workload with quiet compliance (Huang, 2020; J. Y.-J. Kim et al., 2019). Along with pressures to perform well at work, AAW may also be subject to racist and/or sexist work cultures that involve everyday encounters with sexual objectification and devaluation. In a qualitative study of suicidality among Asian American women, Noh (2018) describes the experience of one participant who became suicidal after burning out under unreasonable work conditions where she was expected to conform to a “skirts only” dress code for women, a rule imposed by her boss who would also comment on women’s breast cup size. AAW may also be vulnerable to different dimensions of burnout (e.g., emotional exhaustion, depersonalization or cynicism, and less personal accomplishment; Maslach & Leiter, 2016). Informed by the Conservation of Resources (COR) model, a study examining the association between government employees in California of multiple marginalized identities (e.g., women of color) and burnout revealed that AAW and Mixed/Other men are more vulnerable to emotional exhaustion and overall burnout when compared to Black, Latinx, Pacific Islanders/Native Hawaiians, and Mixed/Other women (Barboza-Wilkes et al., 2021). According to the theory of racialized organizations, the differential vulnerabilities that AAW and other racial minorities experience related to burnout may be explained in part by the unequal allocation of resources in racialized organizations (Ray, 2019). Specifically, people of color don’t have the economic or social resources needed to navigate White emotional expectations, White norms of behavior, or experiences of racial discrimination, which place an undue burden on racial minority employees



(Ray, 2019; Thornhill, 2015; Wingfield, 2010). Hence, current research and theory suggest that GRM among AAW in the workplace may be considered a distinct job demand that can lead to higher levels of burnout, particularly in organizations where they are under-resourced.

### ***Psychological Distress***

A growing body of evidence among Black women has linked gendered racial microaggressions with psychological distress (Lewis & Neville, 2015; Moody & Lewis, 2019; A. J. Thomas et al., 2008; M. G. Williams & Lewis, 2019). Psychological distress is typically characterized by feelings of anxiety, sadness, irritability, and depression that together comprise a generally negative affective state or mood that can contribute to impaired mental health and common mental disorders such as anxiety and depressive disorders (Hardy et al., 2003; Viertiö et al., 2021). Guided by microaggressions theory, GRM are likely to operate through similar biological, cognitive, emotional, and behavioral pathways that deplete one's resources and contribute to increased psychological distress (Sue, 2010; Sue, Bucceri, et al., 2007). As a unique stressor based on the intersection of one's race and gender, these subtle and everyday experiences of discrimination in the workplace can contribute to high levels of psychological distress among AAW who encounter repeated exposures of GRM through everyday workplace interactions.

Namely, AAW's agency, when situated within the larger context of racialized organizations, may be constrained by their position within the organizational hierarchy as well as by their presumed submissiveness which shapes the "racial deference rituals" they, as employees, are expected to perform as an employee (Ray, 2019). In other words, AAW may feel particularly distressed when they continue to encounter GRM from a supervisor, someone who they are expected to defer to, and may feel they have no other choice but to accept abusive

supervision. Although research has yet to demonstrate the direct effects of GRM on psychological distress within the context of the workplace, there is initial evidence to support the association between gendered racial microaggressions and negative mental health outcomes among Asian American women. Keum and colleagues (2018) developed a 22-item Gendered Racial Microaggressions Scale for Asian American Women (GRMSAAW) with four subscales to measure: (a) ascription of submissiveness, (b) Asian fetishism, (c) media invalidation, and (d) assumption of universal appearance. Initial validation of the scale found GRMSAAW scores to significantly predict variance in depressive symptoms beyond individual racial microaggression and sexism variables to suggest GRM as a unique risk factor for AAW's mental health (Keum et al., 2018). As the first intersectional measure to assess unique forms of gendered racial microaggressions among Asian American women, the GRMSAAW can help fill the gap in the literature on mental health and work-related impacts of gendered racism for Asian American women in the workplace.

### **Perceived Exploitation**

In conjunction with exploring outcomes associated with GRM, there is been growing evidence that experiences of perceived exploitation, defined as one's perception of being intentionally taken advantage of by and to the benefit of their organization has serious implications for both work and health outcomes, and may help explain the relationship between GRM and job-related burnout, and GRM and psychological distress (Livne-Ofer et al., 2019). The changing work landscape has left many workers in increasingly precarious positions, with fewer trade unions and collective bargaining agreements, and more forms of short-term employment such as freelance and contracted work that offer few protections and benefits (Adam Cobb, 2016; Bidwell et al., 2013). Changing work conditions have also made it easier for

more subtle forms of employee exploitation to occur, where management may request workers to put in excessive hours without extra pay or assign demeaning tasks without any relevance to their job role (J. Y. Kim et al., 2020). Indeed, Kim et al., (2020) provide further evidence of contemporary forms of exploitation, where questionable managerial practices such as the assignment of extra, unrewarded, or demanding work is seen as legitimate and fair for individuals who are “passionate” about their work because they derive meaning and enjoyment from their job.

Perceived exploitation may have particular salience for AAW who are targets of GRM in the workplace, as assumptions of submissiveness and sexual objectification may elicit feelings of being devalued and taken advantage of in the workplace. The concept of “objectification,” from the Intersectional Prototypicality Model (IPM), provides a useful framework for considering how AAW experiences of GRM may contribute to perceived exploitation (Y. J. Wong et al., 2021a). Objectification is considered a specific form of mechanistic dehumanization, and refers to people being judged or valued for their utility to others, instead of being valued for their full humanity (Vaes et al., 2011). Perceived exploitation may arise when AAW experience sexual objectification, recognizing that they are only valued for their physical attributes and as sex objects, as opposed to being valued for their unique skillset and ability to advance organizational goals (Huang, 2020; Noh, 2018; Y. J. Wong et al., 2021a).

Additionally, AAW who are viewed as submissive are more likely to be denied agency and seen as violable, which may result in exploitative acts that are deemed permissible by others. Wong and McCullough (2021) argue that the communication of such stereotypes may be a precursor to exploitation. For example, in a study investigating racial workplace microaggressions against Asians, Kim et al., (2019) examine *overvalidation* as a new form of

subtle microaggression that describes seemingly positive stereotypes of Asians being good at math or Asians being hard workers serving as justification for being assigned predominantly quantitative tasks or being assigned more work. In a qualitative study of second-generation Asian American professionals, an Asian American woman described how organizations are more likely to hire Asians because they are seen as naturally smart and hardworking, which ultimately “saves them a ton of money,” (Huang, 2020, p. 2489). Further, she relates these positive stereotypes of Asians as to why she is being paid less for doing similar work in a predominantly White workplace. Similarly, Williams and Dempsey (2014) find that Asian women scientists report feeling treated as perennial lab assistants, expected to subserviently perform menial administrative tasks that did little to help advance their careers. Over time, the lack of adequate compensation and reward (e.g., promotion, raise), particularly as it relates to AAW being seen as submissive (i.e., not fit for leadership, or more willing to accept less pay), are likely to increase AAW perceptions of exploitation.

Further, perceptions of exploitation in employee-organizational relationships may lead to negative work-related outcomes. In particular, Livne-Ofer et al., (2019) find that workers that experience anger and hostility (i.e., outward-focused emotional reactions) towards their organization are more likely to report lower work engagement, revenge against the organization, turnover intentions, and lower organizational commitment. In addition, workers that experience shame and guilt (i.e., inward-focused emotional reactions) due to their exploitative job are more likely to report employee burnout, silence, and psychological withdrawal. Livne-Ofer et al., (2019) conceptualize that employees that are prone to feelings of shame and guilt will blame themselves for their diminished personal accomplishments or not meeting their own personal goals, resulting in burnout. Given the particular relevance shame has to many Asian cultures,

AAW may experience feelings of shame for being victimized and guilt for remaining submissive, thereby allowing themselves to be exploited and experiencing job-related burnout as a result (Chan, 1988; Fung, 1999; Y. J. Wong et al., 2014; Y. Wong & Tsai, 2007; You, 1997).

There is also burgeoning empirical support for the adverse health effects that perceived exploitation can have on workers, including increased psychological distress and depression (Majeed & Fatima, 2020; Muntaner et al., 2015; Prins et al., 2021). Although research has yet to demonstrate the psychological outcomes for AAW that experience perceived exploitation, there is evidence to suggest a link between perceived exploitation and psychological distress. For instance, a study examining mental health inequalities in the nursing home industry find social class exploitation predictive of depression among nursing assistants (Muntaner et al., 2015). Similarly, a study that assessed the impact of exploitative leadership on psychological distress among nurses indicates that negative affectivity mediates the relationship between exploitative leadership and psychological distress (Majeed & Fatima, 2020). In addition, a study examining the association between economic exploitation and mental health among a nationally representative sample of US households, Prins et al., (2021) finds a positive relationship between exploitation and psychological distress and mental illness. Given the above conceptualization and evidence, I propose that perceived exploitation will act as an important underlying mechanism in the positive relationship between GRM and job-related burnout as well as GRM and psychological distress among AAW in the workplace. Finally, in an initial step towards revealing what factors may help to mitigate the negative effects of GRM, this study will examine the role of diversity climate as a potential moderator.

## **Diversity Climate**

Diversity climate is defined as employees' perceptions that their organization is fair and strives to promote values and practices that are inclusive of all demographic groups, particularly among historically disadvantaged groups (Holmes et al., 2021; Kossek & Zonia, 1993; McKay et al., 2008; Mor Barak et al., 1998; Triana et al., 2010). Much of the scholarship focused on diversity climate is broadly informed by Cox's (1994) Interactional Model of Cultural Diversity (IMCD), which proposes that an organization's diversity climate is comprised of: (a) individual-level factors such as prejudice and stereotyping, (b) group-intergroup factors that include the degree of conflict that may arise between different groups, and (c) organizational-level factors, such as institutional biases in the human resources systems and the degree to which underrepresented individuals are integrated into higher level positions (McKay et al., 2008).

The IMCD posits that organizational practices that promote fairness and social integration of all employees engenders a supportive diversity climate that should diminish discriminatory treatment, and improve employees' affective (e.g., satisfaction, commitment) and achievement outcomes (e.g., performance), and reduce withdrawal behaviors (e.g., job-related burnout, turnover; Holmes et al., 2021). Consequently, work contexts that perpetuate prejudices and stereotypes across all levels are more likely to contribute to a climate of discrimination and exclusion that can increase withdrawal behavior and reduce job performance and worker attitudes (Holmes et al., 2021). Given the routine experiences of workplace discrimination among racial/ethnic minorities in the U.S. (Deitch et al., 2003; Hebl et al., 2020; Roberts et al., 2004; Triana et al., 2015; Velez et al., 2019), theory and research suggest that racial/ethnic minorities that experience effective diversity management (i.e., organizations that foster a pro-diversity climate), should encounter less discrimination, thereby reducing the negative effects of

perceived discrimination on work and health related outcomes (Hardeman et al., 2016; Holmes et al., 2021).

Indeed, there are studies to suggest that diversity climate may play a key role in buffering against the negative effects of perceived discrimination. In a study examining the relationship between racial-ethnic differences in employee sales performance, McKay et al., (2008) found that pro-diversity climates moderated mean differences in sales performance, such that Black adults in pro-diversity stores exceeded White adults' sales per hour. Further, a study using panel data from the U.S. federal government, found diversity climate to positively moderate the relationship between racial diversity and organizational performance (Moon & Christensen, 2020). In particular, Moon and Christensen (2020) suggest that high levels of diversity climate may reduce intergroup conflicts by recognizing employee's unique talents and ideas as well as their multiple identifications (e.g., race, gender), which helps foster a greater sense of interpersonal integration and inclusion (Moon & Christensen, 2020; Shore et al., 2018). While the experiences of perceived discrimination may be implied, these studies remain limited in their focus on racial/ethnic differences and racial diversity. Even so, there is some evidence to support the relationship between diversity climate with perceived discrimination. Research among military workgroups reveal that the link between diversity climate and workgroup performance is fully mediated by discrimination, such that positive diversity climates result in fewer reports of discriminatory treatment (Boehm et al., 2014). Further, a study assessing the perceptions of the medical school diversity climate among medical students indicates that a negative racial climate, negative role modeling, and witnessing discrimination were significantly associated with an increase in depressive symptoms (Hardeman et al., 2016). Yet, research has yet to demonstrate

whether diversity climates help to mitigate the negative effects of GRM on job-related burnout and psychological distress among AAW.

Studies that examine experiences of organizational support among AAW suggest that they continue to encounter experiences of exclusion and discrimination in the workplace that may increase their perceptions of a negative diversity climate. Recent qualitative evidence among Asian American and Asian Canadian health care workers, indicate that, in response to the spike in racial microaggressions experiences that included threats of violence along with actual violence during the COVID-19 pandemic, their organizations remained largely silent (Shang et al., 2021). Research among Asian American women in public school administration also suggests insufficient organizational support, citing a lack of mentorship and inclusion in networks that would help provide necessary resources and strategies to advance their careers (Liang et al., 2018; J. “Grace” Liang & Peters-Hawkins, 2017). Negative diversity climate perceptions may be heightened among AAW that experience GRM. In particular, assumptions of submissiveness that view AAW as naturally quiet and diminutive may overlook their need for support. Additionally, model minority stereotypes that view Asian Americans as highly competent and intelligent may compound the challenges AAW face in feeling adequately supported and integrated into their organization, as these expectations shape pressures to be self-reliant and lead AAW to navigate the organizational landscape on their own (Rosette et al., 2018). Indeed, Asian American women may feel more heavily scrutinized and seek out less mentorship compared to White women, as doing so may elicit perceptions of them being incompetent and underqualified (Paludi & Coates, 2011).

What is more, there is reason to expect diversity climates may have little effect on Asian Americans, as they are often not included in organizational diversity efforts (e.g., Diversity,



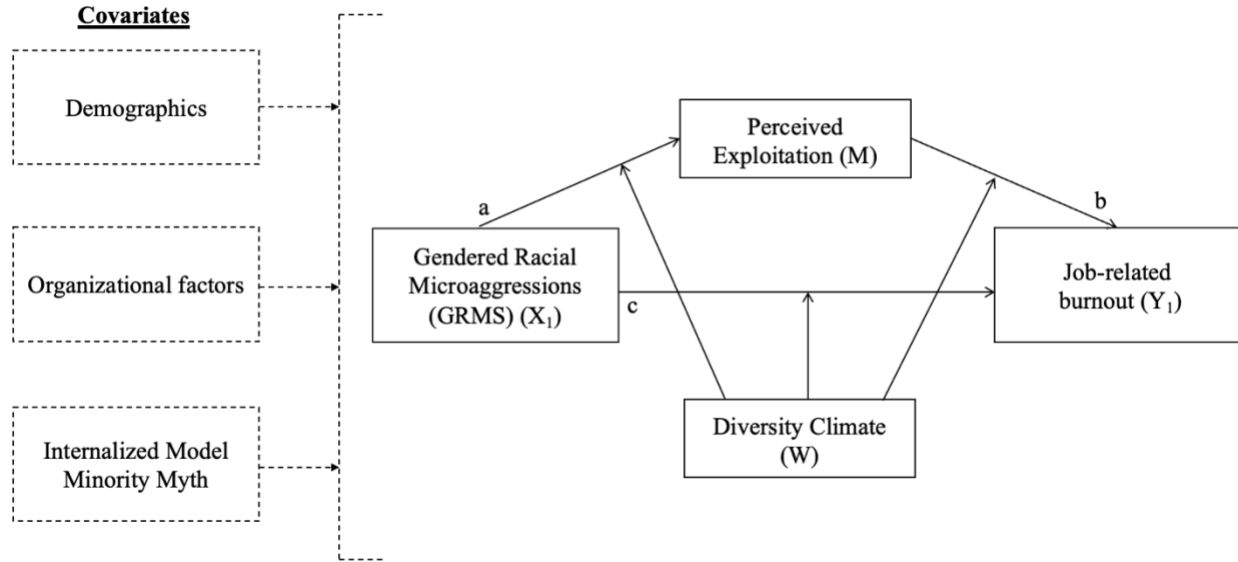
Equity, and Inclusion initiatives), particularly in fields where they are considered an overrepresented majority (Iporac, 2020). Diminished perceptions of effective diversity management among AAW may also reflect one of the tenets proposed by the theory of racialized organizations, which states that organizations often separate their commitments to equity, access, and inclusion from the policies and practices that maintain or do not challenge existing racial hierarchies (Ray, 2019). As a result, organizations are able to appear neutral and maintain their legitimacy without addressing experiences of discrimination and patterns of racial inequality (Ray, 2019). Indeed, Triana et al., (2010) demonstrate some of the disparate effects of diversity climates. For instance, findings indicate increased organizational support for diversity attenuate negative effects of perceived discrimination on affective commitment among White and Hispanic adults, but magnify the negative effects of perceived discrimination among African Americans (Triana et al., 2010). Despite efforts to create a positive diversity climate, organizational support for diversity may feel disingenuous, especially if AAW continue to experience high levels of GRM (Chrobot-Mason, 2003). Taken together, there is evidence to suggest potential benefits of pro-diversity climate in mitigating the negative effects of perceived discrimination in the workplace. However, theory and research among Asian Americans and Asian American women remains unclear, with some evidence indicating diversity climates may have little to no effect on mitigating the negative effects of GRM on job-related burnout and psychological distress.

### **Conceptual Models**

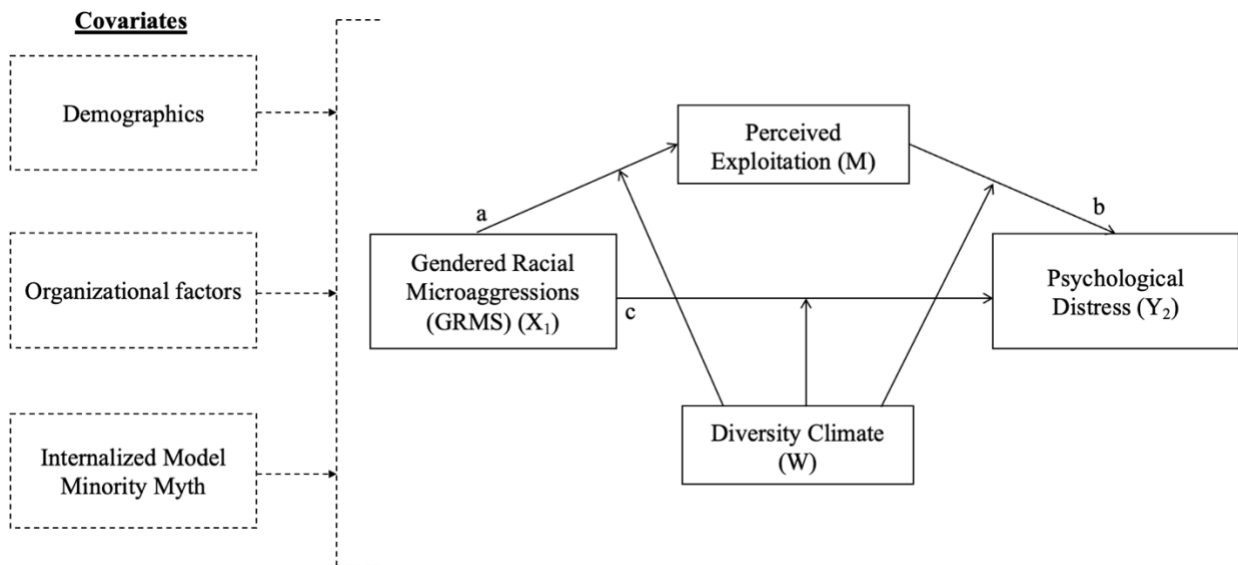
Guided by The Racialized Organizations Theory, Microaggression Theory, Intersectionality, Gendered Racism and the empirical literature, this study will assess the relationships between gendered racial microaggressions, perceived exploitation, diversity

climate, job-related burnout, and psychological distress among AAW in the STEM workforce. The conceptual models for this dissertation are depicted in Figure 1 and Figure 2 below.

**Figure 1.** *Conceptual Model for the Relationships between Gendered Racial Microaggressions, Perceived Exploitation, Diversity Climate, and Job-related Burnout*



**Figure 2.** *Conceptual Model for the Relationships between Gendered Racial Microaggressions, Perceived Exploitation, Diversity Climate, and Psychological Distress*



## ***Research Aims and Hypotheses***

This dissertation will be guided by three overarching research questions: 1) What is the relationship between GRMS and job-related burnout and GRMS and psychological distress among Asian American women in the STEM workforce? 2) Are the proposed relationships explained by perceived exploitation? and 3) Do the proposed direct and indirect relationships vary by perceived diversity climate? The study's specific research aims and hypotheses are described below:

**Aim 1.** Based on prior research that links perceived discrimination to greater job-related burnout and GRMS to psychological distress, this study will assess if GRMS among Asian American women are associated with job-related burnout and psychological distress.

***Hypothesis 1a.*** GRMS will be positively associated with job-related burnout.

***Hypothesis 1b.*** GRMS will be positively associated with psychological distress.

**Aim 2.** Given Asian American women's experiences of GRMS related to sexual objectification and submissiveness in the workplace, perceptions of exploitation may arise when they are mistreated (assigned more work, paid less, treated as sex objects). Hence, this study will examine whether there are indirect associations between GRMS and job-related burnout and GRM and psychological distress through perceived exploitation.

***Hypothesis 2a.*** In addition to the direct positive association with job-related burnout, GRM will yield indirect positive associations with job-related burnout through the mediating role of perceived exploitation.

***Hypothesis 2b.*** In addition to the direct positive association with psychological distress, GRM will yield indirect positive associations with psychological distress through the mediating role of perceived exploitation.

**Aim 3.** According to the literature, pro-diversity climates should reduce the negative effects of perceived discrimination on work and health related outcomes. Thus, this study will examine whether perceived diversity climate moderates the direct and indirect relationships (e.g., mediated by perceived exploitation) between GRMS and job-related burnout and GRMS and psychological distress.

***Hypothesis 3.1a.*** High levels of perceived diversity climate will weaken the association of GRMS with job-related burnout.

***Hypothesis 3.1b.*** High levels of perceived diversity climate will weaken the association of GRMS and perceived exploitation.

***Hypothesis 3.1c.*** High levels of perceived diversity climate will weaken the association of perceived exploitation with job-related burnout.

***Hypothesis 3.1d.*** High levels of perceived diversity climate will buffer the indirect relations between GRMS and job-related burnout, such that the mediation pathway is no longer significant.

***Hypothesis 3.2a.*** High levels of perceived diversity climate will weaken the association of GRMS with psychological distress.

***Hypothesis 3.2b.*** High levels of perceived diversity climate will weaken the association of GRMS and perceived exploitation.

***Hypothesis 3.2c.*** High levels of perceived diversity climate will weaken the association of perceived exploitation with psychological distress.

***Hypothesis 3.2d.*** High levels of perceived diversity climate will buffer the indirect relations between GRMS and psychological distress, such that the mediation pathway is no longer significant.

## CHAPTER 3: METHODS

### Participants

A total of 384 Asian American women participated in the study, sociodemographic information is provided in Table 1. Participants' ages ranged from 19 to 74 ( $M$  age = 35.01,  $SD$  = 10.47,  $Mdn=33$ ). Sociodemographic information including race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, and financial strain are presented in Table 1. The majority of the participants were Chinese (44.1%), followed by 10.4% Asian Indian, 7.6% Korean, 7.6% Taiwanese, 7.4% Filipino, 6.5% Vietnamese, 6.5% Multiethnic Asian, 3% Japanese, 2.7% Multiracial Asian, .5% Cambodian, .5% Laotian, .5% Malaysian, .5% Pakistani, .5% Singaporean, .3% Bangladeshi, .3% Hmong, .3% Indo Chinese, .3% Maldivian, .3% Thai. About 88% identified as heterosexual, 6.8% bisexual, 1.7% lesbian or gay, 1.7% queer, .6% pansexual, .6% asexual, .3% heteroflexible, and .3% straight and bisexual. More than half of the sample were married (52.3%), 25.1% single, 19.3% in a relationship, 1.7% divorced, 1.4% separated, and .3% widowed. There were slightly more 1<sup>st</sup> generation participants (48.5%) than 2<sup>nd</sup> generation participants (47.7%), the remaining 3.7% are 3<sup>rd</sup> generation. The sample was also highly educated, with more than half completing their postgraduate degree (56%) and 35% that have their undergraduate degree. Additionally, 4% have some postgraduate training, 2% received their high school diploma or finished some high school, 1.5% completed some college, and 1.6% completed community college. Further, more than half of the sample reported that they have enough money, with money left over (56%), 30% have just enough money to pay for expenses, 10.3% have some difficulty in meeting expenses, and 3.4% have considerable difficulty in meeting expenses.

Information regarding occupation and industry are provided in Table 2 and Table 3, respectively. The NIOSH Industry and Occupation Computerized Coding System (NIOCCS) occupational coding system was used to categorize the occupations and industry for the study participants (NIOSH, 2021). The study sample included participants that worked in diverse STEM occupations or workplaces, including 90 different occupations across 46 different industries. Among the top six occupations, the majority of the participants were miscellaneous life, physical, and social science technicians (e.g., Research Associate, Lab Technician, Postdoctoral Research Fellow, Graduate Student Researcher) ( $n=38$ ; 9.9%), 7.9% were software developers ( $n=7.9$ ), 7.1% physicians and surgeons ( $n=27$ ), 5.2% postsecondary teachers ( $n=20$ ), 5% physical scientists, all other ( $n=19$ ), and 5% were registered nurses ( $n=19$ ). The top six industries included hospitals ( $n=78$ ; 20.3%), 18% scientific research and development services ( $n= 69$ ), 16.7% colleges, universities, and professional schools, including junior colleges ( $n=64$ ), 7.8% computer systems design and related services ( $n=30$ ), 3.4% office of physicians ( $n=13$ ), and 3.4% other health care services ( $n=13$ ).

**Table 1**

*Socio-demographic characteristics of participants (N= 384)*

<b>Characteristics</b>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
<b>Age, mean (SD)</b>	35(10.47)	-
<b>Race/ethnicity</b>		
Chinese	162	44.1
Asian Indian	38	10.4
Korean	28	7.6
Taiwanese	28	7.6
Filipino	27	7.4
Vietnamese	24	6.5
Multiethnic Asian	24	6.5
Japanese	11	3
Multiracial Asian	10	2.7
Cambodian	2	0.5
Laotian	2	0.5

Malaysian	2	0.5
Pakistani	2	0.5
Singaporean	2	0.5
Bangladeshi	1	0.3
Hmong	1	0.3
Indo Chinese	1	0.3
Maldivian	1	0.3
Thai	1	0.3
<b>Sexual Orientation</b>		
Heterosexual	309	88
Bisexual	24	6.8
Lesbian or Gay	6	1.7
Queer	6	1.7
Pansexual	2	0.6
Asexual	2	0.6
Heteroflexible	1	0.3
Straight and Bisexual	1	0.3
<b>Relationship Status</b>		
Married	190	52.3
Single	91	25.1
In a relationship	70	19.3
Divorced	6	1.7
Separated	5	1.4
Widowed	1	0.3
<b>Generational Status</b>		
1st generation	182	48.5
2nd generation	179	47.7
3rd generation	14	3.7
<b>Educational Attainment</b>		
Postgraduate	208	55.9
College graduate	129	34.7
Some postgraduate	14	3.8
≤ High school	9	2.4
Some college	6	1.6
Community College	6	1.6
<b>Financial Strain</b>		
There is enough money	197	56.3
Just enough to pay expenses	105	30
Some difficulty in meeting expenses	36	10.3
Considerable difficulty in meeting expenses	12	3.4

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*Note.* Not all participants provided complete demographic information.



**Table 2***Participant Occupation Titles (N =384)*

<b>Occupation</b>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
Miscellaneous Life, Physical, and Social Science Technicians*	38	9.9
Software Developers, Applications and Systems Software	30	7.9
Physicians and Surgeons	27	7.1
Postsecondary Teachers (Professor)	20	5.2
Physical Scientists, All Other	19	5
Registered Nurses	19	5
Students (Research Assistant, Teaching Assistant)	14	3.7
Office and Administrative Support Workers, All Other	13	3.4
Managers, All Other	11	2.9
Computer Systems Analysts	10	2.6
Pharmacists	10	2.6
Medical Scientists	9	2.4
Psychologists	8	2.1
Chemists and Materials Scientists	7	1.8
General and Operations Managers	6	1.6
Medical and Health Services Managers	6	1.6
Biological Scientists	5	1.3
Clinical Laboratory Technologists and Technicians	5	1.3
Computer and Information Systems Managers	5	1.3
Management Analysts	5	1.3
Computer and Information Research Scientists	4	1
Education Administrators	4	1
Health Practitioner Support Technologists and Technicians	4	1
Miscellaneous Health Technologists and Technicians	4	1
Architects, except Naval	3	0.8
Engineers, All Other	3	0.8
Financial Managers	3	0.8
Miscellaneous Social Scientists and Related Workers	3	0.8
Other life, physical, and social science technicians	3	0.8
Secondary School Teachers	3	0.8
Secretaries and Administrative Assistants	3	0.8
Teaching Assistants	3	0.8
Biomedical Engineers	2	0.5
Chemical Engineers	2	0.5
Computer Programmers	2	0.5
Counselors	2	0.5
Diagnostic Related Technologists and Technicians	2	0.5
Dietitians and Nutritionists	2	0.5

Market Research Analysts and Marketing Specialists	2	0.5
Marketing and Sales Managers	2	0.5
Nurse Practitioners	2	0.5
Operations Research Analysts	2	0.5
Optometrists	2	0.5
Other Education, Training, and Library Workers	2	0.5
Other engineering technologist and technicians, except drafters	2	0.5
Other managers	2	0.5
Other social scientists	2	0.5
Writers and Authors	2	0.5
Aerospace Engineers	1	0.3
Agricultural and Food Scientists	1	0.3
Civil Engineers	1	0.3
Clinical and counseling psychologists	1	0.3
Computer Network Architects	1	0.3
Computer Support Specialists	1	0.3
Database administrators and architects	1	0.3
Dental Hygienists	1	0.3
Electrical and Electronics Engineers	1	0.3
Engineering Technicians, except Drafters	1	0.3
Environmental Engineers	1	0.3
Environmental Scientists and Geoscientists	1	0.3
Financial and investment analysts	1	0.3
First-Line Supervisors of Office and Administrative Support Workers	1	0.3
First-Line Supervisors of Production and Operating Workers	1	0.3
Industrial Engineers, including Health and Safety	1	0.3
Information Security Analysts	1	0.3
Inspectors, Testers, Sorters, Samplers, and Weighers	1	0.3
Insufficient Information	1	0.3
Janitors and Building Cleaners	1	0.3
Librarians	1	0.3
Library Assistants, Clerical	1	0.3
Mechanical Engineers	1	0.3
Media and communication workers, all other	1	0.3
Medical Assistants	1	0.3
Nursing Assistants	1	0.3
Nursing, Psychiatric, and Home Health Aides	1	0.3
Other community and social service specialists	1	0.3
Other healthcare support workers	1	0.3
Other mathematical science occupations	1	0.3
Other Teachers and Instructors	1	0.3
Paralegals and Legal Assistants	1	0.3
Personal Care Aides	1	0.3

Physician Assistants	1	0.3
Preschool and Kindergarten Teachers	1	0.3
Respiratory Therapists	1	0.3
Sales managers	1	0.3
Speech-Language Pathologists	1	0.3
Statisticians	1	0.3
Tax Preparers	1	0.3
Teacher Assistants	1	0.3
Training and Development Specialists	1	0.3

*Note.* Not all participants provided complete occupation information. \*Some examples for this occupation category include: Research Associate, Lab Technician, Postdoctoral Research Fellow.

**Table 3**

*Participant Industry Titles (N = 384)*

<b>Industry</b>	<i>Frequency (n)</i>	<i>Percentage (%)</i>
Hospitals	78	20.3
Scientific Research and Development Services	69	18
Colleges, Universities, and Professional Schools, including Junior Colleges	64	16.7
Computer Systems Design and Related Services	30	7.8
Offices of Physicians	13	3.4
Other Health Care Services	13	3.4
Industrial and Miscellaneous Chemicals	11	2.9
Pharmaceutical and Medicine Manufacturing	10	2.6
Management, Scientific, and Technical Consulting Services	8	2.1
Offices of Other Health Practitioners	8	2.1
Outpatient Care Centers	8	2.1
Elementary and Secondary Schools	7	1.8
Securities, Commodities, Funds, Trusts, and Other Financial Investments	7	1.8
Banking and Related Activities	4	1
Pharmacies and Drug Stores	4	1
Telecommunications, except Wired Telecommunications Carriers	4	1
Architectural, Engineering, and Related Services	3	0.8
Medical Equipment and Supplies Manufacturing	3	0.8
Other General Government and Support	3	0.8
Advertising, Public Relations, and Related Services	2	0.5
Aerospace Products and Parts Manufacturing	2	0.5
Civic, Social, Advocacy Organizations, and Grantmaking and Giving Services	2	0.5
Construction	2	0.5

Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	2	0.5
Non-depository Credit and Related Activities	2	0.5
Not Specified Food Industries	2	0.5
Residential Care Facilities, except Skilled Nursing Facilities	2	0.5
Services Incidental to Transportation	2	0.5
Agricultural Chemical Manufacturing	1	0.3
Communications, Audio, and Video Equipment Manufacturing	1	0.3
Electronic Component and Product Manufacturing, N.E.C.	1	0.3
Electronic Shopping	1	0.3
Individual and Family Services	1	0.3
Investigation and Security Services	1	0.3
Legal Services	1	0.3
Libraries and Archives	1	0.3
Motion Pictures and Video Industries	1	0.3
Not Specified Manufacturing Industries	1	0.3
Not Specified Wholesale Trade	1	0.3
Offices of Dentists	1	0.3
Offices of Optometrists	1	0.3
Other Information Services, except Libraries and Archives, & Internet Publishing, Broadcasting & Web Search Portals	1	0.3
Restaurants and Other Food Services	1	0.3
Savings Institutions, including Credit Unions	1	0.3
Soap, Cleaning Compound, and Cosmetics Manufacturing	1	0.3

*Note.* Not all participants provided complete occupation information.

## Procedure

The study was approved by the Institutional Review Board (IRB #21-001016). Data collection occurred during August 2022 to January 2023. Participants were recruited through various social media platforms (e.g., Facebook posts, Reddit, Twitter posts, and LinkedIn) and multiple online communication platforms (e.g., listservs, discussion forums, emails) that targeted AAW in STEM workplaces. The survey was advertised as an assessment of AAW's experiences navigating the STEM workplace. Purposeful sampling as well as snowball sampling methods were used to recruit AAW in the United States to capture variation in AAW's experience of GRM across occupations within STEM workplaces. Specifically, organizations that focused on Asian American communities or Asian American professional organizations were contacted and

asked whether the study recruitment message could be sent out via their newsletter (e.g., Asian Women for Health, National Asian Pacific American Women’s Forum). Participants that expressed interest in the study were asked to identify whether they knew of other Asian American women that might qualify for the study, and if they could provide their e-mail address, or if they could circulate the study recruitment message among their personal networks. The inclusion criteria for the study were (1) 18 years or older, (2) self-identity as an Asian American woman, (3) currently employed in a STEM occupation or workplace, and (4) live in the United States. Upon accessing the online survey, participants were first provided information about the study. After providing their consent, and completing a brief screener to assess their eligibility based on the inclusion criteria, participants were directed to an online survey consisting of study variable measures and demographic items hosted by Qualtrics. To minimize harm, participants were made aware during the initial consent process that there is a possibility that answering some of the questions may cause them to experience some discomfort or distress, and that they are allowed to skip questions or to stop at any time if they do not wish to continue. Additionally, a mental health resource sheet was provided with additional links and contact information for various Asian American organizations (e.g., Asian American and Pacific Island Women Lead, Asian American Health Initiative, Asian Mental Health Project). The survey duration generally ranged from 20 to 30 minutes, and included two attention check items (e.g., “Please select *agree*”) to help identify inattentive respondents that may be rushing through the instructions and questions (Kung et al., 2018). Participants were provided a \$20 e-gift card for completing the survey. Participants were directed to a separate survey not linked to their data to provide their e-mail address where the e-gift card could be sent. To ensure confidentiality, no identifying

information was collected, and all data were stored on a secure website requiring 2-factor authentication.

## **Measures**

### ***Dependent Variables***

**Psychological distress.** The mental health outcome was measured using the Kessler Psychological Distress Scale (K6) that evaluates six different manifestations of psychological distress in the past 30 days. The measure asks participants how often they felt, ‘worthless,’ ‘nervous,’ ‘hopeless,’ ‘so depressed that nothing could cheer you up,’ ‘restless or fidgety,’ and ‘that everything was an effort’ (Kessler et al., 2002, 2003). Response categories ranged from 0 (none of the time) to 4 (all of the time), with higher scores (range 0-24) representing higher levels of psychological distress (Kessler et al., 2002). K6 scores that are greater or equal to 6 indicate mental distress, scores greater or equal to 13 indicate mental illness (Kessler et al., 2002). The Cronbach’s alpha for the K6 is .89 and has been widely used and validated among samples of Asians and Asian Americans with a Cronbach’s alpha that ranges between .84 and .91 (Jang et al., 2018; Kang et al., 2015). Additionally, the K6 has demonstrated construct validity relationships with panic disorder, generalized anxiety disorder, bipolar disorder, and schizophrenia (Umucu et al., 2022). The Cronbach’s alpha in the current study was .86.

**Job-related burnout.** The work outcome was measured using the 16-item Oldenburg Burnout Inventory (OLBI) (Demerouti et al., 2003) which measures exhaustion and disengagement, two dimensions of job-related burnout across a wide range of occupations and has been previously validated for use in the U.S. (Halbesleben & Demerouti, 2005). To capture the workers’ level of mental and physical exhaustion related to their job, the exhaustion subscale included items such as, “*After work, I usually feel worn out and weary.*” To capture workers’

experiences of disengagement or active distancing from their job, participants are asked questions from the disengagement scale such as, “*I usually talk about my work in a derogatory way.*” Response categories range from 1=strongly disagree to 4=strongly agree. Higher scores indicate a greater degree of job-related burnout along the dimensions of exhaustion and disengagement. The OLBI has been validated with Asian American women employees, Asian American working adults, and Asian American psychiatrists (Halbesleben & Demerouti, 2005; Summers et al., 2021; Velez et al., 2018). Prior research has demonstrated good internal consistency estimates that range from .79 to .83 for the Exhaustion subscale and .78 to .84 for the Disengagement subscale and construct validity was supported with the Maslach Burnout Inventory a commonly used measure of burnout based on a three-factor model of emotional exhaustion, depersonalization, and personal accomplishment (Halbesleben & Demerouti, 2005). The Cronbach’s alpha for the exhaustion subscale and disengagement subscales were both .85.

### ***Independent Variables***

**Gendered racial microaggressions stress (GRMS).** The main predictor was measured using the 22-item, four-factor, Gendered Racial Microaggression Scale for Asian American Women (GRMSAAW; Keum et al., 2018) to assess the behavioral, verbal, and environmental manifestations of GRMS experienced by AAW in the United States. The current study employed three of the four subscales (17 items) as the media invalidation subscale is not considered relevant for workplace discrimination experiences (e.g., “I rarely see Asian American women playing the lead role in the media”) and instead used the following subscales: (a) Ascribed Submissiveness, (b) Asian Fetishism, and (c) Assumption of Universal Appearance. Additionally, for the purposes of this study, the survey instructed participants to report on their GRM experiences as they relate to the workplace, and in their interactions with their supervisors

and coworkers. A total scale score was calculated based on the items, which are rated on a six-point Likert scale 0=not at all stressful to 5= extremely stressful. Higher scores indicate greater GRMS. Sample items include “*Others expect me to be submissive,*” “*Others express sexual interest in me because of my Asian appearance,*” and “*Other have suggested that all AAW look alike.*” Good internal consistency with Cronbach’s alphas ranging from .86 to .94 for stress appraisal were reported by Keum and colleagues (2018). Additionally, GRMS associations with racial microaggressions, sexism, depression, and internalized racism scores provided support for construct validity (Keum et al., 2018). The Cronbach’s alpha in the current study was .94.

**Perceived exploitation.** The mediator was measured using the 14-item, single factor, Perceived Exploitative Employee-Organization Relationships scale (PEEORS; which uses a 7-point Likert scale (1=strongly disagree to 7=strongly agree; (Livne-Ofer et al., 2019). Sample items include, “*My organization takes advantage of the fact that I need this job,*” and “*My organization uses my ideas for its own personal benefit without acknowledging me for them.*” Higher scores indicate greater perceived exploitation. The item, “*my organization doesn’t provide me with job security as it wants to be able to fire me at its convenience,*” was excluded from the survey due to an error during data collection. The Cronbach’s alpha for the perceived exploitative employee-organization relationship is .96. Items were generated among a sample of working professions, and validated among a student sample from the U.K. and the U.S. (Livne-Ofer et al., 2019). Construct validity was supported by associations with perceived organizational support, psychological contract breach, distributive injustice, abusive supervision, perceived supervisor support, anger and hostility, shame and guilt, turnover intentions, and organizational commitment (Livne-Ofer et al., 2019). The Cronbach’s alpha in the current study was .95.



**Perceived diversity climate.** Perceptions of perceived diversity climate, the moderator, was measured using the Marginalized-Group-Focused Perceived diversity climate Scale (MGF-DCS; Sakr et al., 2023). The MGF-DCS scale measures individual level self-reported perceptions of their organization's perceived diversity climate (e.g., organizational policies, practices, and values) and was validated among full-time employees in Canada and the U.S. from diverse racial/ethnic backgrounds, including Asian individuals (Sakr et al., 2023). The scale consists of 16 items and three subscales that measure employees' sense of organizational commitment to the: 1) interpersonal valuing of marginalized groups; 2) organizational representation and inclusion of marginalized groups; and 3) organizational anti-discrimination of marginalized groups. An example from the interpersonal valuing of marginalized groups subscale is, "*in this organization, historically marginalized employees have the same opportunity to receive mentoring as historically non-marginalized employees.*" An example from the organizational representation and inclusion subscale is, "*top leadership in this organization strives for the representation, across different levels, of historically marginalized employees.*" An example from the organizational anti-discrimination subscale is, "*top leadership in this organization is committed to ensuring that historically marginalized employees are not discriminated against.*" The response options ranged from 1=very strongly disagree to 9=very strongly agree, with higher scores indicating a positive workplace diversity and inclusion climate. The internal reliability estimates using the omega coefficient demonstrated good reliability with the overall scale at .96 and .90 (interpersonal valuing), .91 (organizational representation and inclusion), and .87 (organizational anti-discrimination) for the subscales (Sakr et al., 2023). Construct validity was supported by associations with Mor Barak et al. (1998) diversity perceptions survey, McKay et al. (2008) perceived diversity climate scale, Pugh et al. (2008) perceived diversity

climate scale, impression management, and honesty-humility (Sakr et al., 2023). The omega coefficient ( $\omega$ ) in the current study revealed good reliability for the total score .96, and subscale scores .88 (interpersonal valuing), .91 (organizational representation and inclusion), .96 (organizational anti-discrimination). The Cronbach's alpha in the current study was .94 overall, .88 for interpersonal valuing, .91 for organizational representation and inclusion, and .87 for organizational anti-discrimination.

### ***Covariates***

**Internalized Model Minority Myth.** The Internalization of the Model Minority Myth Measure (IM-4; Yoo et al., 2010), is a 15-item measure with two factors, the model minority achievement orientation (MM—Achievement Orientation) and the model minority unrestricted mobility (MM—Unrestricted Mobility (Yoo et al., 2010). This measure was included as a covariate as there is literature to suggest that internalized model minority myth among AAW may affect perceptions of GRM as well as their experience of psychological distress and job-related burnout (Le & Barboza-Wilkes, 2022; Noh, 2018). The subscale for MM—Achievement Orientation includes 10 items that assesses the belief that Asian Americans are more successful when compared to other racial minority groups due to their strong work ethic and perseverance (e.g., *“In comparison to other racial minorities, Asian Americans are harder workers”*). The MM—Unrestricted Mobility subscale consists of five items that assess the belief that Asian Americans are more successful than other racial minority groups due to their lack of perceived racism and school/work barriers and belief in fair treatment (e.g., *“In comparison to other racial minorities, Asian Americans are less likely to face barriers at work”*). A 7-point Likert-type scale is used to measure all responses (1 = strongly disagree, 7 = strongly agree), with higher scores representing greater internalization of the model minority myth. Past research shows

higher scores on the IM-4 to be associated with greater psychological distress (Atkin et al., 2018). The IM-4 scale was validated with Asian American students and adolescents (Yoo et al., 2014; Yoo et al., 2010). The item, “*Asian Americans get better grades in school because they study harder,*” was excluded from the MM—Achievement Orientation subscale due to an error during data collection. Prior research has demonstrated good internal consistency estimates that range from .91 to .93 for MM—Achievement Orientation and .68 to .87 for MM—Unrestricted Mobility (P. Y. Kim & Lee, 2014; Yi & Todd, 2021; Yoo et al., 2014; Yoo et al., 2010).

Construct validity was supported by associations with Asian American values (e.g., collectivism, conformity to norms, emotional self-control), ethnic identity (e.g., EI Affective-Pride), and distress symptoms (e.g., general distress, somatic distress; Yoo et al., 2010). The Cronbach’s alpha in the current study for MM—Achievement Orientation subscale is .91 and .77 for the MM—Unrestricted Mobility subscale.

**Weekly work hours.** A single item was used to measure the usual hours worked each week for the past month, “During the past 12 months (52 weeks), in the weeks worked, how many hours did you usually work each week?” Prior conceptualization and research have demonstrated weekly work hours to be linked to emotional exhaustion, a dimension of job-related burnout (Jun & Wu, 2021b; Summers et al., 2021).

**Sociodemographic Characteristics.** Information about the participants’ age, race/ethnicity, sexual orientation, relationship status, generational status, financial strain, and level of education were collected for the study as these characteristics have been found in the literature to affect both job-related burnout and psychological distress (Avery et al., 2007; Barboza-Wilkes et al., 2023; Le & Barboza-Wilkes, 2022; Summers et al., 2021; Volpone & Avery, 2013).

## **Data Screening and Preparation**

Of the 585 total participants that accessed the survey, 193 cases were missing more than 20% of the data from the key study variables (e.g., this also included those who accessed the survey but did not proceed beyond the consent), and were removed (Schlomer et al., 2010). An additional 8 cases were removed for failing the attention/validity checks (e.g., “please select never,” “please select agree”). The final sample size was 384 (66%) used in subsequent analyses. Little’s missing completely at random (MCAR) analysis was conducted and the chi-square statistic was not significant  $\chi^2(1472) = 1480.71, p = .432$ , suggesting that the data were missing completely at random. Given that data were missing completely at random, with less than 5% of the data missing overall (Dong & Peng, 2013; IBM, 2021), the expectation maximization (EM) algorithm can provide unbiased parameter estimates and improve statistical power of analyses (Enders, 2001, 2003). Thus, the EM approach was employed for imputation of the missing data using the Missing Values Analysis within SPSS v28. After the missing values were imputed, the mean and total scores were calculated and used in subsequent analyses.

## **Data Analytic Strategy**

### ***Confirmatory Factor Analysis***

Prior to conducting the hierarchical multiple linear regression, mediation and moderated mediation analyses, a confirmatory factor analysis (CFA) was used to assess the factor structure and reliability of the Perceived Exploitative Employee-Organization Relationship Scale (Livne-Ofer et al., 2019) and the Marginalized-Group-Focused Perceived diversity climate Scale (MGF-DCS; Sakr et al., 2023), as these measures have not yet been validated among a sample of Asian American women. To evaluate whether the Perceived Exploitative Employee-Organization Relationship scale loaded onto a single factor, and supported the unidimensional factor structure

for the study sample of AAW, the following fit indices were used: (a) comparative fit index (CFI;  $>.95$  for good fit;  $.92$  to  $.94$  for adequate fit), (b) the root mean square error of approximation (RMSEA;  $<.08$  for acceptable fit), (c) the standardized root mean square residual (SRMR; close to  $<.08$  for acceptable fit) (Fabrigar et al., 1999; Hu & Bentler, 1999; Livne-Ofer et al., 2019). Similarly, a CFA was used to assess the factor structure for the MGF-DCS, and used the comparative fit index (CFI;  $>.95$  for good fit;  $.92$  to  $.94$  for adequate fit), the root mean square error of approximation (RMSEA;  $<.08$  for acceptable fit), and the standardized root mean square residual (SRMR; close to  $<.08$  for acceptable fit) to determine whether the 16-items supported the three-factor structure proposed by Sakr and colleagues (2023). Confirmatory factor analysis were conducted in R version 4.2.2 using the *lavaan* package.

### ***Univariate and Bivariate Analyses***

Preliminary univariate frequencies and percentages were determined for categorical variables, which included: race/ethnicity, sexual orientation, relationship status, generational status, educational attainment and financial strain. Means and standard deviations were calculated for continuous variables: GRMS, job-related burnout, psychological distress, age, week work hours, MM—Achievement orientation, and MM—unrestricted mobility. A correlation matrix was created to examine all continuous study variables. A one-way ANOVA was used to evaluate whether key study variables (e.g., GRMS, job-related burnout, psychological distress, perceived exploitation, and perceived diversity climate) showed group differences across categorical sociodemographic variables (e.g., race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, and financial strain) with continuous variables.

In addition to examining the summary statistics, the study variables were evaluated for normality through visual inspection of scatterplots and normal probability plots, as well as examining skewness and kurtosis. Regression assumptions for linearity, multicollinearity, homoscedasticity, and outliers were checked prior to proceeding with the proposed analyses, and are discussed in more detail in Chapter 4. All data management was performed in R (version 4.2.2). All descriptive statistics and the analytic strategy were conducted using SPSS (v.28) and alpha values of  $p < .05$  were used as the critical value to determine statistical significance.

***Aim 1 Analysis***

The first goal of Aim 1 was to examine the association between GRMS and job-related burnout. The second goal of Aim 1 was to examine the association between GRMS and psychological distress. The path diagram in Figure 3 and Figure 4 are presented below to show the direct relationships that was tested.

**Figure 3.** Path diagram for direct association between GRMS with job-related burnout

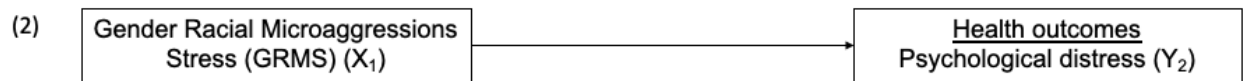


*Note.* These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

**Job-related burnout.** A hierarchical multiple regression analysis was conducted to assess the association between GRMS and job-related burnout. The first step included sociodemographic characteristics that might confound the association between GRMS and job-related burnout: age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment and financial strain. In the second step, weekly work hours were added as they may confound the association between GRMS and job-related burnout. In the third step,

internalized model minority myth, another potential confounder in the association between GRMS and job-related burnout was added. In the final step, GRMS was added to determine whether it would significantly predict job-related burnout after all known covariates were added, and to examine how much variance GRMS accounted for.

**Figure 4.** Path diagram for direct association between GRMS with psychological distress



*Note.* These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

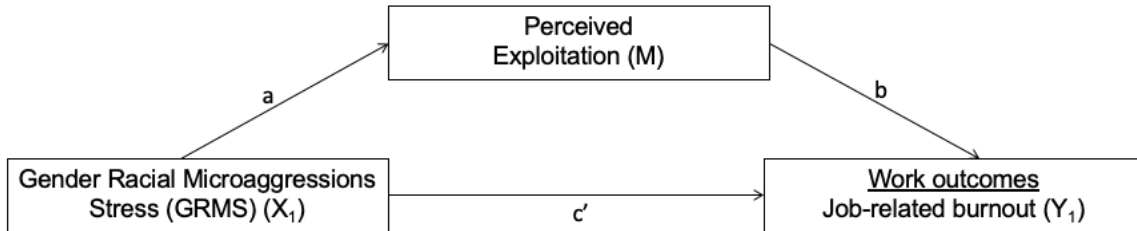
**Psychological Distress.** Similarly, hierarchical multiple regression analysis was conducted to assess the association between GRMS and psychological distress. The first step included sociodemographic characteristics that might confound the association between GRMS and psychological distress: age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment and financial strain. In the second step, weekly work hours were added as they may confound the association between GRMS and psychological distress. In the third step, internalized model minority myth was added as another potential confounder in the association between GRMS and psychological distress. In the final step, GRMS was added to determine whether it would significantly predict psychological distress after all the known covariates have been added, and to examine much variance GRMS accounted for.

### ***Aim 2 Analysis***

The first goal of Aim 2 was to examine perceived exploitation as a potential mediator in the relationship between GRMS and job-related burnout. The second goal was to examine perceived exploitation as a mediator in the relationship between GRMS and psychological

distress. The path diagrams in Figure 5 and Figure 6 are presented below to show the focal relationships that were tested in the mediation analyses.

**Figure 5.** Path diagram for the mediation model for job-related burnout



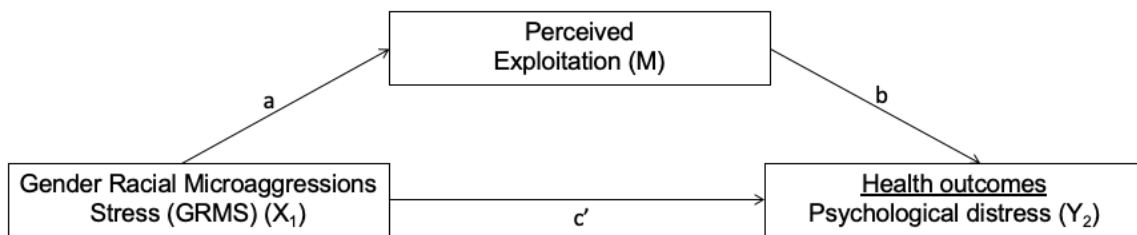
*Note.* These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

**Job-related burnout.** To assess aim 2, the present study used the PROCESS macro version 4.2 for SPSS (Hayes, 2022). PROCESS provides a contemporary and simple way of analyzing a simple mediation model (Hayes, 2022). In addition, PROCESS does not rely on the assumption that there must be a significant association between the X and Y, a necessary step in Baron and Kenny’s (1986) causal steps approach, before proceeding with mediation analysis (Hayes, 2009). Further, PROCESS utilizes bootstrapping methods to draw inferences about mediation, which has greater advantage over the Sobel test used in the causal steps approach, as it does not assume normality, can accommodate small sample sizes, and is adaptable to more complex models (Hayes, 2009). To conduct a simple mediation analysis, Model 4 was selected and job-related burnout ( $Y_1$ ) was specified in PROCESS as the outcome variable, and GRMS ( $X_1$ ) was specified as the antecedent variable, and perceived exploitation (M) was specified as the mediator. Age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours, and internalized model minority myth were entered as covariates. To determine if there is a significant coefficient for the indirect path between GRMS



( $X_1$ ) and job-related burnout ( $Y_1$ ) via perceived exploitation (M), percentile bootstrap confidence intervals were used (10,000 resamples) (Hayes & Scharkow, 2013). This method avoids the problem of assuming a normal sampling distribution for the indirect association of  $ab$  which may have a skewed distribution if the sample size is small (Edwards & Konold, 2020; MacKinnon, 2014). The claim that perceived exploitation (M) mediates GRMS's ( $X_1$ ) association on job-related burnout ( $Y_1$ ) is supported if the percentile bootstrap confidence intervals do not contain zero (Hayes, 2009; Preacher & Selig, 2012).

**Figure 6.** Path diagram for the mediation model for psychological distress



*Note.* These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

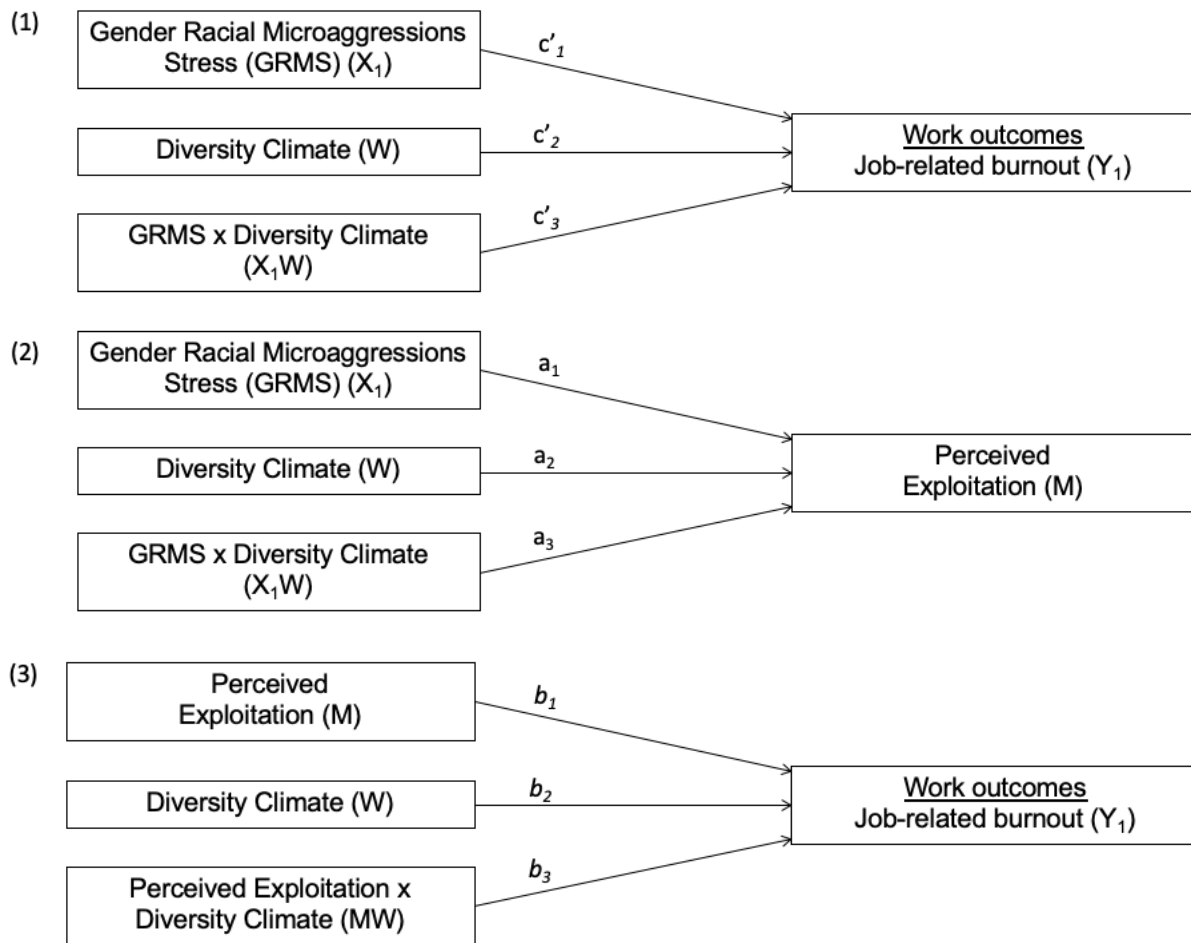
**Psychological Distress.** Similarly, PROCESS macro version 4.2 for SPSS was used to conduct the mediation analysis for the psychological distress outcome. Specifically, Model 4 was selected and psychological distress ( $Y_1$ ) was specified as the outcome variable, GRMS ( $X_1$ ) was specified as the antecedent variable, and perceived exploitation (M) was specified as the mediator. Age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours and model minority myth were entered as covariates. To determine if there is a significant coefficient for the indirect path between GRMS ( $X_1$ ) and psychological distress ( $Y_2$ ) via perceived exploitation (M), percentile bootstrap confidence intervals were used (10,000 resamples) (Hayes & Scharkow, 2013). The claim that perceived exploitation (M) mediates GRMS's ( $X_1$ ) association on psychological

distress ( $Y_2$ ) is supported if the percentile bootstrap confidence intervals do not contain zero (Hayes, 2009; Preacher & Selig, 2012).

**Aim 3 Analysis**

The first goal of Aim 3 was to evaluate whether the direct and indirect associations between GRMS and job-related burnout were conditional at varying levels of perceived diversity climate. The second goal was to evaluate whether the direct and indirect associations between GRMS and psychological distress were also conditional at varying levels of perceived diversity climate. The path diagrams in Figure 7 and Figure 8 are presented to show the focal relationships that were tested in the moderated mediation analyses.

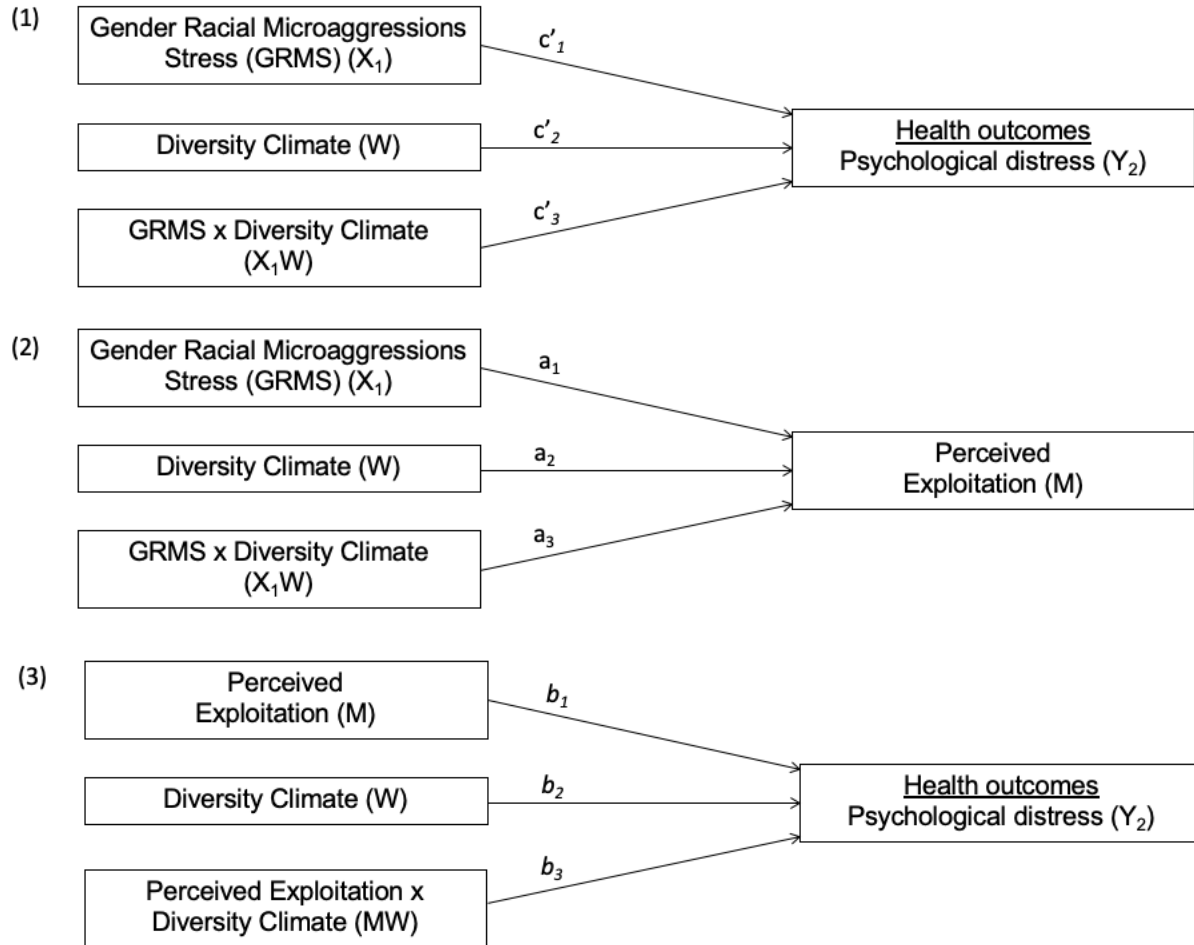
**Figure 7.** Path diagram for the moderated mediation models for job-related burnout



*Note.* These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

**Job-related Burnout.** To assess aim 3, the present study used Hayes (2022) PROCESS macro version 4.2 for SPSS to evaluate whether perceived exploitation mediates the association between GRMS and job-related burnout, and whether the indirect association is further conditional on levels of perceived diversity climate. Specifically, Model 59 was selected, which specifies a moderated mediation model in which  $W$  is allowed to moderate the direct path from  $X$  to  $Y$  and the first and second-stage indirect path from  $X$  to  $M$  and  $M$  to  $Y$ . Job-related burnout ( $Y_1$ ) was specified as the outcome variable, GRMS ( $X_1$ ) was specified as the antecedent variable, perceived exploitation ( $M$ ) was specified as the mediator, and perceived diversity climate ( $W$ ) was specified as the moderator. Age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours, and internalized model minority myth were entered as covariates. In addition, moderation was further probed by estimating and plotting the conditional direct and indirect associations of GRMS at values of perceived diversity climate corresponding to  $-1 SD$ , Mean,  $+1 SD$ , which represent low, moderate, and high values of perceived diversity climate in the current sample. Percentile bootstrap confidence intervals helped to determine if the moderated mediation (10,000 resamples), which is the association of perceived diversity climate ( $W$ ) on the indirect association of GRMS ( $X_1$ ) on job-related burnout ( $Y_1$ ) through perceived exploitation ( $M$ ), is statistically different from zero. There is evidence that the conditional indirect association of GRMS on job-related burnout is moderated at varying levels of perceived diversity climate if the confidence interval for the pairwise contrasts does not contain zero (Hayes, 2022).

**Figure 8.** Path diagram for the moderated mediation models for psychological distress



Note. These models are reduced-form conceptual models. All models controlled for relevant covariates including sociodemographic characteristics, weekly work hours, and internalized model minority myth.

**Psychological Distress.** Next, to evaluate whether perceived exploitation mediates the association between GRMS and psychological distress, and whether the indirect association is further conditional on levels of perceived diversity climate a moderated mediation model was tested using Hayes (2022) PROCESS macro version 4.2 for SPSS. In particular, Model 59 was selected, which specifies a moderated mediation model in which  $W$  is allowed to moderate the direct path from  $X$  to  $Y$  and the first and second-stage indirect path from  $X$  to  $M$  and  $M$  to  $Y$ . Psychological distress ( $Y_2$ ) was specified as the outcome variable, GRMS ( $X_1$ ) was specified as

the antecedent variable, perceived exploitation (M) was specified as the mediator, and perceived diversity climate (W) was specified as the moderator. Age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours, and internalized model minority myth were entered as covariates. In addition, moderation was further probed by estimating and plotting the conditional direct and indirect associations of GRMS at values of perceived diversity climate corresponding to  $-1 SD$ , Mean,  $+1 SD$ , which represent low, moderate, and high values of perceived diversity climate in the current sample. Percentile bootstrap confidence intervals helped to determine if the moderated mediation (10,000 resamples), which is the association of perceived diversity climate (W) on the indirect association of GRMS ( $X_1$ ) on psychological distress ( $Y_2$ ) through perceived exploitation (M), is statistically different from zero. There is evidence that the conditional indirect association of GRMS on psychological distress is moderated at varying levels of perceived diversity climate if the confidence interval for the pairwise contrasts does not contain zero (Hayes, 2022).

## CHAPTER 4: RESULTS

### Confirmatory Factor Analysis

A confirmatory factor analysis (CFA) was conducted to test the hypothesized one-factor model for the perceived exploitation measure and the three-factor model for the MGF-DCS, measures that have not been validated for use among Asian American women. The 13 items that were available for PEEORS were examined in a CFA which specified a one-factor structure. For the hypothesized one-factor model, the key indices suggested an acceptable fit for the CFI and TLI, a poor fit for the RMSEA and an acceptable fit for the SRMR ( $\chi^2 = 431.84$ ,  $p < .001$ ; Comparative Fit Index [CFI] = .91, Tucker-Lewis Index [TLI] = .90; Root Mean Square Error of Approximation [RMSEA] = .12 [.111, .132], Standardized Root Mean Square Residual [SRMR] = .04), based on the criteria recommended by Hu and Bentler (1999) and Brown (2015). Next, the seven items for interpersonal valuing of marginalized groups, the four items for organizational representation and inclusion of marginalized groups, and five items for organizational anti-discrimination were submitted to a CFA analysis which specified a three-factor structure for the MGF-DCS. Following the same criteria as before, the key indices for the hypothesized three-factor model suggested an adequate fit for the CFI, a close to acceptable fit for the RMSEA and an acceptable fit for the SRMR ( $\chi^2 = 426.87$ ,  $p < .001$ ; Comparative Fit Index [CFI] = .93, Tucker-Lewis Index [TLI] = .91; Root Mean Square Error of Approximation [RMSEA] = .09 [.083, .101], Standardized Root Mean Square Residual [SRMR] = .05) (Brown, 2015; Hu & Bentler, 1999). Model fit indices for the hypothesized factor structures for both the PEEORS measure and MGF-DCS are presented in Table 4.

**Table 4**

*Model Fit Indices for tested confirmatory factor analysis (CFA) models*

Models	$X^2$	df	CFI	TLI	RMSEA	SRMR
Perceived Exploitation one-factor model	431.84	65	0.91	0.90	0.120	0.042
MFG-DCS three-factor model	426.87	101	0.93	0.91	0.092	0.047

Notes.  $X^2$  = Chi-square goodness of fit statistics;  $df$  = degrees of freedom;  $CFI$  = Comparative Fit Index;  $TLI$  = Tucker Lewis Index;  $RMSEA$  = Root mean square error of approximation;  $SRMR$  = Standardized root mean square residual. Models are significant at  $p < .001$ .

### Descriptive Statistics and Bivariate Analyses

Table 5 presents the descriptive statistics, internal reliability estimates and bivariate correlations for the current study. Among the study sample, participants reported moderate levels of GRMS ( $M = 2.46$ ,  $SD = 1.14$ ), relatively low levels of psychological distress ( $M = 6.22$ ,  $SD = 4.68$ ), and an elevated risk for job-related burnout ( $M = 37.32$ ,  $SD = 8.23$ ). Additionally, the average score for perceived exploitation among the sample was 2.88 ( $SD = 1.44$ ) and 6.12 ( $SD = 1.49$ ) for perceived diversity climate. Participants reported working an average of 39 hours a week ( $SD = 11.75$ ) and experiencing moderate to high levels of Model Minority (MM)—Achievement Orientation ( $M = 4.88$ ,  $SD = 1.09$ ) and moderate to low levels of Model Minority (MM)—Unrestricted Mobility ( $M = 2.73$ ,  $SD = .98$ ).

GRMS exhibited a medium positive significant correlation with job-related burnout ( $r = .43$ ,  $p < .01$ ) and psychological distress ( $r = .42$ ,  $p < .01$ ). Furthermore, GRMS showed a medium positive significant correlation with perceived exploitation ( $r = .48$ ,  $p < .01$ ), and yielded a small negative significant correlation with perceived diversity climate ( $r = -.34$ ,  $p < .01$ ). Perceived exploitation showed a large positive significant correlation with job-related burnout ( $r = .52$ ,  $p < .01$ ) and a medium positive significant correlation with psychological distress ( $r = .42$ ,  $p < .01$ ). In addition, perceived diversity climate exhibited a medium negative significant correlation with job-related burnout ( $r = -.46$ ,  $p < .01$ ), a small negative significant correlation with psychological

distress ( $r = .33, p < .01$ ), and a large negative significant correlation with perceived exploitation ( $r = -.56, p < .01$ ).

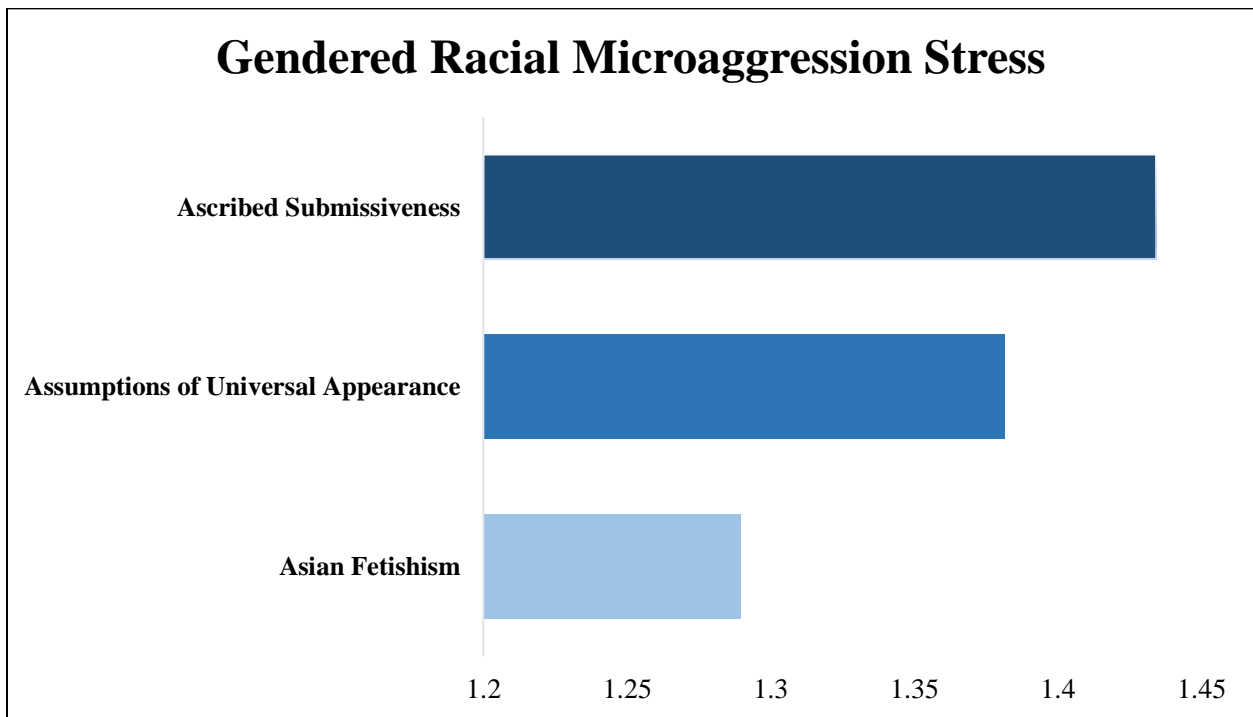
In terms of sociodemographic variables, age displayed a small negative correlation with job-related burnout ( $r = -.25, p < .01$ ). One-way ANOVAs were performed to examine the association between categorical sociodemographic predictors and job-related burnout (Table 6), revealing that there was a statistically significant difference in the mean job-burnout score between at least two groups for race/ethnicity ( $F(4, 362) = [3.411], p = .009$ ), relationship status ( $F(5, 357) = [8.877], p < .001$ ), generational status ( $F(2, 372) = [4.218], p = .015$ ), and financial strain ( $F(3, 346) = [11.931], p < .001$ ). Similarly, age displayed a small negative correlation with psychological distress ( $r = -.30, p < .01$ ). One-way ANOVAs showed that there was a statistically significant difference in the mean psychological distress score between at least two groups for race/ethnicity ( $F(4, 362) = [7.282], p < .001$ ), sexual orientation ( $F(3, 347) = [3.759], p = .011$ ), relationship status ( $F(5, 357) = [8.246], p < .001$ ), generational status ( $F(2, 372) = [4.604], p = .011$ ), and financial strain ( $F(3, 346) = [16.602], p < .001$ ) (Table 7). One-way ANOVAs revealed that there was a statistically significant difference in the mean perceived exploitation scores between at least two groups for sexual orientation ( $F(3, 347) = [2.814], p = .039$ ), relationship status ( $F(5, 357) = [2.941], p = 0.013$ ), and financial strain ( $F(3, 346) = [16.99], p < .001$ ) (Table 8). For perceived diversity climate, one-way ANOVAs (Table 9) showed that there was a statistically significant difference in the mean perceived diversity climate scores between at least two groups for sexual orientation ( $F(3, 347) = [2.643], p = .049$ ) and financial strain ( $F(3, 346) = [5.091], p < .002$ ).

The organizational covariate, weekly work hours showed a small positive significant correlation with perceived exploitation ( $r = .14, p < .01$ ). The psychological covariate,



internalized model minority myth, measured through achievement orientation and unrestricted mobility showed small negative significant correlations with burnout ( $r = -.22, p < .01$ ;  $r = -.21, p < .01$ ), psychological distress ( $r = -.14, p < .01$ ;  $r = -.18, p < .01$ ), and perceived exploitation ( $r = -.10, p < .01$ ;  $r = -.18, p < .01$ ). Conversely, achievement orientation exhibited a small positive significant correlation with perceived diversity climate ( $r = .24, p < .01$ ). Similarly, unrestricted mobility displayed a small positive significant correlation with perceived diversity climate ( $r = .19, p < .01$ ).

**Figure 9.** *Dimensions of Gendered Racial Microaggressions Stress*



Note. The chart is expanded to provide clear representation of the differences between each dimension of gendered racial microaggressions. Response options are from 0-5.

**Table 5***Descriptive statistics and bivariate correlations*

	Descriptive							Correlation								
	Min	Max	<i>M</i>	<i>SD</i>	Skewness	Kurtosis	$\alpha$	1	2	3	4	5	6	7	8	
1. GRMS	1.00	5.88	2.46	1.14	.72	-.37	.94	-								
2. K6	0	23.00	6.22	4.68	.66	-.17	.86	.43**	-							
3. OLBI	19.00	59.00	37.32	8.26	.09	-.32	.90	.42**	.61**	-						
4. PEEORS	1.00	6.62	2.88	1.44	.60	-.58	.95	.48**	.42**	.52**	-					
5. MGF-DCS	1.43	9.00	6.12	1.49	-.58	.19	.94	-.34**	-.33**	-.46**	-.56**	-				
6. MM - Achievement Orientation	1.33	7.00	4.88	1.09	-.47	.11	.91	-.01	-.14**	-.22**	-.10*	.24**	-			
7. MM - Unrestricted Mobility	1.00	5.40	2.73	0.98	.27	-.49	.76	-.33**	-.18**	-.21**	-.18**	.19**	.05	-		
8. Age	19.00	74.00	35.01	10.47	1.03	.86	-	-.03	-.30**	-.25**	-.02	.04	.33**	.04	-	
9. Weekly Work Hours	0	80.00	39.01	11.75	.20	2.38	-	.10*	-.04	.03	.14**	-.08	-.05	-.04	.17**	-

*Note.* GRMS=Gendered Racial Microaggressions Stress; K6 = Kessler Psychological Distress; OLBI = Oldenburg Burnout Inventory; PEEORS = Perceived Exploitative Employee-Organization Relationships Scale; MGF-DCS = Marginalized-Group-Focused Diversity Climate Scale; MM = Model Minority. \*\*p < .01, \*p < .05

**Table 6***One-way ANOVA results for Gendered Racial Microaggression Stress*

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Race/ethnicity	10.12	4, 362	2.53	1.944	0.103
Sexual Orientation	2.35	4, 347	0.588	0.435	0.783
Relationship Status	16.66	5, 357	3.332	2.548	0.028
Generational Status	0.82	2, 372	0.409	0.31	0.734
Educational Status	6.58	5, 366	1.315	1	0.418
Financial Strain	33.58	3, 346	11.195	8.993	<.001

Notes. *df* = degrees of freedom.**Table 7***One-way ANOVA results for Job-related Burnout*

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Race/ethnicity	904.04	4, 362	226.01	3.41	0.009
Sexual Orientation	509.83	3, 347	169.94	2.52	0.058
Relationship Status	2708.48	5, 357	541.70	8.88	<.001
Generational Status	558.39	2, 372	279.19	4.22	0.015
Educational Status	577.25	5, 366	115.45	1.72	0.128
Financial Strain	2277.11	3, 346	759.04	11.93	<.001

Notes. *df* = degrees of freedom.**Table 8***One-way ANOVA results for Psychological Distress*

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Race/ethnicity	593.53	4, 362	148.38	7.28	<.001
Sexual Orientation	233.67	3, 347	77.89	3.76	0.011
Relationship Status	821.09	5, 357	164.22	8.25	<.001
Generational Status	198.31	2, 372	99.16	4.60	0.011
Educational Status	159.64	5, 366	31.93	1.47	0.198
Financial Strain	967.38	3, 346	322.46	16.60	<.001

Notes. *df* = degrees of freedom.

**Table 9***One-way ANOVA results for Perceived Exploitation*

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Race/ethnicity	14.06	4, 362	3.52	1.68	0.155
Sexual Orientation	17.64	3, 347	5.88	2.81	0.039
Relationship Status	29.95	5, 357	5.99	2.94	0.013
Generational Status	0.19	2, 372	0.10	0.05	0.956
Educational Status	12.36	5, 366	2.47	1.18	0.319
Financial Strain	93.77	3, 346	31.26	16.99	<.001

Notes. *df* = degrees of freedom.**Table 10***One-way ANOVA results for Perceived diversity climate*

Predictor	Sum of Squares	<i>df</i>	Mean Square	<i>F</i>	<i>p</i>
Race/ethnicity	8.81	4, 362	2.20	1.01	0.403
Sexual Orientation	17.20	3, 347	5.73	2.64	0.049
Relationship Status	11.48	5, 357	2.30	1.07	0.377
Generational Status	8.28	2, 372	4.14	1.86	0.157
Educational Status	11.08	5, 366	2.22	1.01	0.412
Financial Strain	33.41	3, 346	11.14	5.09	0.002

Notes. *df* = degrees of freedom.**Aim 1 Results*****Hypothesis 1a Gendered Racial Microaggression Stress Associations with Job-related Burnout***

To examine the association between GRMS with job-related burnout, a multiple hierarchical regression analyses was conducted, controlling for age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours, and internalized model minority myth. Prior to proceeding with the

regression analyses, assumptions regarding linearity of relationships among the variables, independence of observations, homoscedasticity of error values, normality, no multicollinearity among predictors, and outliers were checked. To verify the assumption that linearity was met, a scatter plot of all study variables was generated, with job-related burnout as the dependent variable. A visual inspection of the scatter diagram suggests that the relationships between all variables in the model are linear. For the independence assumption to be met, the Durbin-Watson statistics was checked to ensure that there is no autocorrelation in error terms (Uyanto, 2020). The Durbin-Watson statistic was 1.979, which falls within the range of 1.5 to 2.4, indicating that the assumption of independence is met (Clement & Bradley-Garcia, 2022). Examining the same scatter diagram that was generated to assess linearity, the assumption of homoscedasticity can be confirmed, as the residuals fit a rectangular shape instead of differing in size across the DV (Osborne & Waters, 2019). All key variables were considered to meet the assumption for normality based on the criteria for kurtosis (-.58 to .19) and skewness (-.58 to .72) between -2 and +2, suggesting univariate normality (George & Mallery, 2010). Additionally, the normal P-P plot was visually inspected, and points were closely aligned along the diagonal line, suggesting that the data are normal (Hayes, 2018). Additionally, the variance inflation factor (VIF) and tolerance coefficients were examined, and all VIF coefficients were less than 10 and all tolerance coefficients were greater than .20, suggesting no significant multicollinearity among independent variables in the current study (Shrestha, 2020). Lastly, Cook's distance ( $D$ ) was calculated to ensure that data were not influenced by multivariate outliers. All cases had a Cook's distance less than 1, indicating that the analyses were not unduly influenced by multivariate outliers.

Results from the hierarchical regression analysis for job-related burnout are presented in Table 10. Sociodemographic characteristics were entered at Step 1. In Step 2, weekly work hours

was entered, followed by internalized model minority myth, measured through MM-Achievement Orientation and MM-Unrestricted Mobility, which was entered at Step 3. In the final step, GRMS was added. Job-related burnout was inputted as the dependent variable. Step 1 of the regression analysis was statistically significant,  $F(15, 286) = 4.44, p < .001$ , and accounted for 19% of the variance in job-related burnout. Adding in weekly work hours, at Step 2, did not increase the amount of variance by a significant increment ( $F(1, 285) = 4.25, p = .271$ ). Step 3 added internalized model minority myth dimensions, MM-Achievement Orientation and MM-Unrestricted Mobility, which increased the amount of variance explained by 5%, a significant increment ( $F(2, 283) = 5.15, p < .001$ ). In the final step, GRMS was added, and increased the amount of variance explained by 11%, a significant increment ( $F(1, 282) = 8.30, p < .001$ ).

Multiple regression results suggest that even when sociodemographic characteristics, weekly work hours, and internalize model minority myth were taken into account, greater reports of gendered racial microaggression stress was positively associated with greater job-related burnout ( $b = 2.72, \beta = .38, p = < .001$ ). Thus, hypothesis 1a was supported, demonstrating a positive association between GRMS and job-related burnout.

**Table 11***Results of Hierarchical Regressions Analyses for Job-related Burnout*

Variable	Step 1				Step 2				Step 3				Step 4			
	b	$\beta$	SE	t	b	$\beta$	SE	t	b	$\beta$	SE	t	b	$\beta$	SE	t
Age	-.05	-.06	.06	-.83	-.06	-.07	.06	-1.01	-0.02	-.03	.06	-.41	-.03	-.03	.05	-.53
Race/ethnicity																
East Asian		Ref.				Ref.				Ref.				Ref.		
South Asian	.32	.01	1.51	.21	.38	.01	1.51	.25	.97	.04	1.47	.66	-.07	-.003	1.37	-.05
Southeast Asian	2.52*	.12	1.26	1.10	2.50*	.12	1.26	2.06	2.38	.11	1.23	1.94	1.79	.08	1.14	1.57
Multiethnic Asian	2.15	.06	1.92	1.12	2.17	.06	1.92	1.13	1.92	.06	1.87	1.03	1.25	.04	1.73	.72
Multiracial Asian	1.62	.03	2.67	.61	1.82	.04	2.67	.68	1.57	.03	2.60	.61	1.57	.03	2.40	.66
Sexual Orientation																
Heterosexual		Ref.				Ref.				Ref.				Ref.		
Bisexual	-.19	-.01	1.80	-.11	-.19	-.01	1.80	-.10	-1.12	-.03	1.76	-.63	-1.10	-.03	1.63	-.68
Lesbian or Gay	-.12	-.002	3.65	-.03	-.13	-.002	3.65	-.04	.33	.01	3.54	.09	-.96	-.01	3.28	-.29
Other	2.70	.06	2.47	1.10	2.48	.06	2.48	1.00	2.17	.05	2.44	.89	2.24	.05	2.26	1.00
Relationship Status																
Single		Ref.				Ref.				Ref.				Ref.		
Married	-3.76**	-.22	1.30	-2.90	-3.65**	-.22	1.30	-2.81	-3.26**	-.19	1.26	-2.59	-3.41**	-.20	1.17	-2.93
In a relationship	1.08	.05	1.39	.78	1.06	.05	1.39	.77	1.44	.07	1.35	1.07	1.04	.05	1.25	.83
Separated	-2.07	-.02	4.92	-.42	-1.85	-.02	4.93	-.38	-.38	-.004	4.80	-.08	-.03	.000	4.44	-.01
Divorced or Widowed	-6.62	-.10	3.77	-1.76	-6.40	-.10	3.77	-1.70	-5.79	-.09	3.67	-1.58	-7.84*	-.12	3.41	-2.30
Generational Status	-.38	.88	-.03	-.43	-.41	-.03	.88	-.47	-.74	-.05	.87	-.86	-1.11	-.07	.80	-1.38
Educational Attainment	.32	.32	.06	1.00	.27	.05	.33	.83	.16	.03	.32	.52	.13	.02	.29	.43
Financial Strain	2.29***	.61	.22	3.76	2.25***	.22	.61	3.69	2.19***	.21	.60	3.62	1.26*	.12	.57	2.20
Weekly Work Hours					.05	.06	.04	1.10	.03	.04	.04	.67	-.01	-.01	.04	-.23
MM - Achievement Orientation									-1.14*	-.15	.45	-2.55	-1.07**	-.14	.41	-2.60
MM - Unrestricted Mobility									-1.69***	-.20	.46	-3.65	-.70	-.08	.45	-1.56
GRMS													2.72***	0.38	0.39	7.01
R	.44				.44				.50				.60			
R <sup>2</sup>	.19				.19				.25				.36			
Adjusted R <sup>2</sup>	.15				.15				.20				.32			
$\Delta R^2$	.19				.003				.05				.11			
F	4.44***				4.25				5.15***				8.30***			

Note. GRMS=Gendered Racial Microaggressions Stress; MM= Model Minority; ref. = reference. \*p < .05, \*\*p < .01, \*\*\* p < .001.

### ***Hypothesis 1b GRMS Associations with Psychological Distress***

To examine the association between GRMS with psychological distress, a multiple hierarchical regression analyses was conducted, controlling for age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, financial strain, weekly work hours, and internalized model minority myth. Prior to proceeding with the regression analyses, assumptions regarding linearity of relationships among the variables, independence of observations, homoscedasticity of error values, normality, no multicollinearity among predictors, and outliers were checked. To verify the assumption that linearity was met, a scatter plot of all study variables was generated, with job-related burnout as the dependent variable. A visual inspection of the scatter diagram suggests that the relationships between all variables in the model are linear. For the independence assumption to be met, the Durbin-Watson statistics was checked to ensure that there is no autocorrelation in error terms (Uyanto, 2020). The Durbin-Watson statistic was 1.613, which falls within the range of 1.5 to 2.4, indicating that the assumption of independence is met (Clement & Bradley-Garcia, 2022). Examining the same scatter diagram that was generated to assess linearity, the assumption of homoscedasticity can be confirmed, as the residuals fit a rectangular shape instead of differing in size across the DV (Osborne & Waters, 2019). All key variables were considered to meet the assumption for normality based on the criteria for kurtosis (-.58 to .19) and skewness (-.58 to .72) between -2 and +2, suggesting univariate normality (George & Mallery, 2010). Additionally, the normal P-P plot was visually inspected, and although the points were not perfectly aligned along the diagonal line, regression is robust to non-severe violations of normality (Hayes, 2022). Additionally, the variance inflation factor (VIF) and tolerance coefficients were examined, and all VIF coefficients were less than 10 and all tolerance coefficients were greater than .20,



suggesting no significant multicollinearity among independent variables in the current study (Shrestha, 2020). Lastly, Cook's distance ( $D$ ) was calculated to ensure that data were not influenced by multivariate outliers. All cases had a Cook's distance less than 1, indicating that the analyses were not unduly influenced by multivariate outliers.

Results from the hierarchical regression analysis for psychological distress are presented in Table 11. To examine the association between GRMS and psychological distress, sociodemographic characteristics were entered at Step 1 for the first regression analysis. In Step 2, weekly work hours was entered, followed by internalized model minority myth, measured through MM-Achievement Orientation and MM-Unrestricted Mobility, which was entered at Step 3. In the final step, GRMS was added. Psychological distress was inputted as the dependent variable. Step 1 of the regression analysis was statistically significant,  $F(15, 286) = 6.84, p < .001$ , and accounted for 26% of the variance in psychological distress. Adding in weekly work hours, at Step 2, did not increase the amount of variance by a significant increment ( $F(1, 285) = 6.39, p = .772$ ). Step 3 added internalized model minority myth measured via the dimensions of MM-Achievement Orientation and MM-Unrestricted Mobility, which increased the amount of variance explained by 3%, a significant increment ( $F(2, 283) = 6.39, p < .01$ ). In the final step, GRMS was added, and increased the amount of variance explained by 10%, a significant increment ( $F(1, 282) = 9.29, p < .001$ ). Multiple regression results suggest that even when sociodemographic characteristics, weekly work hours, and internalized model minority myth were taken into account, greater reports of gendered racial microaggression stress is positively associated with greater psychological distress ( $b = 1.41, \beta = .35, p < .001$ ). Thus, hypothesis 1b was supported, showing a positive association between GRMS and psychological distress.

**Table 12***Results of Hierarchical Regressions Analyses for Psychological Distress*

Variable	Step 1				Step 2				Step 3				Step 4			
	b	$\beta$	SE	t	b	$\beta$	SE	t	b	$\beta$	SE	t	b	$\beta$	SE	t
Age	-.08*	-.16	.03	-2.45	-.08*	-.16	.03	-2.46	-.07*	-.15	.03	-2.28	-.08*	-.16	.03	-2.53
Race/ethnicity																
East Asian		Ref.				Ref.				Ref.				Ref.		
South Asian	1.51	.10	.80	1.89	1.52	.10	.80	1.89	1.82*	.12	.80	2.28	1.28	.09	.75	1.71
Southeast Asian	1.87**	.16	.67	2.80	1.88**	.16	.67	2.80	1.92**	.16	.67	2.88	1.61**	.13	.62	2.60
Multiethnic Asian	2.93**	.16	1.02	2.87	2.94**	.16	1.02	2.87	2.91**	.15	1.01	2.88	2.56**	.14	.94	2.71
Multiracial Asian	-.37	-.01	1.42	-2.26	-.35	-.01	1.42	-2.24	-.33	-.01	1.41	-2.24	-.33	-.01	1.31	-2.25
Sexual Orientation																
Heterosexual		Ref.				Ref.				Ref.				Ref.		
Bisexual	.01	.00	.95	.01	.01	.00	.96	.01	-.18	-.01	.95	-1.19	-.17	-.01	.89	-1.19
Lesbian or Gay	-3.61	-.10	1.94	-1.86	-3.61	-.10	1.94	-1.86	-3.29	-.09	1.92	-1.71	-3.95*	-.11	1.79	-2.21
Other	2.42	.10	1.31	1.84	2.39	.10	1.32	1.81	2.67*	.11	1.32	2.02	2.70*	.11	1.23	2.20
Relationship Status																
Single		Ref.				Ref.				Ref.				Ref.		
Married	-2.05**	-.22	.69	-2.98	-2.03**	-.22	.69	-2.94	-1.89**	-.20	.68	-2.77	-1.97**	-.21	.64	-3.09
In a relationship	-1.10	-.09	.74	-1.49	-1.10	-.09	.74	-1.49	-.93	-.08	.73	-1.28	-1.14	-.10	.68	-1.67
Separated	1.64	.04	2.61	.63	1.67	.04	2.62	.64	2.44	.05	2.60	.94	2.62	.06	2.42	1.08
Divorced or widowed	-2.51	-.07	2.00	-1.25	-2.48	-.07	2.01	-1.23	-2.53	-.07	1.99	-1.27	-3.59	-.10	1.86	-1.93
Generational Status	.46	.06	.47	.98	.46	.05	.47	.97	.45	.05	.470	.97	.27	.03	.44	.61
Educational Attainment	.35*	.12	.17	2.07	.35*	.12	.17	2.01	.32	.11	.17	1.88	.30	.10	.16	1.90
Financial Strain	1.40***	.24	.32	4.33	1.40***	.24	.33	4.30	1.27***	.22	.33	3.88	.79*	.14	.31	2.53
Weekly Work Hours					.006	.02	.02	.29	.001	.002	.02	.04	-.02	-.04	.02	-.86
MM - Achievement Orientation									-.05	-.01	.24	-.21	-.02	-.004	.23	-.08
MM - Unrestricted Mobility									-.79**	-.16	.25	-3.13	-.28	-.06	.25	-1.11
GRMS													1.41***	.35	.21	6.63
R	.51				.51				.54				.62			
R <sup>2</sup>	.26				.26				.29				.39			
Adjusted R <sup>2</sup>	.23				.22				.24				.34			
$\Delta R^2$	.26				.00				.03				.10			
F	6.84***				6.39				6.39**				9.29***			

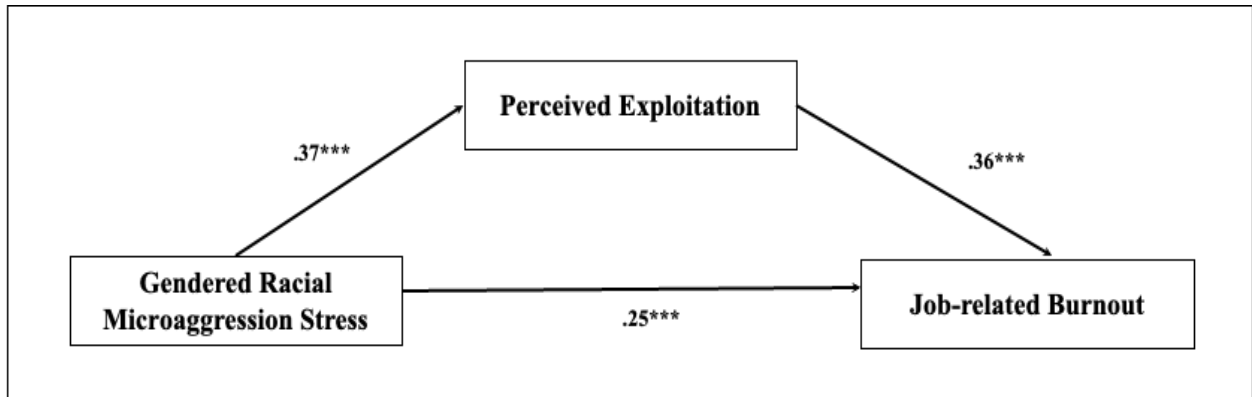
Note. GRMS=Gendered Racial Microaggressions Stress; MM= Model Minority; ref. = reference. \*p < .05, \*\*p < .01, \*\*\* p < .001.

## Aim 2 Results

### *Hypothesis 2a GRMS and Job-related Burnout via Perceived Exploitation*

To examine the potential mediating role of perceived exploitation, Model 4 from PROCESS Version 4.2 was selected, using a percentile bootstrapping method, which is the recommended inferential method for indirect associations that provides a good balance between validity and power (Hayes & Scharkow, 2013; Tibbe & Montoya, 2022). This method involves random resampling from the original sample (e.g., 10,000) to form an observed bootstrap sampling distribution of the indirect association (Tibbe & Montoya, 2022). Results from the mediation analysis suggest that GRMS was indirectly associated with job-related burnout through perceptions of exploitation. As can be seen in Figure 9 and Table 12, participants that experience greater GRMS also perceived greater exploitation (*a* path;  $\beta = .37, p < .001$ ), and subsequently those that perceived greater exploitation in their workplace experienced more job-related burnout (*b* path;  $\beta = .36, p < .001$ ). All paths including the direct path from GRMS to job-related burnout (*c'* path;  $\beta = .25, p < .001$ ) were positive and significant. Financial strain and MM-Achievement Orientation significantly predicted perceived exploitation as covariates. A 95% bootstrap confidence interval, with 10,000 resamples was constructed to conduct inferences about the indirect association. Overall, there was a significant total association of GRMS on job-related burnout ( $\beta = .38, SE = .05, 95\% CI = [.271, .482]$ ). The total association was comprised of a significant direct association ( $\beta = .24, SE = .05, 95\% CI = [.138, .350]$ ) that accounted for 65% of the total association and a significant indirect association ( $\beta = .13, SE = .03, 95\% CI = [.079, .196]$ ) that accounted for 35% of the total association. The model accounted for 36% of the variance in job-related burnout, and results suggested mediation was present for the current study sample, in support of hypothesis 2a.

**Figure 10. Mediation model of perceived exploitation as a mediator between gendered racial microaggression stress and job-related burnout**



Note. \*p < .05, \*\*p < .01, \*\*\* p < .001.

**Table 13**

*Estimate of Indirect and Total Effects from Bootstrap Analysis (OLBI)*

IV	Mediator	DV	Standardized Effect Estimate	SE	95% Bootstrapped CI
Direct effect					
GRMS		OLBI	.244	0.05	[.138, .350]
Indirect effect					
GRMS	PEEORS	OLBI	.133	.03	[.079, .196]
Total effect					
GRMS		OLBI	.376	.05	[.271, .482]

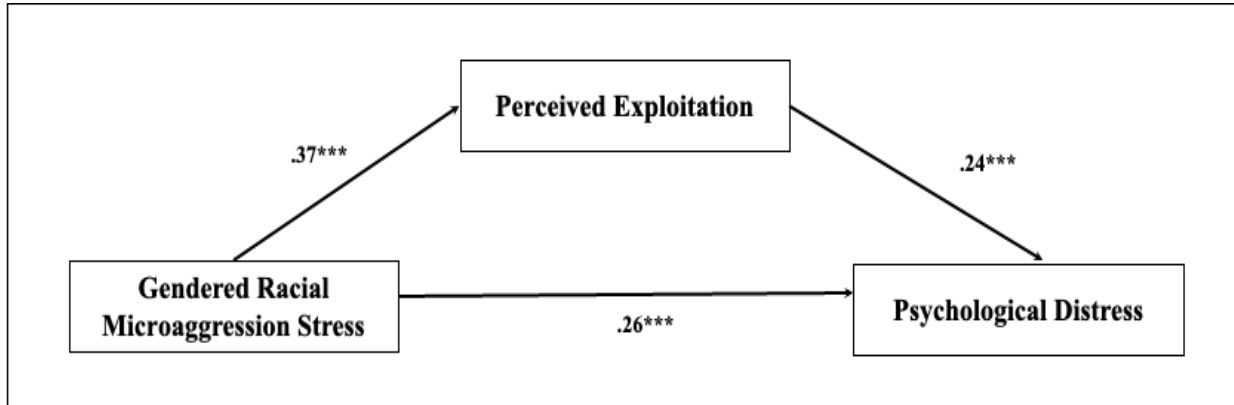
Notes. GRMS = Gendered Racial Microaggressions Scale; PEEORS = Perceived Exploitative Employee-Organizational Relationship Scale; OLBI = Oldenburg Burnout Inventory; IV = Independent Variable; DV = Dependent Variable. SE = Standard Error; CI = Confidence Interval.

***Hypothesis 2b GRMS and Psychological Distress vis Perceived Exploitation***

For the reasons previously mentioned, the percentile bootstrapping method was also used to assess the potential mediation role of perceived exploitation in the relationship between GRMS and psychological distress (Hayes & Scharkow, 2013; Tibbe & Montoya, 2022). Using

Model 4 from PROCESS Version 4.2, the results from the mediation analysis suggest that GRMS was indirectly associated with psychological distress through perceptions of exploitation. As can be seen in Figure 10 and Table 13, participants that experience greater GRMS also perceived greater exploitation (*a* path;  $\beta = .37, p < .001$ ), and subsequently those that perceived greater exploitation in their workplace experienced more psychological distress (*b* path;  $\beta = .24, p < .001$ ). All paths including the direct path from GRMS to psychological distress (*c'* path;  $\beta = .26, p < .001$ ) were positive and significant. Financial strain and MM-Achievement Orientation significantly predicted perceived exploitation as covariates. A 95% bootstrap confidence interval, with 10,000 resamples was constructed to conduct inferences about the indirect association. Overall, there was a significant total association of GRMS on psychological distress ( $\beta = .34, SE = .05, 95\% CI = [.241, .445]$ ). The total association was comprised of a significant direct association ( $\beta = .26, SE = .05, 95\% CI = [.150, .363]$ ) that accounted for 75% of the total association and a significant indirect association ( $\beta = .09, SE = .03, 95\% CI = [.042, .142]$ ) that accounted for 25% of the total association. The model accounted for 42% of the variance in psychological distress, and results suggested mediation was present for the current study sample, in support of hypothesis 2b.

**Figure 11.** Mediation model of perceived exploitation as a mediator between gendered racial microaggression stress and psychological distress



Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\*  $p < .001$ .

**Table 14**

*Estimate of Indirect and Total Effects from Bootstrap Analysis (K6)*

IV	Mediator	DV	Standardized Effect		
			Estimate	SE	95% Bootstrapped CI
Direct effect					
GRMS		K6	.257	.05	[.150, .363]
Indirect effect					
GRMS	PEEORS	K6	.088	.03	[.042, .142]
Total effect					
GRMS		K6	.343	.05	[.241, .445]

Notes. GRMS = Gendered Racial Microaggressions Scale; PEEORS = Perceived Exploitative Employee-Organizational Relationship Scale; K6 = Kessler Psychological Distress Scale; IV = Independent Variable; DV = Dependent Variable. SE = Standard Error; CI = Confidence Interval.

### Aim 3 Results

#### ***Hypothesis 3.1a GRMS with Job-related Burnout Moderated by Perceived diversity climate***

To examine whether the indirect association of GRMS on job-related burnout via perceived exploitation was moderated by perceived diversity climate, Model 59 from PROCESS Version 4.2 was selected. Using Model 59, the current study assessed the associations of

moderation of perceived diversity climate on: 1) the relationship between GRMS and perceived exploitation (a path); 2) the relationship between perceived exploitation and job-related burnout (b path); and 3) the relationship between GRMS and job-related burnout (c' path). As with the earlier analyses, relevant sociodemographic characteristics (age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, and financial strain), organizational factors (weekly work hours), and psychological factors (MM-Achievement Orientation, MM-Unrestricted Mobility) were entered as covariates. As demonstrated by Table 14 and Figure 11, there was a significant main association of GRMS on job-related burnout (path c';  $b = .23$ ,  $SE = .05$ ,  $p < .001$ ), and this association was not moderated by perceived diversity climate ( $b = .001$ ,  $SE = .05$ ,  $p = .995$ ). Given the non-significant interaction associations between GRMS and perceived diversity climate on job-related burnout, these findings do not support hypothesis 3.1a demonstrating a non-significant interaction between GRMS and perceived diversity climate on job-related burnout.

**Table 15**

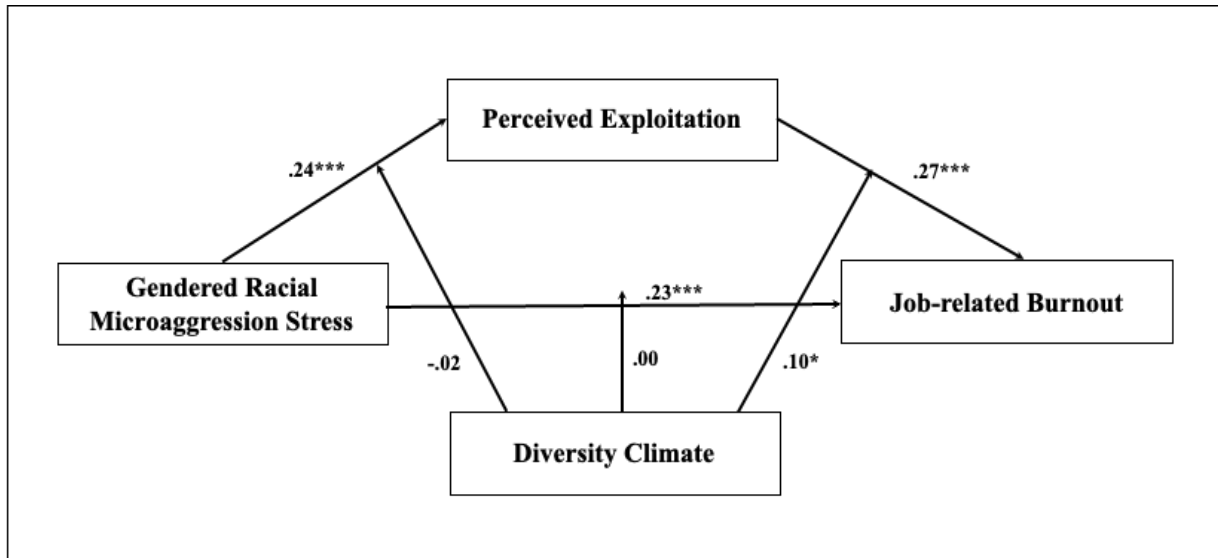
*Conditional direct and indirect associations of GRMS on job-related burnout via perceived exploitation and moderated by perceived diversity climate*

Model	$\beta$	SE	95% CI	$R^2$	$F$
<b>Mediator variable model for predicting PEEORS</b>				.495	13.01***
GRMS	.24***	.05	[.145, .341]		
MGF-DCS	-.43***	.05	[-.525, -.338]		
GRMS x MGF-DCS	-.02	.04	[-.096, .056]		
<b>Dependent variable model for predicting OLBI</b>				.483	11.83***
GRMS	.23***	.05	[.123, .334]		
PEEORS	.27***	.06	[.150, .393]		
MGF-DCS	-.23***	.06	[-.344, -.123]		
GRMS x MGF-DCS	.00	.05	[-.093, .092]		
PEEORS x MGF-DCS	.10*	.05	[.006, .197]		
<b>Conditional direct associations of GRMS on OLBI at values of MGF-DCS</b>					
<i>M - 1 SD</i>	.23***	.06	[.102, .355]		
<i>M</i>	.23***	.05	[.123, .334]		
<i>M + 1 SD</i>	.23**	.08	[.074, .382]		
<b>Conditional indirect associations of GRMS on OLBI at values of MGF-DCS</b>					
<i>M - 1 SD</i>	.04	.03	[-.005, .109]		
<i>M</i>	.07	.02	[.027, .112]		
<i>M + 1 SD</i>	.08	.03	[.025, .155]		

Notes. GRMS = Gendered Racial Microaggressions Scale; PEEORS = Perceived Exploitative Employee-Organization Relationship Scale; MGF-DCS = Marginalized-Group-Focused Perceived diversity climate Scale; OLBI = Oldenburg Burnout Inventory. *M* = Mean; *SD* = Standard Deviation; SE = Standard Error; CI = Confidence Interval. \* $p < .05$ , \*\* $p < .01$ , \*\*\*  $p < .001$ .



**Figure 12.** Moderated mediation model of perceived exploitation as a mediator between gendered racial microaggression stress and job-related burnout with diversity climate as a moderator



Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\*  $p < .001$ .

***Hypothesis 3.2a GRMS with Perceived Exploitation Moderated by Perceived diversity climate***

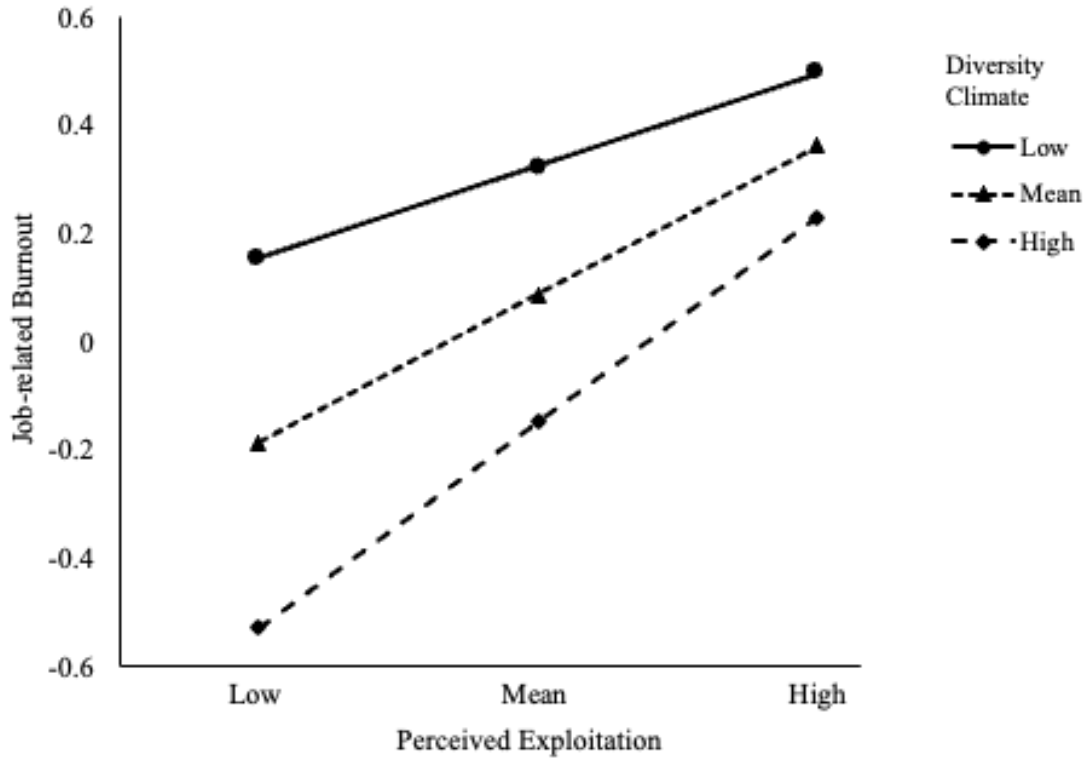
Similarly, there was a significant main association of GRMS on perceived exploitation (path b;  $b = .24$ ,  $SE = .05$ ,  $p < .001$ ). This main association was not moderated by perceived diversity climate ( $b = -.02$ ,  $SE = .04$ ,  $p = .606$ ). Thus, hypothesis 3.2a was not supported, demonstrating a non-significant interaction between GRMS and perceived diversity climate on perceived exploitation.

***Hypothesis 3.3a Perceived Exploitation with Job-related Burnout Moderated by Perceived diversity climate***

Lastly, there was a significant main association of perceived exploitation on job-related burnout (path b;  $b = .27$ ,  $SE = .06$ ,  $p < .001$ ). Moreover, this main association was moderated by

perceived diversity climate ( $b = .10$ ,  $SE = .05$ ,  $p = .037$ ). As shown in the Figure 12, which presents a visual depiction of the interaction between perceived exploitation and perceived diversity climate on job-related burnout, perceived exploitation was positively associated with job-related burnout for all levels of perceived diversity climate (e.g., - 1 SD, Mean, + 1 SD), such that as perceptions of exploitation increased, they were associated with increased reports of job-related burnout. However, as depicted by the steepness of the slopes, the positive association between perceived exploitation and job-related burnout was largest in magnitude among those that perceived high perceived diversity climate, with the magnitude of the positive association decreasing as levels of perceived diversity climate decreased. In other words, only those at low levels of perceived exploitation, particularly those that perceive high levels of diversity climate, seem to report lower job-related burnout than those that perceive lower diversity climate. Yet, as levels of perceived exploitation increase, the buffering effects of diversity climate diminish. In particular, at high levels of perceived exploitation, participants across all levels of perceived diversity climate report similar levels of job-related burnout. Thus, hypothesis 3.3a was partially supported, as high levels of perceived diversity climate weakened the association between perceived exploitation and job-related burnout at low levels of perceived exploitation.

**Figure 13.** *Diversity Climate as a moderator between perceived exploitation and job-related burnout*



***Hypothesis 3.4a Indirect Association Between GRMS and Job-related Burnout via Perceived Exploitation Moderated by Perceived diversity climate***

Further, the results of the percentile bootstrap confidence intervals, using 10,000 resamples, showed that the conditional indirect association of GRMS on job-related burnout via perceived diversity climate was not statistically significant at low levels ( $\beta = .04$ ,  $SE = .03$ , 95%  $CI = [-.004, .108]$ ), but was statistically significant at mean ( $\beta = .07$ ,  $SE = .02$ , 95%  $CI = [.028, .112]$ ) and high levels of perceived diversity climate ( $\beta = .08$ ,  $SE = .03$ , 95%  $CI = [.026, .159]$ ). No index of moderated mediation is provided for Model 59, rather moderated mediation is determined using pairwise contrasts between conditional indirect associations (Hayes, 2022). If

any of the bootstrap confidence intervals for the difference between any pair of conditional indirect associations does not include zero, then it can be said that perceived diversity climate moderates the indirect association of GRMS on job-related burnout via perceived exploitation. However, as presented in Table 15, all of the bootstrap confidence intervals for the pairwise contrasts between conditional indirect associations included zero ( $\beta = .02$ ,  $SE = .02$ , 95% CI=[-.022, .064]; ( $\beta = .04$ ,  $SE = .04$ , 95% CI=[-.044, .129]; ( $\beta = .02$ ,  $SE = .02$ , 95% CI=[-.023, .068]. Therefore, hypothesis 3.4a was not supported as perceived diversity climate did not moderate the indirect relations between GRMS and job-related burnout.

**Table 16**

*Pairwise Contrasts between Conditional Indirect Effects (OLBI)*

Effect 1	Effect 2	$\beta$ Contrast	<i>SE</i>	95% Bootstrapped CI
.066	.044	.022	.02	[-.022, .064]
.084	.044	.039	.04	[-.044, .129]
.084	.066	.017	.02	[-.023, .068]

Notes. *SE* = Standard Error;  $\beta$  contrast = Effect 1 – Effect 2.

***Hypothesis 3.1b GRMS with Psychological Distress Moderated by Perceived diversity climate***

To examine whether the indirect association of GRMS on psychological distress via perceived exploitation was moderated by perceived diversity climate, Model 59 from PROCESS Version 4.2 was selected. The current study assessed the associations of moderation of perceived diversity climate on: 1) the relationship between GRMS and perceived exploitation (a path); 2) the relationship between perceived exploitation and psychological distress (b path); and 3) the relationship between GRMS and psychological distress (c' path). Relevant sociodemographic characteristics (age, race/ethnicity, sexual orientation, relationship status, generational status, educational attainment, and financial strain), organizational factors (weekly work hours), and

psychological factors (MM-Achievement Orientation, MM-Unrestricted Mobility) were entered as covariates. As demonstrated by Table 16 and Figure 13, there was a significant main association of GRMS on psychological distress (path  $c'$ ;  $b = .25$ ,  $SE = .06$ ,  $p < .001$ ), and this association was not moderated by perceived diversity climate ( $b = -.017$ ,  $SE = .05$ ,  $p = .733$ ). Given the non-significant interaction associations between GRMS and perceived diversity climate on job-related burnout, these findings do not support hypothesis 3.1b, showing non-significant interaction associations between GRMS and perceived diversity climate on psychological distress.

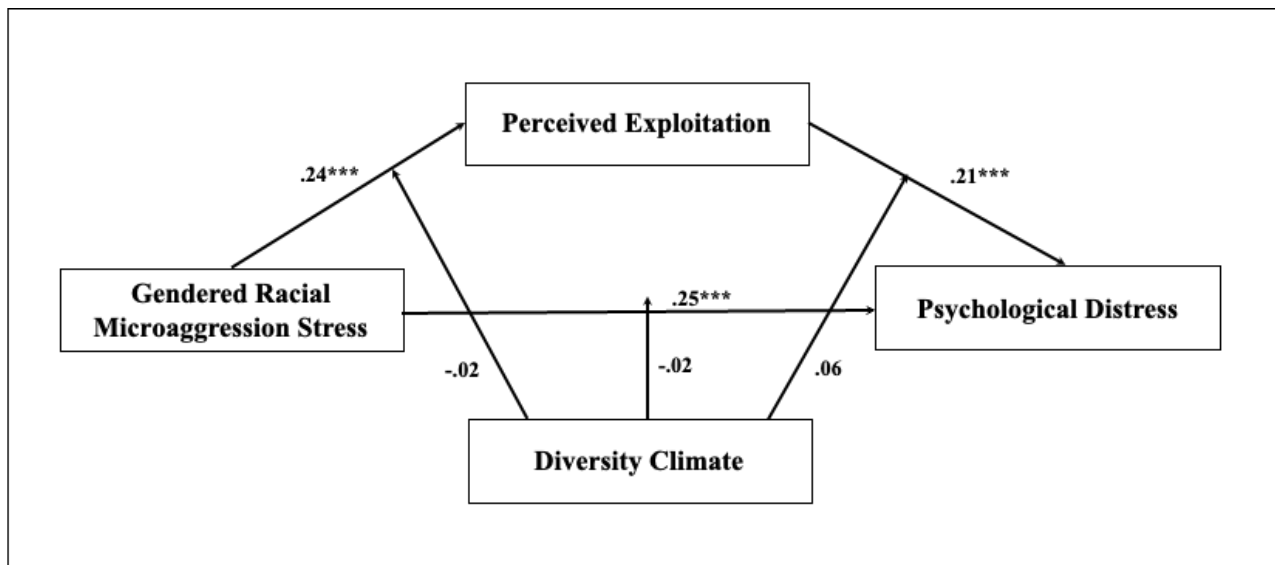
**Table 17**

*Conditional direct and indirect associations of GRMS on psychological distress via perceived exploitation and moderated by perceived diversity climate*

Model	$\beta$	SE	95% CI	$R^2$	$F$
<b>Mediator variable model for predicting PEEORS</b>				.494	13.01***
GRMS	.24***	.05	[.145, .341]		
MGF-DCS	-.43***	.05	[-.525, -.338]		
GRMS x MGF-DCS	-.02	.04	[-.096, .058]		
<b>Dependent variable model for predicting K6</b>				.429	9.08***
GRMS	.25***	.06	[.139, .357]		
PEE-ORS	.21***	.06	[.087, .338]		
MGF-DCS	-.08	.06	[-.195, .034]		
GRMS x MGF-DCS	-.02	.05	[-.112, .079]		
PEEORS x MGF-DCS	.06	.05	[-.038, .158]		
<b>Conditional direct associations of GRMS on K6 at values of MGF-DCS</b>					
$M - 1 SD$	.27***	.07	[.134, .396]		
$M$	.25***	.06	[.139, .357]		
$M + 1 SD$	.23**	.08	[.072, .390]		
<b>Conditional indirect associations of GRMS on K6 at values of MGF-DCS</b>					
$M - 1 SD$	.04	.03	[-.005, .095]		
$M$	.05	.02	[.017, .097]		
$M + 1 SD$	.06	.03	[.013, .127]		

Notes. GRMS = Gendered Racial Microaggressions Scale; PEE-ORS = Perceived Exploitative Employee-Organization Relationship Scale; MGF-DCS = Marginalized-Group-Focused Perceived diversity climate Scale; K6 = Kessler Psychological Distress. M = Mean; SD = Standard Deviation; SE = Standard Error; CI = Confidence Interval. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Figure 14.** Moderated mediation model of perceived exploitation as a mediator between gendered racial microaggression stress and psychological distress with diversity climate as a moderator



Note. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

**Hypothesis 3.2a GRMS with Perceived Exploitation Moderated by Perceived diversity climate**

There was a significant main association of GRMS on perceived exploitation (path b;  $b = .24$ ,  $SE = .05$ ,  $p < .001$ ). This main association was not moderated by perceived diversity climate ( $b = -.02$ ,  $SE = .04$ ,  $p = .606$ ). Thus, hypothesis 3.2a was not supported, demonstrating a non-significant interaction between GRMS and perceived diversity climate on perceived exploitation.

***Hypothesis 3.3b Perceived Exploitation with Psychological Distress Moderated by Perceived diversity climate***

Lastly, there was a significant main association of perceived exploitation on psychological distress (path b;  $b = .21$ ,  $SE = .06$ ,  $p = .001$ ). This main association was not moderated by perceived diversity climate ( $b = .06$ ,  $SE = .05$ ,  $p = .232$ ). Thus, hypothesis 3.3b was not supported, showing non-significant interaction between perceived exploitation and perceived diversity climate on psychological distress.

***Hypothesis 3.4b Indirect Association Between GRMS and Psychological Distress via Perceived Exploitation Moderated by Perceived diversity climate***

Further, the results of the percentile bootstrap confidence intervals, using 10,000 resamples, showed that the conditional indirect association of GRMS on psychological distress via perceived diversity climate was not statistically significant at low levels ( $\beta = .04$ ,  $SE = .03$ , 95% CI=[-.006, .095]), but it was significant at mean ( $\beta = .05$ ,  $SE = .02$ , 95% CI=[.016, .097]) and high levels of perceived diversity climate ( $\beta = .06$ ,  $SE = .03$ , 95% CI=[.013, .127]). No index of moderated mediation is provided for Model 59, rather moderated mediation is determined using pairwise contrasts between conditional indirect associations (Hayes, 2022). If any of the bootstrap confidence intervals for the difference between any pair of conditional indirect associations does not include zero, then it can be said that perceived diversity climate moderates the indirect association of GMS on psychological distress via perceived exploitation. However, as presented in Table 17, all of the bootstrap confidence intervals for the pairwise contrasts between conditional indirect associations included zero ( $\beta = .01$ ,  $SE = .02$ , 95% CI=[-.024, .051]; ( $\beta = .02$ ,  $SE = .04$ , 95% CI=[-.045, .097]; ( $\beta = .01$ ,  $SE = .02$ , 95% CI=[-.022, .049]. Therefore,

hypothesis 3.4b was not supported as perceived diversity climate did not moderate the indirect relations between GRMS and psychological distress.

**Table 18**

*Pairwise Contrasts between Conditional Indirect Effects (K6)*

Effect 1	Effect 2	$\beta$ Contrast	<i>SE</i>	95% Bootstrapped CI
.052	.040	.012	.02	[-.024, .051]
.061	.040	.021	.04	[-.045, .097]
.061	.052	.009	.02	[-.022, .049]

Notes. *SE* = Standard Error;  $\beta$  contrast = Effect 1 – Effect 2.



## CHAPTER 5: DISCUSSION

The present study examined whether gendered racial microaggression stress among Asian American women in the STEM workplace are linked to greater job-related burnout and psychological distress. The current study also examined whether these linkages can be explained in part by Asian American women's perceptions of exploitation, and finally, whether diversity climate perceptions might mitigate some of the harmful effects of gendered racial microaggression stress on job-related and gendered racial microaggression stress on psychological distress for the direct and indirect pathways. Extending the organizational literature, higher gendered racial microaggression stress was found to be significantly associated with greater job-related burnout and psychological distress. Results from the simple mediation analyses showed positive indirect associations between gendered racial microaggression stress and job-related burnout via perceived exploitation, and gendered racial microaggression stress and psychological distress through perceived exploitation. Finally, the results from the moderated mediation analysis indicated that diversity climate was not a significant buffer against job-related burnout or psychological distress associated with gendered racial microaggression stress. Only the positive association between perceived exploitation and job-related burnout was significantly moderated by perceived diversity climate, such that at low levels of perceived exploitation, Asian American women that perceived high levels of diversity climate experienced low levels of burnout. However, at high levels of perceived exploitation, Asian American women experienced similar levels of burnout across all levels of diversity climate. Findings from the current study provide important insights into the role of gendered racial microaggression stress in the STEM workplace. Further, it informs future organizational research among Asian American women, with important implications for addressing gendered racial microaggression stress and

perceived exploitation as well as prompting further investigations into how diversity climate perceptions operate. This chapter will contextualize key study findings, discuss limitations and directions for future research, as well as implications for policy and practice.

### **Gendered Racial Microaggression Stress, Job-Related Burnout and Psychological Distress**

Previous studies have primarily focused on various organizational risk factors such as workload (e.g., cognitive, physical, emotional demands) and control (e.g., degree of autonomy over one's work) as key determinants of job-related burnout (Maslach et al., 2001; Maslach & Leiter, 2016). However, there has been growing research to demonstrate the role of discrimination on job-related burnout among individuals in multiply marginalized groups (Dyrbye et al., 2022; Volpone & Avery, 2013). In a national sample of U.S. physicians, women and racial/ethnic minority physicians who experienced mistreatment and discrimination from patients, families, and visitors experienced greater risk for burnout (Dyrbye et al., 2022). This study helps to extend current research on discrimination and job-related burnout to consider the role of gendered racial microaggression stress among Asian American women in the STEM workplace. Specifically, study findings show greater gendered racial microaggression stress among Asian American women were found to be associated with greater job-related burnout. While job-related burnout helps to illuminate dimensions of exhaustion and disengagement tied to one's work, psychological distress captures experiences of generalized distress often characterized by symptoms of depression and anxiety that can contribute to poor mental health (Bessaha, 2017; Lace & Merz, 2020), worse physical health (Leary et al., 2022; Prince et al., 2007; Tessler & Mechanic, 1978), and increased mortality (Pratt, 2009; Yang et al., 2020). Thus, the current study also examined the role of gendered racial microaggression stress on

psychological distress, finding greater gendered racial microaggression stress were associated with greater experiences of psychological distress.

### *Assumptions of Ascribed Submissiveness*

Gendered and racialized expectations of Asian American women can manifest in a myriad of ways in the STEM workplace. In particular, encounters with gendered racial microaggressions, including the dimensions of ascribed submissiveness, assumptions of universal appearance, and Asian fetishism may be especially salient in contributing to job-related burnout and psychological distress. For instance, Asian American women may experience increased burnout and distress from actively working against assumptions of ascribed submissiveness that view them to be docile, quiet, and ultimately unfit for leadership positions that require assertiveness (Keum et al., 2018; Mukkamala & Suyemoto, 2018). In fact, previous studies have found, Asian American women are often perceived as least fit for leadership positions, and this experience of being overlooked professionally based on one's gender and race contributes to their experience of stress in the workplace (Kawahara et al., 2013; Mukkamala & Suyemoto, 2018; Rosette et al., 2016, 2018; Tinkler et al., 2019). These findings are consistent with other research that showed Vietnamese American women were more likely than women from other racial/ethnic groups to report discriminatory treatment in denied promotion decisions due to their race/ethnicity (Yu, 2020). Perceptions of Asian American women being seen as least fit for leadership, is further supported by data that continue to show Asian women to be the least likely among all race/ethnic groups to become executive leaders (B. Gee & Peck, 2017; Min & Jang, 2015; L. Wu & Jing, 2011). Thus, Asian American women that are repeatedly denied promotion, may become burned out and distressed from constantly working against assumptions that stereotype them to lack the qualifications for leadership.

### *Assumptions of Universal Appearance*

Asian American women that encounter assumptions of universal appearance, where all Asian American women are thought to look alike and have the same facial features and body type, may also experience greater job-related burnout and psychological distress. Given the higher concentration of Asian American women in STEM, it is possible that they may disengage from their work, and further deplete their cognitive resources when they are repeatedly mistaken for another Asian American woman in their organization. For instance, the lack of differentiation and recognition can lead Asian American women to feel invisible, which recent research has highlighted as a factor that can lead marginalized workers to disengage with their negative work environment (Buchanan & Settles, 2019; Settles et al., 2019). In addition, research among women in STEM indicated that their experience of gender microaggressions, particularly one's that devalue their physical presence or deny their reality, reported a variety of negative emotions (e.g., anger, sadness, indignation) along with expending significant cognitive resources (e.g., rumination, hypervigilance; (Kim & Meister, 2022). Thus, Asian American women that experience assumptions of universal appearance, where they are made to feel indistinguishable from one another, may feel especially burned out from these encounters, especially if their colleagues put little effort into recognizing their unique qualities and the significant contributions they have made. Additionally, Asian American women may continue to ruminate over these encounters, as they try to decipher the intent behind them. They may also become hypervigilant, and try to mentally benchmark these events and whether they are just happening to them or other non-Asian American women. Together, these experiences can lead to greater exhaustion, disengagement, and a variety of negative emotions that can result in greater job-related burnout and psychological distress for Asian American women.

### *Asian Fetishism*

Further, experiences of job-related burnout and psychological distress may also be driven by Asian American women's perceptions of Asian fetishism, where they are treated as a sexual interest because of their appearance. Although descriptively, Asian fetishism did not show as much salience in comparison to ascribed submissiveness and assumptions of universal appearance for the current sample, nonetheless it is an important dimension to consider. In particular, perceptions of Asian fetishism can motivate the objectification and hypersexualization of Asian American women, which results in the denial of their agency and humanity, allowing others to view them as passive objects that are easily exploitable for one's own purposes (Y. J. Wong et al., 2021b). Accordingly, Asian fetishism can be especially problematic in a STEM environment where workplace sexual harassment remains ubiquitous and is linked to both severe mental health outcomes and burnout among women of color who experience an increase in the frequency and intensity of sexual harassment (Berdahl & Moore, 2006a; Cortina & Areguin, 2021; Funk & Parker, 2018; Linos et al., 2022; Mattheis et al., 2022; Minnotte & Pedersen, 2023).

For Asian American women, perceptions of Asian fetishism can manifest to exacerbate feelings of objectification (e.g., only being valued as a sexual interest instead of their creativity) as well as intensifying instances of quid pro quo sexual harassment (A. R. Castro & Collins, 2021; Gu, 2016). For example, in an ethnographic study of immigrant Chinese women scientists and engineers, (Gu, 2016) highlighted the experience of a Chinese doctoral student who was aggressively pursued by a professor who promised her potential career opportunities if she agreed to go out with him. She denied his offer and faced severe consequences that damaged her social capital within the department and making it difficult for her to complete her program (Gu,

2016). As this study demonstrates, perceptions of Asian fetishism can exacerbate encounters of quid pro quo harassment. Specifically, if the perpetrator views Asian American women as passive objects that are merely a site for their sexual gratification, they may become angry and punitive when their sexual advances are denied (Y. J. Wong et al., 2021b). These experiences can contribute to increased exhaustion, as Asian American women may become hypervigilant, trying to avoid encounters with their perpetrator. Moreover, the frequency of encounters with Asian fetishism may also lead Asian American women to disengage from their job entirely. Further, findings from the current study are also consistent with prior research that demonstrates a link between racialized sexual harassment (e.g., Asian fetishism) and psychological distress. In a study examining sexual harassment and posttraumatic stress symptoms among Asian and White women, findings showed Asian women had greater psychological distress and depressive symptoms compared to White women, although they reported less frequent sexual harassment (Ho et al., 2012).

Taken together, these findings help to extend our current understanding of gendered racial microaggression stress as a significant risk factor for job-related burnout and psychological distress among Asian American women in STEM workplaces. Prior research has drawn upon the Job Demands-Resources (JD-R) model to conceptualize perceived discrimination as a job demand (i.e. stressor) that is both mentally and physically taxing, and can exceed one's resources available to cope (Volpone & Avery, 2013). While the JD-R model has been helpful in conceptualizing perceived discrimination as a job demand, it is important to further situate the JD-R model within a broader theory of racialized organizations (Ray, 2019). In doing so, researchers can examine the ways in which all organizational risk factors for burnout (e.g., workload, control, rewards, etc.) may be shaped by gendered racism within a racialized

organization. Viewed as a key mechanism for maintaining gendered and racial inequality within organizations, gendered racial microaggressions, particularly the dimensions of ascribed submissiveness, assumptions of universal appearance, and Asian fetishism work together to maintain the status quo for Asian American women within STEM organizations (e.g., highly skilled workers, but never leaders) and contribute to their increased job-related burnout and psychological distress.

### **The Role of Perceived Exploitation**

#### ***Gendered Racial Microaggression Stress, Perceived Exploitation and Job-related Burnout***

In line with the study's hypothesis, results from the simple mediation analysis demonstrated a significant positive indirect association of gendered racial microaggression stress on job-related burnout through perceived exploitation among the current sample of Asian American women. In other words, greater gendered racial microaggression stress was associated with greater perceptions of exploitation within the STEM workplace, and in turn, was associated with greater job-related burnout. There are a few explanations that may help to guide the interpretation of this finding. Specifically, it is important to explore the role of guilt and shame among Asian American women, as well as their broader engagement in emotional labor.

Shame and guilt may hold particular cultural relevance for Asian American women, and when coupled with experiences of gendered racial microaggression, shame, guilt and submissiveness may leave them especially susceptible to perceived exploitation and subsequent burnout. Prior research has indicated that shame and guilt serve an important purpose among Asian cultures that are collectively oriented, and place high value on social cohesion and maintaining harmony in relationships over individual autonomy and personal aspirations (Bebko et al., 2019; Bedford & Hwang, 2003; Chan, 1988; Liw et al., 2022). According to prior

conceptualizations of perceived exploitation, employees' that are prone to feelings of shame and guilt, are more likely to engage in self-blaming behaviors that can result in burnout (Livne-Ofer et al., 2019).

Recent studies provide additional support for the role of shame and guilt proneness on burnout (Barr, 2022; Greenmyer et al., 2022). Specifically, a study examining burnout among NICU nurses found that shame and guilt together explained the variance in different dimensions of burnout, including demoralization (41%), exhaustion (9%), and loss of motive (15%) (Barr, 2022). In addition, a construct closely related to perceived exploitation, organizational dehumanization (i.e., considered a tool or instrument of their organization), has also been linked to burnout (Caesens et al., 2017; Caesens & Stinglhamber, 2019; Nguyen et al., 2022). In a study examining employees that experience greater organizational dehumanization, they found that these employees are more likely to engage in surface acting as a form of emotional labor (e.g., suppressing negative emotions) that can contribute to greater emotional exhaustion (Nguyen et al., 2022). Thus, Asian American women that are prone to experiencing shame and guilt, particularly as it is tied to their experiences of gendered racial microaggression (i.e., guilt for remaining submissive and allowing themselves to be exploited), may experience greater perceived exploitation that in turn is associated with greater emotional exhaustion and subsequent burnout (Le & Barboza-Wilkes, 2022; Livne-Ofer et al., 2019).

### ***Gendered Racial Microaggression Stress, Perceived Exploitation and Psychological Distress***

Similarly, results from the simple mediation analysis demonstrated a significant positive indirect association of gendered racial microaggression stress on psychological distress via perceived exploitation, which was consistent with the study hypothesis. That is to say, greater gendered racial microaggression stress was associated with greater perceived exploitation among



Asian American women in the STEM workplace, which as a result, was associated with greater psychological distress. The role of psychological need thwarting as it relates to perceived exploitation may help to further contextualize this finding.

Employees that experience perceived exploitation may be more likely to feel their basic psychological needs within the workplace are thwarted, which can result in greater psychological distress. In a study guided by self-determination theory, (Lagios et al., 2022) conceptualize organizational dehumanization as a negative experience that frustrates employees' basic psychological needs (e.g., autonomy, competence, relatedness; (Deci & Ryan, 2000). Over time, employees that continue to have their needs thwarted may engage in maladaptive coping strategies that can also produce more negative attitudes (Deci & Ryan, 2000). Indeed, there is research to demonstrate the link between need thwarting and increased stress, psychological strains, burnout, and turnover intentions (Gillet et al., 2015; Huyghebaert et al., 2018; Lagios et al., 2022; Rouse et al., 2020).

For Asian American women, perceptions of gendered racial microaggression stress may drive perceptions of exploitation that further frustrate their basic psychological needs within the workplace and increase their psychological distress. For instance, Asian American women that experience gendered racial microaggression stress related to assumptions of universal appearance where they are easily mistaken for other Asian American women employees, may feel as though their organization views Asian American women as easily replaceable and does not value them or their unique contributions. In turn, perceptions of exploitation may arise and thwart their need for competence within their organizations, thereby driving greater experiences of psychological distress. Indeed, there is some research to support this pathway, as findings from a recent study highlight how Asian American women that experience gendered racial microaggressions are less

likely to perceive decent work (e.g., physically and interpersonally safe work environment, adequate compensation, time to rest) which is similar to having their psychological needs thwarted in the workplace (N.-Y. Choi et al., 2022). Together, this research highlights how gendered racial microaggression stress can contribute to greater psychological distress through perceived exploitation.

### **The Role of Diversity Climate Perceptions**

Prior research indicates the potential for diversity climates to buffer against the negative effects of discrimination (Hardeman et al., 2016; Holmes et al., 2021). Thus, the current study sought to investigate whether diversity climate might buffer both the direct and indirect associations of gendered racial microaggression stress with job-related burnout as well as gendered racial microaggression stress with psychological distress. Results from the moderated mediation analysis indicated that perceived diversity climate was not a significant buffer against job-related burnout or psychological distress for Asian American women that perceive gendered racial microaggression stress. Specifically, perceived diversity climate did not significantly moderate the associations between gendered racial microaggression stress on perceived exploitation, gendered racial microaggression stress on job-related burnout and gendered racial microaggression stress on job-related burnout via perceived exploitation. Similarly, results for the moderated mediation analysis to assess whether diversity climate would buffer the direct and indirect associations between gendered racial microaggression stress and psychological distress also indicated non-significant findings. However, results from the study provided partial support for the hypothesis that diversity climate would moderate the relationship between perceived exploitation and job-related burnout. Specifically, at low levels of perceived exploitation, perceptions of high diversity climate resulted in decreased reports of job-related burnout. Yet, at

high levels of perceived exploitation, Asian American women reported similar levels of job-related burnout across all levels of diversity climate, suggesting that when Asian American women perceived high levels of exploitation, they seem to report similar levels of job-related burnout regardless of their levels of perceived diversity climate.

### *Perceptions of Tokenism in Diversity Climates*

The non-significant findings diverge from the expected benefits of diversity climate proposed by the Interactional Model of Cultural Diversity (IMCD) which posits that supportive diversity climates should diminish discriminatory treatment and improve work outcomes such as job-related burnout (Holmes et al., 2021; McKay et al., 2008). These non-significant findings suggest that Asian American women's perceptions of gendered racial microaggressions may be associated with viewing their organization's diversity climate as largely tokenistic. That is, while organizations may say that they prioritize diversity, equity and inclusion (DEI) within their organization, their policies and practices fail to make any meaningful changes in their diversity climate. Accordingly, prior research and theorizations have suggested, DEI efforts tend to be seen as largely tokenistic (i.e., performative rather than substantive; (Chantarat et al., 2023; Ray, 2019; J. M. Thomas, 2018). Ray's (2019) theory of racialized organizations discusses the tenet of racialized decoupling, which involves a separation between the formal commitments of equity, inclusion and access from the policies and practices that either reinforce or do not challenge the status quo around existing racial hierarchies. As Ray astutely points out, rather than actually changing the racial distribution of organizational power through formal enforcement measures, most organizations state their commitment to DEI policies and programs as a "ceremonial public relations function," and to "placate external constituencies" (e.g., government) (Ray, 2019, pg. 42). In fact, there is growing evidence to support the experience of racialized decoupling. In a

study examining the professional climate and efforts to advance DEI in the health services and policy research (HSPR) workplace, results indicated that nearly 40% agreed or strongly agreed that DEI initiatives were tokenistic. This was particularly true among participants that identified as female, LGBTQI+, Black/African American, Hispanic/Latino and individuals with a disability. Further, participants reported that DEI initiatives primarily consisted of planning activities (e.g., evaluating existing DE policies/protocols), with few initiatives focus on implementation activities (e.g., recruitment of underrepresented minoritized professionals; Chantarat et al., 2023). This may have been the case among Asian American women in the current study. Specifically, as their perceptions of gendered racial microaggressions increased, their views of the diversity climate were seen as largely symbolic with little substance, especially if there was no change in organizational policies and practices.

### ***Systems of Privilege and Oppression in the STEM Environment***

As previous studies have noted, the STEM workplace can be an especially hostile and unsafe environment for women of color (A. R. Castro & Collins, 2021; Funk & Parker, 2018). Accordingly, the non-significant findings may also provide important insight into the STEM workplace itself and who it benefits. In a study examining whether white-able-bodied heterosexual men (WAHM) are uniquely privileged in STEM, (Cech (2022) finds systemic advantages for WAHM, such as greater social inclusion, professional respect, career opportunities, higher salaries and persistence intentions than STEM professionals in 31 other intersectional groups. Hence, it is likely that the cultural and structural systems of privilege in STEM that maintain systems of oppression (e.g., sexism, racism, heteronormativity, ableism) overwhelm the efforts of DEI initiatives (e.g., implicit bias training, recruitment and retention efforts, leadership training and skill development, mentorship and sponsorship; National Science

and Technology Council, 2021). Results from a recent study examining the buffering role of diversity and inclusion on stressful work experiences (e.g., discrimination) and health and well-being in a STEM organization indicated that the level of diversity and inclusion did not change the relationship between stressful work experiences and emotional exhaustion (Behnke et al., 2022). In fact, across different levels of diversity inclusion, the various work stressors were positively associated with emotional exhaustion (Behnke et al., 2022). This study along with the present study's non-significant findings, suggests there may be additional challenges of implementing effective diversity climates within STEM organizations that privilege White able-bodied heterosexual men.

Interestingly, diversity climate perceptions significantly moderated the association between perceived exploitation and job-related burnout. Specifically, at low levels of perceived exploitation, Asian American women that perceived high levels of diversity climate seemed to report lower job-related burnout than those who perceived lower levels of diversity climate. However, at high levels of perceived exploitation, Asian American women seemed to report similar levels of job-related burnout across all levels of perceived diversity climate.

To understand why the levels of diversity climate moderate the association between perceived exploitation and job-related burnout differentially across levels of perceived exploitation, it is helpful to reexamine what high and low diversity climate perceptions represent. As prior research demonstrates positive or high diversity climates can act as a protective factor, by creating an inclusive environment with diverse leadership and personnel committed to addressing bias and discrimination (McKay et al., 2008). Alternatively, an environment that shows little to no commitment to diversity, equity and inclusion, and is rife with exclusionary behavior, harassment, and discrimination results in perceptions of a negative or low diversity

climate (Holmes et al., 2021). Therefore, at low levels of perceived exploitation, high diversity climate can act as a buffer against the negative effects of perceived exploitation on job-related burnout. In particular, employees may feel more empowered to speak up or seek support from colleagues or leaders regarding the few instances that they perceive exploitation to occur. However, as perceptions of diversity climate decrease to mean and low levels of diversity climate (e.g., more added stressors of discrimination, harassment, exclusion etc.), they may feel less safe to speak up or seek support, resulting in more job-related burnout. However, in instances where they encounter high levels of exploitation, where they are constantly being taken advantage of, perceptions of diversity climate matter less. If they are already under a lot of stress from their perceptions of exploitation, it may overwhelm any potential protective benefits that perceptions of diversity climate have to offer, even at high levels of diversity climate. For example, an Asian American woman may work in a STEM organization that has a high level of diversity climate where they feel safe and supported, yet if she is consistently overworked, undervalued, and underpaid, no level of diversity climate can help mitigate the negative effects of perceived exploitation on job-related burnout. Over time, a lack of systemic changes within an organization that has declared their commitment to diversity, equity, and inclusion will then be seen as an organization full of empty promises, further complicating perceptions of high diversity climate that may ultimately contribute to greater job-related burnout.

### **Limitations and Future Directions**

The findings from this study should be considered within the context of several limitations. First, given the cross-sectional nature of the data, the temporal ordering of the variables cannot be determined, thereby limiting any consideration for causal implications of the results. For instance, it cannot be ruled out that the proposed associations may occur in the other

direction—for example, job-related burnout or psychological distress could increase perceived exploitation, which then increases perceptions of gendered racial microaggression. To better understand the direction of these associations, future studies should consider exploring the findings using longitudinal data. Future research can also consider using qualitative or mixed methods approaches to understanding the complex processes of how gendered racial microaggression and perceived exploitation operate within the STEM workplace to influence work and mental health outcomes for Asian American women.

The generalizability of the findings may be limited due to sample-related characteristics and recruitment. While there was considerable variability in the race/ethnicity of the study sample, the majority of the sample was comprised of heterosexual Asian American women with East Asian roots. While Asian American women from different Asian ethnicities may share similar experiences of gendered racial stereotypes of Asian women in the U.S., generalizability of the study is limited to the major identities represented in the sample. For example, gendered racial microaggression related to assumptions of universal appearance (e.g., petite, small-chested, fair skin) may be less applicable for South and Southeast Asian women (Poolokasingham et al., 2014; Tabag, 2022). Further, sexual minority Asian American women are likely to encounter additional forms of oppression (e.g., heterosexism, microaggressive invalidations) that can contribute to their psychological distress (Patel, 2019; Szymanski & Gupta, 2009; Szymanski & Sung, 2010). Thus, future studies should consider more comprehensive recruitment strategies to incorporate a more representative sample, such as in-person recruitment along with online methods that are more targeted towards South Asian and Southeast Asian women. Additionally, future research should consider the unique differences in gendered racial microaggression experiences (e.g., body-related assumptions) across Asian

ethnicities and other intersecting identities to provide a more comprehensive understanding of the variability in gendered racial microaggression experiences.

Further, generalizability may also be limited given one's occupation (e.g., physician vs. nurse) and variations within the STEM work environment by industry, (e.g., engineering vs. health-related fields) where demographics as well as the structure of the organization can influence gendered racial microaggression experiences. For instance, Wingfield and Chavez, (2020) found that within the healthcare industry, the organizational hierarchy fundamentally informed Black workers' perceptions of the nature and type of workplace racial discrimination they encountered. Specifically, Black doctors were more likely to perceive structural and organizational discrimination, whereas Black nurses were more likely to encounter both organizational and individual level racial discrimination (Wingfield & Chavez, 2020). While the discriminatory experiences one encounters within their organization may be shaped by their position within the organizational hierarchy, these experiences may also be largely determined by organizational leadership (i.e., as those in power will also determine organizational culture, policies, practices). For example, an Asian American woman that works as a data analyst in a technology company that is predominantly led and staffed by White men are likely to have different experiences of gendered racial microaggression than an Asian American woman who works as a nurse in a hospital primarily staffed by other Asian American women or women of color. Therefore, future studies should consider focusing on gendered racial microaggression experiences within a single STEM organization or industry (e.g., technology, healthcare) to generate a better understanding of how perceptions of gendered racial microaggression may vary within different STEM environments.



Although this study provides important insight into Asian American women's experiences of perceived exploitation within the STEM workplace, these findings may be limited in their measurement of perceived exploitation and ability to capture the experience among Asian American women. While the Cronbach's alpha indicated good scale reliability, the goodness of fit indices from the CFA showed the proposed one-factor model was an adequate to poor fit for the data. It is possible that the missing item prevented the accurate assessment of the factor structure for perceived exploitation, in which case future studies should replicate findings with all 14 items. However, the exploitative managerial and organizational practices captured using the PEEORS may not reflect more subtle forms of exploitation (e.g., being asked to work extra hours) that are more common in white-collar jobs. For instance, Asian American women in the STEM workplace may actually experience more passion exploitation, which can be broadly understood as a way to justify potentially exploitative practices based the passion or joy one derives from their work. In other words, if given the opportunity, Asian American women would freely volunteer their time to do whatever extra work they were asked to take on (J. Y. Kim et al., 2020). Thus, passion exploitation may be more relevant for Asian American women in the STEM workplace, especially those that endorse model minority myth assumptions of being hard-working and successful. These stereotypes may push Asian American women to prove to themselves and others how passionate they are about their work, and legitimize potentially exploitative practices as a necessary part of the job that will pay off in the long term (i.e., hard work equals future success). Thus, future research should consider employing other measures of exploitation, such as passion exploitation, to illuminate the complex role of perceived exploitation, particularly as it relates to Asian American women experiences of gendered racial microaggressions.

Finally, there may also be issues of self-report bias that led to differences in reporting of gendered racial microaggression experiences. For example, Chae et al. (2017) found that African American men with higher racial centrality were more likely to report racial discrimination, while greater implicit anti-Black bias was associated with lower reports of racial discrimination. Moreover, there is evidence to show that internalized racism differentially shapes Asian American women's perception and subsequent stress appraisal of gendered racial microaggression (Keum & Wong, 2022). Thus, future studies should consider the inclusion of measures of gender racial centrality and internalized racism, as well as objective measures of stress using physiological measures such as a cortisol swab or heart rate monitors (Frazier & Parker, 2019). Additionally, there may also be issues of self-report bias in perception of diversity climate. In particular, the current measure captures diversity climate at the individual level (e.g., psychological climate) and not at the organizational level. At the individual level, there is a lot of variability in the factors that can influence how an Asian American woman may differentially perceive their diversity climate compared to other Asian American women in the same organization. For example, within a larger organization, perceptions of diversity climate may largely be shaped by daily interactions that could be in a department with other women of color or it may be in a department that is predominantly White and male. Further, depending on how close the Asian American women in the study were to their peers, collective judgement about the diversity climate can also shape individual perceptions. For instance, if everyone you work with and trust believes that the diversity climate of their organization is highly supportive and prioritizes diversity and inclusion, this can influence individual-level perceptions of diversity climate to be high. Thus, future research should consider including objective metrics of organizational diversity management performance. In particular, along with capturing executive

level diversity, future studies could also collect data on workplace discrimination lawsuits, discrimination and harassment complaints logged to human resources, and tracking of employee turnover. In addition, it will be important to capture more information about the kinds of DEI initiatives and programming that organizations actually implement beyond stating that they are committed to DEI (e.g., kinds of training and activities offered, frequency of training, implementation plans, what levels of the organization are involved, who is appointed to lead DEI efforts, what resources are allocated to supporting DEI programming etc.).

### **Implications for Social Work Practice and Policy**

The findings from this study have important implications for social work practice and social policy. Prior research has noted the significant role that social workers play as counselors in Employee Assistance Programs (EAP), offering employees a wide range of services including assessment, short-term counseling for mental and behavioral health concerns, referrals, and management consultation, to name a few (Kurzman, 2013). Thus, EAP counselors can play a key role in the identification, assessment, and treatment of gendered racial microaggression stress among Asian American women employees, along with helping Asian American women recognize other culturally specific stereotypes (e.g., model minority myth stereotypes, anti-Asian COVID-19 related racism, internalized racism) that may amplify their experiences of job-related burnout and psychological distress. In addition, EAP counselors can also offer trainings to management as well as human resources about the ways that GRM can increase burnout and psychological distress among their Asian American women employees. For example, an EAP counselor could offer trainings and facilitate critical dialogue about how gendered racial microaggression and model minority stereotypes often push Asian American women into quantitative positions that require a high level of skill and competence. Further, even if the

workload is too high, they may not ask for help because they feel they must quietly comply. EAP counselors can help managers increase awareness of how these stereotypes may play out in the workplace, and also identify points where they can intervene to offer Asian American women additional mentorship and organizational resources. Accordingly, given social workers interdisciplinary training, they are uniquely positioned as EAP counselors to intervene on a wide variety of systemic issues as well as individual-level concerns, and can help Asian American women as well as management identify gendered racial microaggressions and understand how to address it within their organization.

The findings from this study also identified that after examining both direct and indirect pathways between gendered racial microaggression stress and job-related burnout and gendered racial microaggression stress and psychological distress, perceived diversity climate remained limited in its ability to weaken the association between perceived exploitation and job-related burnout. This suggests that although diversity climates can play an important role in intervening and mitigating some of the negative effects of perceived exploitation, more needs to be done to address experiences of gendered racial microaggression stress. To assume that Asian American women are part of an “overrepresented majority” within STEM (Iporac, 2020), and that it is not necessary to include them in DEI initiatives, bolsters false narratives of model minority success and obscures greater need for DEI initiatives across Asian ethnicities that are often underrepresented, like Hmong American women in STEM (Shivaram, 2021).

DEI policies and programs within STEM organizations should consider moving beyond representation as a signifier of diversity, and work towards implementing a multi-pronged approach to DEI policies and programs across the employment life cycle (e.g., recruitment, hiring, development, and retention). For example, given the ways that gendered racial

microaggressions can contribute to the bamboo ceiling among Asian American women (Yu, 2020), and prevent Asian American women from advancing into leadership positions, management and human resources can work together with Asian American women within their organization to formulate more transparent policies for determining promotions that are also identity-conscious. This could mean considering alternative leadership styles that take into account cultural strengths (e.g., decentralized and collaborative leadership style; Lee, 2019). Further, given the ways that gendered racial microaggressions and model minority myth stereotypes can leave Asian American women without necessary support and resources to do their work (Rosette et al., 2016, 2018), organizational policies and program can incorporate mandatory mentorship and sponsorship of Asian American women during their onboarding and throughout their careers. Specifically, mentors can facilitate regular check-ins with Asian American women to make sure they are connected to organizational resources and other professional networks. Most importantly, this work should not fall solely on other Asian American women or other people of color within the organization, as this increases the burden of racialized equity labor (Lerma et al., 2020). Rather, there needs to be buy-in from leadership to do the work needed to generate a shared understanding of DEI with explicit consideration of gendered racial microaggressions and how they manifest within their organization. This means that decentralized efforts, such as e-learning modules alone are not sufficient to address implicit biases related to gendered racial microaggressions, instead regular critical dialogue and reflection will be required to address gendered racial microaggressions in a meaningful way.

## **Conclusion**

Gendered racial microaggressions among Asian American women in the STEM workplace are a unique intersectional stressor that is associated with increased job-related

burnout and psychological distress. These findings motivate further empirical investigation of gendered racial microaggression related feelings of perceived exploitation as a more proximal factor that is associated with job-related burnout and psychological distress. Further, consideration of the ways in which gendered racial microaggressions operate within the broader context of STEM organizations as racialized organizations are needed to understand how gendered racial microaggressions maintain existing organizational gender racial hierarchies (Ray, 2019). In particular, instead of recognizing Asian American women for their unique contributions and talents, gendered racial microaggressions diminish Asian American women's agency by viewing them as docile, competent workers, and not fit for leadership. Further, as their workload increases, gendered racial microaggressions and model minority myth stereotypes help to legitimize the unequal distribution of resources, assuming Asian American women do not need any additional support or resources to perform their job. Overall, this study contributes to the existing organizational literature by bringing urgent attention to gendered racial microaggression stress as a key organizational risk factor for job-related burnout among Asian American women, and highlight the role of diversity climates in mitigating some of the negative effects of perceived exploitation, with significant potential to address harms inflicted by gendered racial microaggression stress within the STEM workplace.

## APPENDICES

### APPENDIX A. Research Information Sheet

#### UCLA RESEARCH INFORMATION SHEET

#### Asian American Women's Workplace Experiences in STEM

##### Introduction

My name is Michele Wong, MSPH, a doctoral candidate in the Department of Social Welfare at the University of California Los Angeles Luskin School of Public Affairs. As part of my dissertation research, I am conducting a study on Asian American women's workplace experiences in Science, Technology, Engineering, and Mathematics (STEM).

You are invited as a possible participant in this study because you:

- 1) self-identify as an Asian American woman (e.g., East Asian, Southeast Asian, South Asian)
- 2) are currently employed in a STEM occupation or work in a STEM environment
- 3) currently reside in the United States
- 4) are 18 years old or older

For the purposes of this research, a STEM professional is broadly defined to include individuals that work in the following major categories:

- **science and engineering** (e.g., software developer, food scientist, chemist, social scientist, bioengineer),
- **science and engineering related occupations** (e.g., physician, nurse, technician, health services manager, science teacher),
- **skilled technical workforce** (e.g., construction, manufacturing).

If you do not work as a STEM professional, **you may still qualify** as long as you are currently working in a STEM environment (e.g., administrative assistant at a tech firm or a human resources manager working at a hospital).

##### Research Information

**Why is this research being done?** Little research exists on Asian American women's workplace experiences in STEM fields, specifically on how experiences of discrimination and harassment may affect their work and health outcomes in the United States. Findings from this study have important implications, particularly for the development of organizational policies, interventions, tools and training that can better support Asian American women in the STEM workplace.

**What do I need to do? And what is the time required?** If you agree to participate in this

study, the procedure involves completing an online survey that will take approximately **20-30 minutes** to complete. Some sample items will include:

- In this organization, the different opinions, ideas, and perspectives brought by Asian American women are valued by other workers
- In this organization, others have been surprised when I disagree with them

### **Are there any risks if I participate?**

There are no significant risks anticipated for participating in this survey. There is a possibility that answering some of the questions might cause you to experience negative thoughts when reflecting on your experiences in a STEM workplace. If you feel any discomfort or distress while completing the study, you have the option to not answer or skip questions, or you can stop the study entirely if you do not wish to continue.

### **Are there any benefits if I participate?**

There are no anticipated direct benefits, instead the results of the research may benefit the society and our knowledge of how to better support Asian American women in the STEM workplace.

### **Will I be paid for participating?**

Everyone who completes the survey will receive a **\$20 e-gift card** (while funds last).

Additionally, research participants with complete survey responses will be given the option to enter into a drawing to win 1 of 10 **\$100 e-gift cards**. A random number generator will be used to select the winners after the initial wave of survey recruitment has closed.

*What if I decline to participate in the research?* Participation in the study is not required in order to participate in the raffle. If you would like to be entered into the drawing without participation in this study, you can contact Michele at [mwongj09@g.ucla.edu](mailto:mwongj09@g.ucla.edu) and you will be included within a single prize drawing for one of the \$100 e-gift cards.

### *Approximate odds of winning:*

- *For research participants:* Best expected odds are 1:50 if the expected 500 participants complete all surveys, and lowest expected odds are 1:100 if all participants of the intended recruitment of 1000 participants complete the surveys.
- *For non-research participants entering the raffle:* The highest expected odds are 1:500 if the expected 500 participants complete all surveys, and lowest expected odds are 1:1000 if all participants of the intended recruitment of 1000 participants complete all surveys.

Selected prize winners will be contact via email by Michele Wong (Principal Investigator).

### **How will information about me and my participation be kept confidential?**

The researchers will do their best to make sure that your private information is kept confidential. Participating in research may involve a loss of privacy and the potential for a



breach in confidentiality. Study data will be electronically secured. As with any use of electronic means to store data, there is a risk of breach of data security.

***Use of personal information that can identify you:*** Your responses will be strictly confidential; we will not be collecting or retaining any information about your identity except an email address that we can use to contact you later on about the e-gift card, raffle and follow up survey participation. Your email address will not be linked to your data.

***How information will be stored?*** The data collected during this study will be stored on a secure website with 2-factor authentication.

***People and agencies that will have access to your information:*** The research team and authorized UCLA personnel, may have access to study data and records to monitor the study. Publications and/or presentations that result from this study will not identify you by name (this study will not ask for your name).

#### **Use of data for future research**

Your data may be kept for use in future research.

**Who can I contact if I have questions about this study?** If you have any questions, comments or concerns about the research, you can talk to one of the researchers.

Primary contact: Michele Wong – [mwongj09@g.ucla.edu](mailto:mwongj09@g.ucla.edu)

Faculty sponsor: Dr. Brian Keum – [briankeum@luskin.ucla.edu](mailto:briankeum@luskin.ucla.edu)

#### **UCLA Office of the Human Research Protection Program (OHRPP):**

If you have questions about your rights as a research subject, or you have concerns or suggestions and you want to talk to someone other than the researchers, you may contact the UCLA OHRPP:

- by phone: (310) 206-2040;
- by email: [participants@research.ucla.edu](mailto:participants@research.ucla.edu)
- or by mail: Box 951406, Los Angeles, CA 90095-1406.

#### **What are my rights if I take part in this study?**

- Your participation in this study is completely voluntary.
- You can choose whether or not you want to be in this study, and you may withdraw your consent and discontinue participation at any time.
- Whatever decision you make, there will be no penalty to you, and no loss of benefits to which you were otherwise entitled.
- You may refuse to answer any questions that you do not want to answer and still remain in the study.

**Thank you for your time, support, and consideration in moving this important and timely research forward!**

**Please feel free to contact me (mwongj09@g.ucla.edu) with any questions or comments.**

**APPENDIX B. Study Measures**

<b>During the past 30 days, about how often did you feel ...</b>	<b>All of the time</b>	<b>Most of the time</b>	<b>Some of the time</b>	<b>A little of the time</b>	<b>None of the time</b>
<b>1.</b> Nervous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>2.</b> Hopeless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>3.</b> Restless or fidgety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>4.</b> So depressed that nothing could cheer you up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>5.</b> That everything was an effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6.</b> Worthless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

***Kessler Psychological Distress Scale (K6)***

**Kessler Psychological Distress Scale Scoring Procedure**

Code each of the 6 questions from 0 to 4 and then sum

Score ranges 0 to 24

Serious mental illness clinical range: 13-24\*

\*A score of 13: sensitivity was 0.36 (0.08), specificity was 0.96 (0.02), and total classification accuracy was 0.92 (0.02). (Based on general US population analysis.)

Kessler, R.C., Barker, P.R., Colpe, L.J., Epstein, J.F., Gfroerer, J.C., Hiripi, E., Howes, M.J, Normand, S-L.T., Manderscheid, R.W., Walters, E.E., Zaslavsky, A.M. (2003). Screening for serious mental illness in the general population *Archives of General Psychiatry*. 60(2), 184-189.

**Oldenburg burnout inventory**

*Instructions:* Below you find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the number that corresponds with each statement.

		<b>strongly agree</b>	<b>agree</b>	<b>disagree</b>	<b>strongly disagree</b>
1.	I always find new and interesting aspects in my work ( <i>D</i> )				
2.	There are days when I feel tired before I arrive at work ( <i>E.R.</i> )				
3.	It happens more and more often that I talk about my work in a negative way ( <i>D.R</i> )				
4.	After work, I tend to need more time than in the past in order to relax and feel better ( <i>E.R</i> )				
5.	I can tolerate the pressure of my work very well ( <i>E</i> )				
6.	Lately, I tend to think less at work and do my job almost mechanically ( <i>D.R</i> )				
7.	I find my work to be a positive challenge ( <i>D</i> )				
8.	During my work, I often feel emotionally drained ( <i>E.R.</i> )				
9.	Over time, one can become disconnected from this type of work ( <i>D.R</i> )				
10.	After working, I have enough energy for my leisure activities ( <i>E</i> )				
11.	Sometimes I feel sickened by my work tasks ( <i>D.R</i> )				
12.	After my work, I usually feel worn out and weary ( <i>E.R</i> )				
13.	This is the only type of work that I can imagine myself doing ( <i>D</i> )				

.					
14	Usually, I can manage the amount of my work well ( <i>E</i> )				
15	I feel more and more engaged in my work ( <i>D</i> )				
16	When I work, I usually feel energized ( <i>E</i> )				

*Note:* Disengagement items are 1, 3(R), 6(R), 7, 9(R), 11(R), 13, 15. Exhaustion items are 2(R), 4(R), 5, 8(R), 10, 12(R), 14, 16. (R) means reversed item when the scores should be such that higher scores indicate more burnout.

***disengagement  
sub-total:***

***exhaustion  
sub-total:***

***full scale  
total:***

### **OLBI Scale Scoring Procedure**

- 1) “Reverse” scores on items 2, 3, 4, 6, 8, 9, 11, 12. This means if you scored a 1, make it a 4. If you scored a 3, make it a 2, etc.
- 2) Add together scores on all 16 items, including those “reversed” as above.
- 3) Your total score should be between 16-64.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, 86(3), 499.

### ***Gendered Racial Microaggressions Scale for Asian American Women (GRMSAAW)***

**FREQUENCY INSTRUCTIONS:** The following items assess gendered racial microaggressions toward Asian American women. To the best of your ability, please indicate how often you generally experienced each event throughout your lifetime in relation to your identity as an Asian American woman.

Please rate your responses based on the following options:

0 (*Never*), 1 (*Rarely*), 2 (*Sometimes*), 3 (*Often*), 4 (*Very frequently*), 5 (*Always*).

**STRESS INSTRUCTIONS:** The following items assess gendered racial microaggression toward Asian American women. To the best of your ability, please indicate how stressful (e.g., upset, bothered, offended) each event is for you in relation to your identity as an Asian American woman. Note: if an event never happened to you or you can’t recall such an event happening, please rate 0 (*Not at all stressful*).

Please rate your responses based on the following options: 0 (*Not at all stressful*), 1 (*Slightly stressful*), 2 (*Somewhat stressful*), 3 (*Moderately stressful*), 4 (*Very stressful*), 5 (*Extremely stressful*).

1. Others expect me to be submissive.
2. Others have been surprised when I disagree with them.
3. Others take my silence as a sign of compliance.
4. Others have been surprised when I do things independent of my family.
5. Others have implied that Asian American women seem content for being a subordinate.
6. Others treat me as if I will always comply with their requests.
7. Others expect me to sacrifice my own needs to take care of others (e.g., family, partner) because I am an Asian American woman.
8. Others have hinted that Asian American women are not assertive enough to be leaders.
9. Others have hinted that Asian American women seem to have no desire for leadership.
10. Others express sexual interest in me because of my Asian appearance.
11. Others take sexual interest in Asian American women to fulfill their fantasy.
12. Others take romantic interest in Asian American women just because they never had sex with an Asian American woman before.
13. Others have treated me as if I am always open to sexual advances.
14. Others have talked about Asian American women as if they all have the same facial features (e.g., eye shape, skin tone).
15. Others have suggested that all Asian American women look alike.
16. Others have talked about Asian American women as if they all have the same body type (e.g., petite, tiny, small-chested).
17. Others have pointed out physical traits in Asian American women that do not look “Asian.”

### Scoring

Ascribed Submissiveness (AS): Items 1-9  
 Asian Fetishism (AF): Items 10-13  
 Media Invalidation (MI): Items 14-18

Assumption of Universal Appearance (AUA): 19-22

Total scale score: add up all of the items (1-22) and calculate the mean score

Subscale scores:

- Structural Equation modeling: It is recommended that you conduct structural equation modeling to examine the bifactor of the GRMSAAW in relation to the outcome variables. This can be done by modeling the general factor (all items) and the four subscales uncorrelated to each other and then examining their relationship to an outcome variable simultaneously. Please see Keum et al. 2018 for more info.

- Observed scores: Based on our bifactor model examination, only the AS factor explained significant unique variance beyond the general factor (total scale score). Hence, the AS factor is the only subscale that can be simply calculated by obtaining its mean subscale score (take the average of items 1-9). For the remaining 3 subscales (AF, MI, AUA), you must subtract the mean total scale score from each of the mean subscale score to parcel out the variance accounted by the general factor. E.g., To use the AF subscale, add up and get the mean of items 10-13, and then subtract the mean total scale score.

**\*\*NOTE:** I have received inquiries from researchers asking if the subscales can be used on their own. Each subscale may also be used individually (average observed score for each subscales) only if a four-factor correlated structure has a good fit to your data. We validated the GRMSAAW using a bifactor model but the four-factor first order model also had good fit. Therefore, if you wish to use the four subscales individually, you must demonstrate that the four-factor first order model has a good fit for your sample before proceeding. Please contact me at [tbkeum@umd.edu](mailto:tbkeum@umd.edu) if you have any questions about this.

\*\*\*\*Please do not distribute without the written permission of the author\*\*\*\*

Keum, B. T., Brady, J. L., Sharma, R., Lu, Y., Kim, Y. H., & Thai, C. J. (2018). Gendered Racial Microaggressions Scale for Asian American Women: Development and initial validation. *Journal of Counseling Psychology*. Advance online publication. <http://dx.doi.org/10.1037/cou0000305>

***Perceived Exploitative Employee-Organization Relationship Scale***

Instructions: To the best of your ability, please think about your experiences in the workplace and indicate how much you may agree or disagree with each statement in relation to your identity as an Asian American woman, by selecting the number that corresponds to each statement.

Please rate your responses based on the following options:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Somewhat Disagree
- 4 = Neither Agree or Disagree
- 5 = Somewhat Agree
- 6 = Agree
- 7 = Strongly Agree

1.	As long as I work in my organization, it will keep taking advantage of me.
2.	My organization will never stop using me.
3.	This is not the first time my organization has taken advantage of me.

4.	My organization takes advantage of the fact that I need this job.
5.	My organization forced me into a contract that unilaterally benefits the organization.
6.	I am a modern-day slave.
7.	My organization mistreats me because I am dependent on it.
8.	My organization uses labor contract loopholes to avoid adequate compensation.
9.	My organization uses the fact that I need this job to avoid compensating me adequately.
10.	My organization intentionally undercompensates me because it knows that I am desperate for this job.
11.	My organization expects me to be available to work at any time without extra pay.
12.	My organization uses my ideas for its own personal benefit without acknowledging me for them.
13.	My organization doesn't care if it harms me, as long as it benefits from my work.

Livne-Ofer, E., Coyle-Shapiro, J. A., & Pearce, J. L. (2019). Eyes wide open: Perceived exploitation and its consequences. *Academy of Management Journal*, 62(6), 1989-2018.

### ***Workplace Diversity and Inclusion Climate Scale***

Historically marginalized groups are those who, **either historically and/or currently**, are: less accepted, treated as less valuable, and/or discriminated against in society. Groups may be marginalized based on gender/gender identity, race/ethnicity/national origin, colour, immigrant status, sexual orientation, religious identification, marital or family status, age, disability, socioeconomic status, etc.

Below are several statements concerning your perceptions of your organization. Please rate your agreement with the following statements:

1	2	3	4	5	6	7	8	9
Very Strongly Disagree	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither Disagree nor Agree	Slightly Agree	Moderately Agree	Strongly Agree	Very Strongly Agree

1. In this organization, the different opinions, ideas, and perspectives brought by historically marginalized employees are valued by other workers.

2. In this organization, historically marginalized employees have the same opportunity to receive mentoring as historically non-marginalized employees.
3. In this organization, managers and supervisors encourage historically marginalized employees to be their true selves.
4. In this organization, managers and supervisors have a track record of paying historically marginalized employees fairly.
5. In this organization, historically marginalized employees are involved in social gatherings by other workers.
6. In this organization, historically marginalized and historically non-marginalized employees often share and learn about one another as people.
7. In this organization, managers and supervisors draw on the talents of historically marginalized employees.
8. Top leadership in this organization strives for the representation, across different levels, of historically marginalized employees.
9. This organization demonstrates complete commitment to its historically marginalized employees.
10. The inclusion of historically marginalized employees is very much a part of this organization's culture.
11. In this organization, managers and supervisors are held accountable for increasing diversity throughout the organization.
12. Top leadership in this organization is committed to ensuring that historically marginalized employees are not discriminated against.
13. In this organization, there are policies to resolve matters of discrimination against historically marginalized group members immediately.
14. In this organization, there are policies that seek to eliminate bias and prejudice against historically marginalized groups.
15. In this organization, there is work being done so that historically marginalized employees can feel safe from discrimination.
16. Intolerance of discrimination against historically marginalized employees is very much a part of this organization's culture.

1. When responding to the questions above, I was primarily thinking about the diversity climate that exists \_\_\_\_\_ .
  - a. In my Team
  - b. In my Department
  - c. In my Organization
  - d. Other. Please specify: \_\_\_\_\_

2. When responding to the questions above, which historically marginalized groups were you primarily thinking about? Please list in order of importance.

\_\_\_\_\_ [1]

\_\_\_\_\_ [2]

\_\_\_\_\_ [3]

\_\_\_\_\_ [4]

\_\_\_\_\_ [5]



3. Historically marginalized groups are those who, **either historically and/or currently**, are: less accepted, treated as less valuable, and/or discriminated against in society. With which group do you most identify?
1. Non-historically marginalized group
  2. Historically marginalized group
- i. To what extent do you identify as a [non/marginalized] group member?

1	2	3	4	5	6	7	8	9
Not at All		Slightly		Somewhat		Moderately		Extremely

**Scoring Key for the Workplace Diversity and Inclusion Climate Scale:**

**Subscale 1 Score** (Valuing, including, and treating fairly historically marginalized employees) = (item 1 + item 2 + item 3 + item 4 + item 5 + item 6 + item 7) / 7

**Subscale 2 Score** (Organizational commitment and policies to promote representation and inclusion of historically marginalized employees) =

(item 8 + item 9 + item 10 + item 11) / 4

**Subscale 3 Score** (Organizational commitment and policies to eliminate bias and discrimination against historically marginalized groups) =

(item 12 + item 13 + item 14 + item 15 + item 16) / 5

**Overall Workplace Diversity and Inclusion Climate Scale Score** = (Subscale Score 1 + Subscale Score 2 + Subscale Score 3) / 3

Sakr, N., Son Hing, L. S., & González-Morales, M. G. (2023). Development and Validation of the Marginalized-Group-Focused Diversity Climate Scale: Group Differences and Outcomes. *Journal of Business and Psychology*. <https://doi.org/10.1007/s10869-022-09859-3>

## APPENDIX C. Recruitment Flyer



The header features the UCLA Luskin School of Public Affairs logo on the left. To its right, the text "STEM WORKPLACE STUDY" is displayed in large, bold, white letters on a yellow background. Below this, a blue banner contains the text "Asian American Women Needed For Research Study on STEM Workplace Experiences" in white.



This section contains several graphics: a central illustration of a woman with glasses and a lab coat holding a flask, surrounded by colorful circles with the letters S, T, E, and M; a collection of STEM-related icons including a microchip, a rocket, a DNA helix, a microscope, and a plus sign; and a QR code with the text "TO SEE IF YOU QUALIFY" above it and "SCAN THE QR CODE" below it.

We are interested in learning more about your experiences navigating the Science, Technology, Engineering and Mathematics (STEM) workplace as an **Asian American woman**.

### PARTICIPANTS WILL

- Receive a \$20 e-gift card
- Complete a 20-30 minute online survey
- Have a chance to win an additional \$100 e-gift card
- Participation in this study is not required in order to participate in the raffle

### YOU MAY QUALIFY IF YOU

- Are 18 years old or older
- Self-identify as an Asian American woman
- Are currently employed in a STEM occupation or workplace
- Currently live in the United States

Please contact Michele Wong – [mwongj09@g.ucla.edu](mailto:mwongj09@g.ucla.edu)

ELIGIBILITY SCREENING LINK: <https://bit.ly/AAWSTEM>

## APPENDIX D. Recruitment Email

\*\*\*\*\*

My name is Michele Wong, MSPH, a doctoral candidate in the Department of Social Welfare at the University of California Los Angeles Luskin School of Public Affairs. As part of my dissertation research, I am conducting a study (IRB#21-001016) on Asian American women's workplace experiences in Science, Technology, Engineering, and Mathematics (STEM).

We are looking for participants who:

- 1) self-identify as an Asian American woman (e.g., East Asian, Southeast Asian, South Asian)
- 2) are currently employed in a STEM occupation or work in a STEM environment
- 3) currently reside in the United States
- 4) are 18 years old or older

For the purposes of this research, a STEM professional is broadly defined to include individuals that work in the following major categories:

- **science and engineering** (e.g., software developer, food scientist, chemist, social scientist, bioengineer),
- **science and engineering related occupations** (e.g., physician, nurse, technician, health services manager, science teacher),
- **skilled technical workforce** (e.g., construction, manufacturing).

If you do not work as a STEM professional, **you may still qualify** as long as you are currently working in a STEM environment (e.g., administrative assistant at a tech firm or a human resources manager working at a hospital).

Participation involves taking a confidential online survey that will take approximately **20-30 minutes** to complete. Participation in this study is completely voluntary. If you are interested in participating in this study, please click on the link below to read more about the study in the online consent form. Once you complete the consent form, you will be directed to the survey. You will receive a **\$20 e-gift card** for participating in this study, and be eligible to enter into a drawing to win **1 of 10 \$100 e-gift cards**.

If you know of other Asian American women that may qualify for this survey, please feel free to forward this information among your networks!

If the hyperlink is disabled, please copy and paste the following link into your internet browser.

**Survey Link:** <https://bit.ly/AAWSTEM>

Thank you for your time, support, and consideration in moving this important and timely research forward! Please feel free to contact me ([mwongj09@g.ucla.edu](mailto:mwongj09@g.ucla.edu)) with any questions or comments.

Sincerely,  
Michele J. Wong  
PhD Candidate  
Department of Social Welfare  
UCLA Luskin School of Public Affairs  
[mwongj09@g.ucla.edu](mailto:mwongj09@g.ucla.edu)

\*\*\*\*\*

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