Perceived racial discrimination during COVID-19 and psychological distress among East and Southeast Asian American young adults: Examining the roles of ethnic identity and social support

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Abstract

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The COVID-19 pandemic amplified anti-Asian racism in the United States, heightening mental health risks for Asian Americans. This study examined associations between perceived racial discrimination and psychological distress—depression, anxiety, and posttraumatic stress disorder (PTSD)—and tested whether ethnic identity (exploration and commitment) and social support (family, friends) moderated these associations among East and Southeast Asian American young adults. Participants were 429 adults (ages 20–33) from Wave 4 of the COVID-19 Adult Resilience Experiences Study (February–June 2022). Validated self-report measures and moderation analyses (PROCESS in SPSS) were used. Discrimination was positively associated with depression, anxiety, and PTSD. Ethnic identity exploration correlated with greater distress, whereas commitment was linked to lower distress. Exploration amplified the discrimination–anxiety link, highlighting the emotional toll of identity exploration in a discriminatory society. Guided by self-categorization and rejection sensitivity frameworks, individuals actively exploring ethnicity may become more attuned to racial stressors, increasing vulnerability during an inherently uncertain process. Interventions fostering critical consciousness and community connection may transform exploration into an empowering experience. Social support from family and friends predicted lower distress overall and buffered the effects of discrimination on depression and anxiety—but more so at lower than higher

discrimination levels. Under severe racial stress, interpersonal support may be insufficient, underscoring the need for systemic change. These findings call for interventions that not only bolster individual resilience but also confront structural conditions sustaining anti-Asian racism

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Chapter 1: Introduction

The COVID-19 pandemic has had devastating effects on racial-ethnic groups across the United States. A 2020 study estimated that the prevalence of depressive symptoms among U.S. adults tripled during the COVID-19 pandemic as compared to pre-pandemic levels (Ettman et al., 2020). At the same time, the COVID-19 pandemic has uncovered deep-seated inequalities and further exacerbated health and mental health disparities, which disproportionately impact racial-ethnic minorities and immigrants (Addo, 2020; Hooper et al., 2020; van Dorn et al., 2020). In particular, Asian Americans have faced disproportionate stressors, confronting not only pandemic-related challenges such as illness, isolation, and economic downturn, but also a surge of anti-Asian racial discrimination, which has instilled fear and anxiety about their own safety (J. Kim & Tummala-Narra, 2022; Tavernise & Oppel, 2020).

The COVID-19 pandemic, which has been highly racialized and politicized from the start, has reanimated a long-standing history of anti-Asian racism and xenophobia in the U.S. (Chen et al., 2020; H.L. Cheng et al., 2021; E. Lee, 2015). As COVID-19 emerged in Wuhan, China, Asian individuals and communities were pathologized and scapegoated as the source of the outbreak and spread of the virus (J. Chen et al., 2020; Keum & Choi, 2022). This is not surprising, given the long history of naming epidemics after people, places, animals, and racist stereotypes (Kaur, 2020). In this case, the scapegoating of Chinese Americans is a form of "ethno-stigmatization" (Mallapragada, 2021, p.283), where Chinese Americans are reduced to their bodies, presumed to be diseased - carriers of the virus, and contagious - contaminating the air around them; "an embodied form of the contagion that needs to be expelled" (Mallapragada, 2021, p.284). The construction of Chinese Americans (more broadly Asian Americans) as a racial contagion is upheld and amplified by the spread of misinformation on

news platforms, social media, and severely damaging language from President Donald Trump, who synonymized COVID-19 with Asian racial identity by calling it “China virus” and “Kung flu” (J. Chen et al., 2020; Mallapragada, 2021; Turner-Musa et al., 2020).

The shunning of Asian Americans as pathogens of the COVID-19 virus has not only lived on an ideological level in the public consciousness of the U.S. but has led to a spike in anti-Asian violence, both on structural and interpersonal levels. While overall hate crimes decreased by 7% nationwide, hate crimes targeting Asian Americans increased by 150% in 2020 and 194% in the first quarter of 2021 (Levin & Grisham, 2021). Stop AAPI Hate, a U.S. based data tracking organization, has received a total of 10,370 hate incidents against Asian Americans and Pacific Islanders from March 2020 to September 2021 (Yellow Horse et al., 2021). A nationally representative survey of Asian Americans and Pacific Islanders (AAPI) conducted in 2021 revealed that 21.2% of Asian Americans and 20% of Pacific Islanders reported experiencing a hate incident in the past year (Yellow Horse et al., 2021). This includes reports of Asians being spat on, refused services, verbally abused, and physically attacked (Hong, 2020; Turton, 2020; Yan et al., 2020). These horrific incidents have occurred against the backdrop of numerous high-profile tragedies affecting AAPI victims, most notably the Atlanta spa shooting of eight Asian American women in March 2021, the beatings of Asian elderly in the Bay Area, and the murder of multiple Asian women in New York City in early 2022. The severity and persistence of anti-Asian racism, intensified by the COVID-19 pandemic, underscore the urgency in examining its psychological impacts on Asian Americans in the U.S.

As such, the current study aims to examine the association between perceived racial discrimination and psychological distress (symptoms of depression, anxiety, and post-traumatic

stress disorder (PTSD)) among Asian young adults during COVID-19. Grounded in Clark's (1999) biopsychosocial model of perceived racism and Harrell's (2000) multidimensional conceptualization of racism-related stress, the current study conceptualizes experiences of racial discrimination as a source of stress that is embedded within the interpersonal, collective, cultural, and sociopolitical contexts (Harrell, 2000). In line with the broader stress and coping theory (Lazarus & Folkman, 1984), these models highlight that discriminatory experiences stemming from racism are experienced as stressful by racial/ethnic minority individuals when they exceed the existing individual and collective resources and threaten well-being (Clark et al., 1999; Harrell, 2000). Moreover, this study draws from Minority Stress Theory (Meyer, 2003), which draws attention to the excess stress individuals from stigmatized social groups endure as a result of their minority position; as well as Carter's (2007) Race-based Traumatic Stress Model, which conceptualizes racism as a form of trauma, which may bring about psychological and physiological symptoms similar to those resulting from more commonly acknowledged traumatic experiences such as rape and domestic violence (Carter, 2007).

The current study aims to build upon the literature on the harmful psychological impacts of racial discrimination among Asian Americans. In support of aforementioned models' conceptualizations of racism, studies have demonstrated the association between perceived racial discrimination and negative psychological effects among Asian Americans, long before the surge in anti-Asian discrimination during the COVID-19 outbreak. Even prior to the pandemic, experiences of racial discrimination have been associated with increased psychological distress (Syed & Juan, 2012), including symptoms of anxiety, depression (Nadal et al., 2015; Tummala-Narra et al., 2012), suicidal ideation (Hwang & Goto, 2008), and substance use (D. H. Chae et al., 2008) among Asian Americans. Since the outbreak of the

pandemic, studies have documented the stark increase of racial discrimination experiences and their association with symptoms of depression (Huynh et al., 2023; S. Lee & Waters, 2021), anxiety (Ahn et al., 2022; Dong et al., 2022; Lu & Wang, 2022), and PTSD (Ermis-Demirtas et al., 2022b; Hahm et al., 2021) among Asian Americans across age groups.

With the well-established connection between racial discrimination and diminished well-being/ worsened mental health outcomes among Asian Americans, there has been a call for research that investigates resilience-promoting factors that can ameliorate the negative health effects of racism (J. Chen et al., 2020). As such, the present study will examine two factors: ethnic identity and social support, and how they moderate (i.e., exacerbate/attenuate) the association between perceived racial discrimination and psychological distress among Asian young adults.

Ethnic identity and its dimensions have been widely studied among Asian Americans, but the findings have been mixed (see Yip et al., 2019 for a review). This study aims to address a gap in the literature by responding to calls from scholars to explore the distinct dimensions of ethnic identity, rather than treating it as a single, multidimensional construct. Different aspects of ethnic identity may exert different effects on the discrimination-distress link among Asian Americans (Phinney & Ong, 2007; Yip et al., 2019). To this end, the current study investigates the moderating role of two well-established factors of ethnic identity: ethnic identity *exploration*, and ethnic identity *commitment/affirmation*. This focus is particularly relevant for the current sample, as identity development, including ethnic identity, is a salient developmental task for racial/ethnic minority individuals in emerging and young adulthood (Phinney, 2006; Syed & Azmitia, 2010).

Additionally, this study examines the distinct effects of social support *from family* and social support *from friends* in moderating the relationship between perceived discrimination and psychological distress. Social support is conceptualized as a key coping resource, and its use may be especially pronounced in Asian cultural contexts that emphasize interdependence and collectivism (Sangalang & Gee, 2012). However, other research suggests that there may be nuances to this conjecture, as Asian young adults who espouse a more collectivistic orientation may also be less likely to disclose personal problems, particularly those related to mental health challenges, out of concern for burdening others and disrupting group harmony (B. S. K. Kim et al., 2001; J. E. Kim & Zane, 2016). By differentiating between support from family and support from friends, this study offers a more nuanced understanding of how these sources of support may function differently as moderators. This is particularly relevant in the context of COVID-19, during which many Asian American emerging and young adults likely experienced changes in their social relationships and increased social isolation due to the prolonged stay-at-home orders and virtual learning (Lisitsa et al., 2020).

Taken together, these potential moderating factors are paramount to investigate, as they may illuminate both individual-level and contextual protective mechanisms to mitigate the psychological impact of racial discrimination among Asian American young adults. Understanding the mental health consequences of heightened anti-Asian racism during COVID-19, as well as the factors that may buffer this distress, holds important clinical implications for promoting the well-being of a community whose psychological needs are commonly eclipsed by the pervasive influence of the model minority myth in the U.S. (S. Lee et al., 2009).

Chapter 2: Literature Review

2.1 Brief Background on Asian Americans in the U.S.

Asian Americans are the fastest growing racial/ethnic group in the U.S. (Budiman & Ruiz, 2021). Comprising 5.6% of the U.S. population, Asian Americans encompass individuals of Asian descent from over 50 countries and linguistic backgrounds, each subgroup possessing unique cultural, linguistic, religious, and immigration histories (Budiman & Ruiz, 2021). Like other racial minority groups in the U.S., Asian Americans have been subjected to a long history of racial discrimination and systemic injustice.

2.2 Manifestations of Anti-Asian Discrimination during COVID-19

Anti-Asian racism during COVID-19 has manifested in both overt and subtle ways, ranging from microaggressions to verbal harassment to physical violence. According to the Stop AAPI Hate Reporting Center, Asian Americans have reported being verbally and physically harassed, avoided, shunned, physically assaulted, coughed and spat on, and excluded from employment and career opportunities due to COVID-19-related racism (Saw et al., 2021; Yellow Horse et al., 2021). A Pew Research Center report revealed that 39% of Asian respondents said others have acted more uncomfortable around them because of race; 31% reported being the subject of racial slurs or jokes, and 26% fear being threatened or physically attacked (Ruiz et al., 2020). These experiences have been documented across various settings, including schools (Le et al., 2021), workplaces (Gardner et al., 2022), and online settings (Ng, 2021), affecting Asians across the lifespan (Cheah et al., 2020; Jeung et al., 2021).

COVID-19-related anti-Asian stigma and hostility have been most acutely targeted at East Asians, largely due to *Sinophobia*, or anti-Chinese discrimination (Cheah et al., 2020;

Chen et al., 2020). However, individuals who "appeared Chinese," regardless of their actual ethnicity, have been vulnerable to racially motivated victimization (Ermis-Demirtas et al., 2022b; Litam, 2020; Ruiz et al., 2020). This is reflected in the hate crimes reports across AAPI communities: data from Stop AAPI Hate indicated that while the most frequently targeted ethnic group was Chinese (40.7% of incidents), other Asian ethnic groups have also faced COVID-19 discrimination, including Koreans (15.1%), Vietnamese (8.2%), and Filipinos (7.2%) (Saw et al., 2021).

The current study will focus on East and Southeast Asians, who have reported higher rates of COVID-19-related racial discrimination compared to South Asians (Le et al., 2020; Wong-Padoonpatt et al., 2022; Zhang et al., 2022). This disparity is due in part to the way that East and Southeast Asians were more likely to be perceived, based on phenotypic features, as resembling Chinese individuals, who were closely associated with the virus's origin. Media narratives reinforced this connection, portraying them as foreign or threatening and intensifying scapegoating and everyday discrimination.

2.3 Historical and Sociopolitical Context of Anti-Asian Racism in the U.S.

2.3.1 Context

The surge of anti-Asian racism during the COVID-19 pandemic cannot be examined in isolation, as both the outbreak of the disease and its sequelae are embedded in a sociopolitical context and structural stigma (Hatzenbuehler, 2016). The rise in anti-Asian hate has been fueled by news media that attributes disease threat to the Chinese community (Haft & Zhou, 2021) and exacerbated by political leaders' public comments. For example, U.S. president Donald Trump engaged in public racist rhetoric that promoted anti-Asian sentiments and exclusion, e.g., referring to COVID-19 as "Chinese virus," "Wuhan virus," "Kung flu,"

"Yellow alert" throughout March-April 2020 (Cabanatuan, 2020; Kambhampaty & Sakaguchi, 2020). Framing and cultivation theories (Morgan & Shanahan, 2010) contend that negative news media can increase stereotypes and discrimination against racial/ethnic groups after major global events (Darling-Hammond et al., 2020). Indeed, a data analysis of Twitter from November 2019 and March 2020 revealed a 68% increase of racist tweets featuring xenophobic slurs, such as "Ching Chong," "Chink" (Nguyen et al., 2020), and studies have documented an increase in implicit bias against Asian Americans starting March 2020 following the propagation of anti-Asian sentiment in the media (Darling-Hammond et al., 2020). The promotion and normalization of xenophobia in the media prompted the World Health Organization to develop a guide warning against an "infodemic" that spread misinformation about the COVID-19 virus (Turner-Musa et al., 2020).

2.3.2 History

The grim reality is that COVID-19-related anti-Asian racism is only the latest iteration of a long history of stereotyping and scapegoating minoritized groups as disease carriers and represents a snapshot within a broader pattern of "legally sanctioned racism and contemporary forms of racial discrimination" (Chae et al., 2021, p.508) against Asian Americans in the United States (J. Chen et al., 2020). This section will outline a brief history of Asian Americans as well as summarize three pervasive stereotypes about Asian Americans in the U.S.: yellow peril, model minority, and perpetual foreigner.

Racism is maintained through an idea of racial superiority/inferiority and the practice of injustice (Alvarez et al., 2016). The power structures in the U.S. are designed to uphold racial hierarchy to maintain the superiority of Whiteness and inferiority of non-White populations. Racial discourse in the U.S. has often been polarized as a Black and White issue, resulting in a

minimization or dismissal of the racial discrimination encountered by Asian Americans (Kim, 1999; Wong & Halgin, 2006). However, anti-Asian discrimination is part and parcel to the history of Asians in the United States, where Asian Americans have long been "frequent targets of interpersonal and structural persecution" (Ermis-Demirtas et al., 2022, p.2).

Anti-Asian racist ideologies in the U.S. have existed since the first wave of Asian immigrants arrived in the U.S. in 1763 (Takaki, 2008). During the 1850s, the Gold Rush and the construction of the first transcontinental railroad brought many Asian immigrants to the U.S. as laborers. The first major wave of Chinese immigrants contributed significantly to mining, farming, fishing, and railroad workforces. Paradoxically, while Chinese immigrants were hired as cheap labor, they started to be perceived as an economic threat to the U.S. It was during this time that the "yellow peril" stereotype emerged, portraying Asian Americans as dirty, alien, immoral, and ultimately unfit for citizenship (Takaki, 2008). Later in 1882, the Chinese Exclusion Act, the first immigration law in the U.S. that barred immigration solely based on race, was passed to prevent Chinese laborers from entering the U.S. Moreover, during World War II, 120,000 individuals of Japanese ancestry, more than 60% of whom were U.S. citizens, were forced to concentration camps with immensely inhumane and extreme conditions, based on unfounded suspicions that Japanese individuals were aiding the enemy in WWII. During the late 1970s-early 1980s, in Texas, the Ku Klux Klan (KKK) attacked the Vietnamese fishermen's boats by setting them on fire, claiming that Vietnamese fishermen were stealing American jobs. In 1982, two white men beat then 27-year-old Vincent Chin, a Chinese American man, to death, blaming him for the success of the Japanese auto industry. Instead of a manslaughter sentence of 15 years, the judge gave the murderers of Vincent Chin a probation and a $3,000 fine. The 1992 Los Angeles riots following the acquittal of four police

officers accused of beating Rodney King brought about severe property damage to the L.A. Koreatown, as compared to majority White areas (Takaki, 2008). These events only represent a fraction of the pervasive injustices Asian Americans have endured throughout U.S. history.

2.3.3 Stereotypes

Inextricably tied to the anti-Asian violence highlighted above are pervasive essentialist stereotypes that justify the dehumanizing, degrading treatment and discrimination against Asian Americans (Yoo et al., 2022). This section will review three deeply entrenched and enduring stereotypes of Asian Americans: Yellow Peril, Model Minority, and Perpetual Foreigner.

The characterization of Asians carrying diseases is not new (J. Chen et al., 2020; G. S. Kim & Shah, 2020; Tummala-Narra et al., 2012). Throughout history, infectious diseases have given rise to further marginalization and othering of minoritized groups: "outbreaks create fear, and fear is a key ingredient for racism and xenophobia to thrive" (Devakumar et al., 2020, p.1194). Kam (2019) highlights that people seek a sense of control and assurance during infectious outbreaks, which leads to labeling of outgroups as dangerous "others," in turn strengthening stereotypes and racist scapegoating.

The "Yellow Peril" stereotype, which emerged in the late 19th and early 20th centuries, describes Asian Americans as a menacing threat to American society. This stereotype depicts Asian Americans as dirty, ill, sinister, and morally depraved (E. Lee, 2007; Said, 1978). This degrading portrayal of Asian Americans has influenced discriminatory anti-Asian immigration policies (Takaki, 2008) as well as barring of Asian communities from physical spaces. For example, when anti-sanitary reforms failed to stop the spread of the smallpox outbreak of 1875-76 in San Francisco, the Chinese immigrants living in Chinatown were blamed (there

was a wave of Chinese immigrants in California at this time). They were described as “lying and treacherous aliens” (Trauner, 1978), “vile and disease-breeding” (Shah, 2001). Chinatowns were portrayed as “laboratories of infection with foul and disgusting vapors” (Trauner, 1978). In the 1890s, the Vancouver municipal council categorized Chinatown separately for supervision, using words such as “sewage” and “slaughterhouses” to describe such areas. Moreover, during the bubonic plague outbreak in the early 1900s, officials in Vancouver quarantined, burned down, and forcibly removed residents in Chinatown from their homes (J. Chen et al., 2020), a markedly disproportionate and inhumane response in stark contrast to the treatment of non-immigrant communities at the time. Between 1910 and the 1940s, thousands of Asian immigrants arriving in San Francisco were subjected to prolonged detention at Angel Island—often for weeks, months, or even years—while their European counterparts passed through Ellis Island with relatively few barriers (E. Lee, 2015). Asian immigrants were specifically targeted for invasive medical inspections and were screened for so-called "Oriental diseases," which could be used to deny them entry into the United States. Many were forced to undergo humiliating procedures, including the submission of stool samples, as part of this racialized health screening process. Later, the 2003 SARS outbreak prompted a resurgence of anti-Asian racism, particularly toward Chinese and Filipino communities in North America (Fang, 2020; Leung, 2008).

The re-emergence of “medical scapegoating” (Trauner, 1978) during COVID-19 has reduced Chinese Americans (and Asian Americans more broadly) to their bodies, which were believed to be the “embodied form of the contagion that needs to be expelled” (Mallapragada, 2021, p.284). Asian Americans were believed to be diseased and contagious, and as a result,

were shunned on media platforms as well as in everyday interpersonal interactions (H.-L. Cheng, Wong, et al., 2021).

The "yellow peril" stereotype, which casts Asian Americans as a threat, stands in contrast with another deeply rooted stereotype: the "Model Minority" in the U.S. The model minority myth portrays Asian Americans as hardworking, accommodating, polite, law-abiding, and non-threatening who are seen to be free from problems, successful in academics, and immune to racism and discrimination due to their cultural values of hard work and education (S. Lee et al., 2009; D. W. Sue et al., 2007). The term "model minority" was first termed by a sociologist William Peterson who made comparisons between Japanese Americans and African Americans in a 1966 New York Times Magazine story "Success Story, Japanese American Style" which argued that Japanese Americans were able to "overcome" the adversity of WWII internment in just 20 years. In this article, Peterson simultaneously attributed such "success" of Japanese Americans to their culture of strong work ethic, family structure, and genetics while pointing to African American culture and family structure as deficits responsible for their socio-economic problems (Shih et al., 2019).

The ostensibly positive stereotype of model minorities further became popularized throughout the 1960s during the civil rights movement and was utilized as "a political instrument of White supremacy" (Ermis-Demirtas et al., 2022, p.2) to pit Asians and other minority groups such as African Americans and Latinos against each other. According to Kim (1999)'s racial triangulation theory, the model minority status has been externally imposed on Asians "as a hegemonic device… [it] maintains the dominance of white Americans in the racial hierarchy by diverting attention from racial inequality and by setting standards for how minorities should behave" (S. J. Lee, 1996, p.6). By designating Asians as the "model"

minority, this stereotype denigrates other minority racial groups as "problem" minorities, especially in light of claims of structural and systemic oppression and injustice against African Americans during the 1960s civil rights movement (Yip et al., 2023).

The model minority myth has many detrimental effects on Asian Americans. It collapses diverse Asian subgroups with vastly different cultures, histories, and social positions, into one group: "the complexity and uniqueness of each Asian person's subjectivity is lost" (Yi, 2023, p.46). Not only is it reductive, but the stereotype also has the insidious effect of overlooking the mental health needs of Asian Americans (Kiang et al., 2017; Suzuki, 2002). This could happen on two levels: Asians who internalize this myth themselves are at risk of experiencing psychological distress, for example, feeling immense pressure to meet the unrealistic expectations imposed regarding academic and occupational success, and/or feel shame and doubt when they do experience racism and/or mental health challenges (counter to the myth). In turn, the model minority myth may contribute to the underutilization of mental health services by Asian Americans (Kwok, 2013). Not only is this myth harmful when it is internalized by Asians themselves, but also by dominant society, as it engenders a "social indifference" (Wong & Halgin, 2006, p.48). Historically, national polls have shown that most Americans believe racism is not a pressing issue for Asian Americans (*A Committee of 100 Survey*, 2001). Scholars further argue that the model minority myth contributes to an underrepresentation of Asian Americans in mental health research, with only 0.17% of National Institutes of Health (NIH) funding invested in addressing Asian American health and mental health (Đoàn et al., 2019).

Assigning Asian Americans a status as "honorary Whites" or "white adjacent" (Wong & Halgin, 2006) implies that Asians will never fully assimilate within the White power

structure in the U.S. This upholds white supremacy and suggests that Asians are, at best, model minorities (Li & Nicholson, 2021). This reflects another enduring stereotype of Asian/ Asian Americans in the U.S.: "the perpetual foreigner." The perpetual foreigner stereotype positions Asians in the U.S. as inherently foreign, regardless of their citizenship, generational status, or length of residency in the U.S. (Wu, 2002). "Where are you from" / "where are you really from?" are common questions Asians in the U.S. receive, revealing the commonly held belief that Asian Americans are outsiders, foreign to this country who will never fully assimilate to the U.S. and be "truly American" (Armenta et al., 2013). These stereotypes function to stigmatize Asian individuals and perpetuate racism and White supremacy.

2.4 The Impact of Racism on Mental Health

The long history of anti-Asian violence in the U.S. and prevalent anti-Asian stereotypes in the U.S. have direct implications on the identity development and well-being of Asian Americans. This section will give a brief overview of racism as a determinant of the mental health and outline theoretical frameworks that explain the negative impact of discrimination on mental health of Asian Americans. A large body of research has demonstrated the association between racial discrimination and psychological distress including anxiety, depression, substance use, and psychotic experiences (Borrell et al., 2007; Lewis et al., 2015; Martin et al., 2003; Mouzon & McLean, 2017; Paradies et al., 2015; Pieterse et al., 2012) as well as negative health outcomes including blood pressure, cancer, cardiovascular disease, and diabetes (Adam, 2012; Guyll et al., 2001; Krieger & Sidney, 1996; Ryan et al., 2008). The theoretical frameworks outlined in this section address the "why" of this link, i.e., the mechanism underlying the association between racial discrimination and adverse health and mental health outcomes.

2.4.1 Racism and Mental Health: Theoretical Foundations

2.4.1.1 Clark's (1999) Biopsychosocial Model of Perceived Racism

Rodney Clark's (1999) biopsychosocial model of perceived racism focuses on racism as a perceived stressor. Perceived racism is defined as "the subjective experience of prejudice or discrimination" (Clark et al., 1999, p.808). This model builds on Lazarus & Folkman's (1984) stress-coping model which contends that one appraises environmental stimuli as stressful when an individual feels the stimuli is important to them and if it demands the individual to activate a coping response. The biopsychosocial model posits that "the perception of an environmental stimulus as racist results in exaggerated psychological and physiological stress responses that are influenced by constitutional factors, sociodemographic factors, psychological and behavioral factors, and coping responses" (Clark et al., 1999, p.806). These stress responses then accumulate over time to influence health outcomes. Clark et al. (1999) outlined possible variables that may influence the degree to which one perceives an environmental stimulus as racist or stressful: constitutional and socio-demographic factors such as skin tone, occupational status, personal income, family history of hypertension, socioeconomic status; and psychological and behavioral factors such as neuroticism, self-esteem, perceived control, and anger expression-suppression (Clark et al., 1999). This model also highlights that when confronted with racism, "the magnitude and duration of stress responses will depend on the availability and use of coping responses" (Clark et al., 1999, p. 809). Coping responses can be adaptive or maladaptive; general (e.g., social support) or racism-specific (e.g., actively addressing source of racism, keeping quiet and "accepting" mistreatment) (Clark et al., 1999). In terms of the mechanism underlying perceived racism and negative health outcomes, such as depressive symptoms, Clark et al. (1999) proposed

perceived racism posed a threat to one's self esteem and contributed to a sense of helplessness. While this model was originally conceptualized for African Americans, it can be extended to other racial/ethnic minorities experiencing racial discrimination. As such, the present study will draw on this model to investigate the effects of perceived racial discrimination on Asian American young adults' psychological distress, namely, symptoms of depression, anxiety, and post-traumatic stress disorder (PTSD).

2.4.1.2 Harrell's (2000) Multidimensional Conceptualization of Racism-related Stress

While Clark et al., (1999)'s biopsychosocial model was originally conceptualized for African Americans and more focused on health outcomes (which can be applied to other minoritized groups), Harrell's (2000) Multidimensional Conceptualization of Racism-Related Stress explicitly conceptualizes racism-related stress on diverse, historically oppressed racial and ethnic groups, integrating social and historical contexts and culture-specific variables that may influence the link between perceived racism and well-being. Harrell (2000)'s theory centers the transaction between person and environment and draws on both stress-and-coping literature as well as literature on social and psychological functioning on historically oppressed racial/ethnic groups.

Harrell (2000) extends Lazarus & Folkman (1984)'s definition of psychological stress to define the multidimensional construct of racism-related stress as "the race-related transactions between individuals and groups and their environment that emerge from the dynamics of racism and that are perceived to tax or exceed existing individual and collective resources or threaten well-being" (Harrell, 2000, p.44). Harrell (2000) outlines at least six types of racism-related stress: racism-related life events, vicarious racism experiences, daily racism microstressors, chronic-contextual stress, collective experiences of racism, and

transgenerational transmission of group traumas. Importantly, this theory stresses the cumulative effects of racism and that "living in a society where the occurrence of any [of the six forms of racism] is at all times a distinct possibility can create stress above and beyond the generic stresses of life" (Harrell, 2000, p.47).

In the model of racism-related stress and well-being, Harrell (2000) underscores internal and external *mediators* that are at play in the relationship between perceived racism and well-being. Internal characteristics include self-esteem, self-efficacy, cognitive appraisals and attributions. Sociocultural variables include cultural values, racial/ethnic identity, coping styles. Of note, Harrell (2000) highlights that a strong attachment to one's identity group (i.e., strong racial-ethnic identity) can buffer the negative effects of discrimination and increase self-esteem, whereas the internalization of racist beliefs and behaviors could exacerbate the harmful impacts of racism on well-being. External mediators include social support networks (intragroup, intergroup, environmental, and institutional support) that might be utilized by the individual who is experiencing racial discrimination. The current study will assess factors mentioned in this model, such as ethnic identity dimensions and social support, and their potential roles in buffering or exacerbating the association between racial discrimination and psychological distress among Asian young adults.

2.4.1.3 Carter's (2007) Race-based Traumatic Stress Model (RBTSM)

Racial trauma, or race-based trauma, is defined as "People of Color's reactions to real or perceived experiences of racial discrimination" (Comas-Díaz et al., 2019, p.1). Racial incidents have been recognized as a potential form of victimization that affects racial minorities, that may result in posttraumatic-like symptoms, such as symptoms resulting from acknowledged traumatic experiences such as rape and domestic violence (Bryant-Davis &

Ocampo, 2006; Comas-Díaz et al., 2019). Racial trauma includes psychological and physiological effects that bear resemblance to clinical presentations of PTSD, such as hypervigilance to threat, flashbacks, nightmares, avoidance, somatic expressions such as headaches and heart palpitations (Comas-Díaz et al., 2019).

Robert Carter (2007) developed the race-based traumatic stress model (RBTSM) to fill three main gaps of the literature. First, it was developed in response to the lack of recognition of racism as a harmful stressor for psychological health for people of color in traditional psychological and psychiatric diagnostic systems (Carter, 2007). Carter (2007) underscores that while studies of discrimination and race-related stress have linked exposure to racial discrimination to psychological and physical distress, they largely "have not considered whether racism *may produce trauma*" (Carter, 2007, p.15). In cases that racism *has* been examined in relation to trauma, studies have used the definition of post-traumatic stress disorder (PTSD) as per the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM–5). This definition requires the individual to meet "Criterion A," which refers to an incident in which one is exposed to actual or threatened death, serious injury, or sexual violence (APA, 2013), thus precluding the accumulated stress individuals experience from cumulative, chronic exposure to race-based stress. Carter (2007) states that "the reliance on the dispositional approach (i.e., mental disorders or diagnoses) seems to hold the target responsible for situational factors outside her or his control" (Carter, 2007, p.16), which risks pathologizing the individual as it views the traumatic response to "external violations and assaults inherent in racism and race-based encounters and experiences" (Carter, 2007, p.16) as a type of mental illness. Thus, RBTSM maintains that racism *is* a form of trauma and individuals' responses to racism-related events is a type of "emotional injury" (Carter, 2007). The effects of race-based

trauma among Asian young adults will be assessed using a PTSD symptom scale as a mental health outcome, which is an understudied construct (as compared to anxiety and depression) as it relates to perceived racial discrimination (Ermis-Demirtas et al., 2022b; Hahm et al., 2021). Given the nuances the model highlights regarding the distinction between PTSD and racial trauma, interpretations regarding the PTSD outcome in the present study will consider the role of racism as a trauma and move away from locating the pathology within the individual.

2.4.1.4 Meyer's (2003) Minority Stress Theory

The minority stress theory (Meyer, 2003) focuses on the "excess stress to which individuals from stigmatized social categories are exposed as a result of their social minority position." (p.675). The minority stress theory draws on multiple social psychological theories. Of relevance, the social identity and self-categorization theories, including social identity and self-categorization theories, posit that "the process of categorization (e.g., distinction among social groups) triggers important intergroup processes (e.g., competition and discrimination) and provides an anchor for group and self-definition" (Tajfel & Turner, 1986; Turner, 1999). Other relevant theories such as social comparison and symbolic interaction theories (Cooley, 1922; Stryker & Statham, 1985) underscore the importance of the interactions with others in the development of one's sense of self and well-being. It follows from this framework that negative regard by others, via discrimination, prejudice, stereotyping, may lead to negative sense of self and adverse psychological health for individuals with marginalized identities. Although this theory was originally conceptualized for lesbian, gay, and bisexual (LGB) populations, it has been extended to other minoritized populations, including Asian Americans (Lei et al., 2022).

The minority stress theory highlights distal stressors and proximal processes in the conceptualization of the impact of external social conditions and structures on an individual's mental health outcomes (Meyer, 2003). Distal minority stressors are defined as "objective stressors in that they do not depend on an individual's perceptions or appraisals - although their report depends on perception and attribution" (Meyer, 2003, p.676). The meaning-making processes of such distal minority stressors, depends on processes subjective to the individual, for example, the levels of prominence, integration and valence of the minority identity. Importantly, Meyer (2003) underscores that minority status is not just associated with stress but could also be linked to stress-ameliorating factors such as group solidarity and cohesiveness. For example, minority stressors such as homophobia may have a greater impact on health outcomes when one perceives their LGB identity to be a prominent aspect, as opposed to secondary, to their sense of self. As it relates to the current study, characteristics of minority identity, such as the level to which an Asian young adult *explores* their ethnic identity (related to integration) and/or *affirms* their ethnic identity (related to valence), could serve to ameliorate or exacerbate the impact of stress from perceived racial discrimination. The minority stress theory also underscores the role of social support in moderating the association between minority stressors and mental health outcomes. As such, this study will also examine the potential role of social support in augmenting or weakening the relationship between perceived racial discrimination and psychological distress among Asian young adults.

2.4.2 The Impact of Anti-Asian Racism on Mental Health of Asian Americans

Grounded in the aforementioned theoretical models, Anti-Asian racism and its detrimental effects on the mental health of Asian Americans have been well documented. A body of literature has focused on the association between perceived racism and psychological

distress of Asian Americans, even prior to the uptick in anti-Asian discrimination during the COVID-19 pandemic (Alvarez et al., 2006). A pre-COVID-19 meta-analysis conducted in 2011 of 122 studies identified the statistically significant relationship between racial discrimination and psychological distress among Asian Americans (D. L. Lee & Ahn, 2011). Racial/ethnic discrimination has been associated with depressive symptoms (Gee et al., 2007; Wei et al., 2008), anxiety (Cassidy et al., 2004), negative health outcomes (Gee et al., 2007), antisocial behaviors (Park et al., 2013), substance use (D. H. Chae et al., 2008; Tran et al., 2010) among Asian and Asian Americans. Of note, some studies have found that compared to other racial-ethnic groups, the relationship between racial discrimination, depression, and life satisfaction was stronger for Asian Americans than for other racial or ethnic minority groups (S. Choi et al., 2017; Tummala-Narra et al., 2018).

The recent surge in Anti-Asian discrimination since the onset of COVID-19 has intensified its already harmful effects on the mental health of Asian Americans in the U.S. In mid-2020, 33% of Asian Americans reported depression or anxiety symptoms compared to only 11% of all individuals in the U.S. in the earlier half of 2019 (U.S. Census Bureau, 2020). A national survey found that Asian Americans reported anti-Asian discrimination to be their greatest source of distress, much higher than other pandemic concerns (Saw et al., 2021). Indeed, Asian Americans' experiences of racism during COVID-19 have been linked to a range of psychological problems, such as anxiety (Hahm et al., 2021; Lee & Waters, 2021), depressive symptoms (Chae et al., 2021; Cheah et al., 2020; Lee & Waters, 2021; Woo & Jun, 2022), Post-Traumatic Stress Disorder (Ashby et al., 2022; Ermis-Demirtas et al., 2022a; Hahm et al., 2021), alcohol use severity (Keum & Choi, 2022), and sleep difficulties (Lee & Waters, 2021).

In order to contextualize the current study, below I provide a more in-depth review of the articles published about anti-Asian racism and psychological distress during COVID-19, highlighting studies most relevant to the current investigation, specifically, those that examine depression, anxiety, and post-traumatic stress disorder (PTSD), and those focused on college students and young adult populations.

Empirical studies have found that anti-Asian racism is prevalent during COVID-19 and is associated with increased internalizing symptoms of depression and anxiety among young adults. A panel study (the Healthy Minds Study; HMS) (Zhou et al., 2023) that collected data from Asian American undergraduate and graduate students at three times points before and after the COVID-19 outbreak (Fall 2019: N = 3929, Spring 2020: N=78, Fall 2020 = N=4804) found that from Fall 2019 to Fall 2020, moderate to severe depression increased by 11%; severe depression increased by 17%; Moderate to severe anxiety increased by 17%; and severe anxiety increased by 30% (Zhou et al., 2023). Moreover, a study of 410 Asian and Asian American young adults (mean age = 26.5 years, SD = 7.8) conducted in spring 2020 found that nearly a third of the participants reported an increase in experiences of discrimination during the pandemic, with more than 40% reporting elevated levels of anxiety, depression, and sleep difficulties associated with perceived experiences of COVID-19 experiences (Lee & Waters, 2021). Similarly, in Zhou et al. (2021)'s study of 1697 Asian university students, 24.9% students reported depression and 40.1% reported anxiety. Hahm et al. (2021)'s study of 211 Asian young adults (20-32 years old) revealed that 68% of respondents reported that they or their family have experienced COVID-19-related discrimination and approximately 15% of respondents reported experiencing verbal or physical assaults. In this sample, 31.8% of the respondents reported depression symptoms and 30.3% reported anxiety symptoms.

Some scholars have addressed a gap in the literature by examining the impact of COVID-19-related discrimination on symptoms of posttraumatic stress disorder (PTSD). Notably, Hahm et al. (2021)'s study revealed that among Asian and Asian American young adults aged 20-32 years old in a study conducted in April to June 2020, COVID-19-related discrimination was more strongly associated with PTSD symptoms than with symptoms of depression or anxiety. Specifically, increases in COVID-19-related discrimination experiences were found to be significantly associated with increases in PTSD symptoms, while controlling for individuals' pre-existing mental health diagnoses, demographics, socioeconomic status, and lifetime discrimination experiences, which was not the case for anxiety symptoms. Among 116 East and Southeast Asian American high school students, those who reported more COVID-19-related online and in-person discrimination endorsed higher levels of PTSD symptoms (Ermis-Demirtas et al., 2022a). The findings from these studies, along with the relative lack of research on PTSD as compared to other mental health outcomes among Asian Americans facing racial discrimination, indicate that symptoms of PTSD should be examined in the current study as a mental health outcome, in addition to depression and anxiety.

2.5 Why Focus on Asian American Young Adults?

2.5.1 Significance of Asian Cultural Values

Asian Americans are the most understudied racial/ethnic minority group in psychological research, with only 0.17% of the National Institutes of Health funding over the past 26 years supporting Asian American health research (Đoàn et al., 2019). The surge in anti-Asian violence since the COVID-19 pandemic outbreak, and its association with worsened mental health outcomes in the Asian American community, brings to the forefront the importance of better understanding the mental health needs of Asian Americans. In addition to

the COVID-19 context, several culturally relevant factors make the study of the mental health of Asian Americans particularly urgent.

Research has demonstrated that Asian Americans considerably underutilize mental health services relative to their need (Abe-Kim et al., 2007; Meyer, 2003; S. Sue et al., 2012). For example, Alegría et al. (2008) revealed that 69% of Asian Americans diagnosed with a depressive disorder did not seek mental health treatment, compared to Hispanics (64%), African Americans (59%), and White Americans (40%). Despite the fact that Asian Americans struggle with mental health at similar rates as their White peers, they are three times less likely than the general population to seek treatment for these concerns (S. Lee et al., 2009). The underutilization of mental health services among Asian Americans was found to be more pronounced in immigrant communities (Le Meyer et al., 2009). Of particular relevance to the current study, a large study of college students with depression and/or anxiety symptoms found that Asian Americans were the least likely of all racial/ethnic groups to perceive a need for services (Eisenberg et al., 2012). Notably, even for Asian Americans who *do* seek mental health services, research has revealed that there is a tendency for delay of help-seeking among Asian Americans until the problems have become more severe (Leong, 1986; Okazaki, 2000); Asian Americans tend to have a greater severity of symptoms and reduced functioning at the outset of mental health treatment (Durvasula & Sue, 1996; Kearney et al., 2005). Additionally, research shows that Asian Americans are more likely to prematurely terminate psychotherapy, and are less likely to disclose mental health problems compared to White European Americans (Atkinson et al., 1995; Kung, 2003; Matsuoka et al., 1997; S. Sue et al., 1991).

These concerning patterns led researchers to examine cultural and structural barriers Asian Americans face in accessing mental healthcare. Although Asian Americans represent a

heterogenous group of ethnic groups with unique sociopolitical and immigration histories, customs, and social norms, research has highlighted cultural values that are salient across many Asian subpopulations, including collectivism, emotional restraint, conformity to norms, deference to authority, and humility. Adherence to Asian cultural values has been found to be associated with less positive attitudes towards seeking professional help (B. S. K. Kim, 2007; B. S. K. Kim & Omizo, 2003; Miller et al., 2011) and decreased willingness to seek counseling (B. S. K. Kim & Omizo, 2003; Shea & Yeh, 2008) among Asian Americans. Choi and Miller (2014) extended this line of research by identifying the link that Asian cultural values related to a diminished willingness to seek counseling through public stigma and stigma by close others. Common Asian values of face concern (i.e., one's concern over maintaining or enhancing one's social position and worth that are earned through the fulfillment of social roles; Mak et al., 2009; Zane & Yeh, 2002) and interdependent self-construal (i.e., the interdependent model of self-emphasized connectedness and relational harmony with others; the self becomes meaningful only in the larger context of social relationships, Markus & Kitayama, 1991) are also relevant. Research has found that Asian Americans may not disclose mental health struggles in fear of bringing shame to their family (Augsberger et al., 2015; S. B. Kim & Lee, 2022; Shea & Yeh, 2008). While traditional Asian cultural norms may discourage help-seeking, it is crucial not to adopt a deficit-based model. As such, scholars have highlighted systemic issues, for example, mainstream service delivery of mental health services lacking the cultural relevance and sensitivity to serve the needs of Asian Americans, thus discouraging them to seek help (Atkinson et al., 1995).

2.5.2 Developmental Implications

Emerging and young adulthood (ages 18-30) is a critical developmental period to consider the impact of racial discrimination and mental health outcomes. In this developmental stage, individuals begin to separate from their parents more fully than in adolescence and become autonomous agents (Phinney, 2006). Arnett (2000)'s theory of emerging adulthood underscores five pillars: the age of instability, the age of possibilities, the age of self-focus, the age of feeling in-between, and the age of identity exploration. Emerging and young adults encounter many new experiences, relationships, and living situations (Byrd & McKinney, 2012; Ketchen Lipson et al., 2015), leading to more nuanced identity negotiations and meaning-making. In this developmental period, Asian Americans in emerging and young adulthood are determining who they are and how they fit into the broader (racially stratified) society (Arnett & Tanner, 2006; Syed & Mitchell, 2013), for example, exploring how they fit or do not fit pervasive stereotypes and negotiating their responses to racial discrimination (S. Lee et al., 2009).

Concurrently, the developmental window of emerging/young adulthood is also marked by increased vulnerability for a wide range of mental health challenges, with the onset of many psychiatric conditions, including mood disorders, substance use disorders, and psychotic disorders, occurring during late adolescence and early adulthood (De Girolamo et al., 2012; Kessler et al., 2007). The confluence of these developmental factors make the study of psychological distress related to racial discrimination among Asian American young adults paramount, as racial discrimination may trigger or exacerbate the onset or course of various psychiatric problems.

2.6 Stress-ameliorating Moderators of Racial Discrimination

2.6.1 Ethnic Identity

Given the harmful impacts of anti-Asian racism on mental health of Asian Americans, it is critical to examine protective factors that could ameliorate the negative effects of racism. Grounded in Minority Stress Theory, protective factors could be intrapsychic or interpersonal. The present study will look at protective factors on both levels. On the individual level, one protective factor that has been widely studied is ethnic identity (Neblett et al., 2012; Rivas-Drake et al., 2014). Ethnic identity is defined as the feelings, thoughts, behaviors associated with exploring the meaning of one's ethnicity, as well as the level of psychological connectedness to, and commitment to, one's ethnic group (Phinney, 1992).

2.6.1.1 Definition and Background

Ethnic identity has been conceptualized as a multidimensional construct: it includes both content and process (Phinney, 1992), which are inextricably linked. Content refers to "attitudes and beliefs about one's group and its relations to other groups," while process refers to "the mechanisms by which individuals explore, form, and maintain their ethnic-racial identity" (Umaña-Taylor et al., 2014, p.3). The three main components of ethnic identity most studied are the cognitive dimension: clarity and resolution regarding one's ethnic background; the affective dimension: affect and regard toward one's ethnic group, and the behavioral dimension: engagement with one's ethnic heritage (Umaña-Taylor et al., 2014).

2.6.1.2 Theory

Social identity theory posits that the social environment is the foundation from which a "Self"/ development of an identity arises (Yip et al., 2014). Within Erikson's (1968) broader theory of ego identity development, Erikson contended that development and maintenance of

identity is dependent on the support and recognition that one receives from the social environment (Erikson, 1968). Since the U.S. has a long history of categorizing social groups by the axes of race and ethnicity, racial/ethnic identity plays a key role in the process of identity formation and meaning-making for ethnic and racial minority youth and young adults (Umaña-Taylor et al., 2014). Erikson (1968) posited that individuals of historically oppressed and minority groups may internalize negative views of dominant society, in turn developing negative self-identity. Social psychologist Tajfel (1978) also contended that "membership in a disparaged minority group can create psychological conflict; minority group members are faced with a choice of accepting the negative views of society toward their group or rejecting them in search of their own identity."

Phinney (2003) extended Erikson's (1968) and Marcia (1994)'s theoretical frameworks of personal identity to develop the theory of ethnic identity (Umaña-Taylor et al., 2014). She posited ethnic identity formation involved three stages. In the first phase, the unexamined phase, an individual places little to no importance to their ethnic/cultural heritage. This is followed by the second phase, where an individual begins to explore and learn about the ethnic group they belong to, for example its culture and traditions. The third and last stage is the ethnic identity achievement stage, where an individual develops pride for and belonging with their ethnic group. Notably, scholars have noted that these stages do not necessarily follow sequentially and are dynamic and dependent on the social environment (Phinney & Kohatsu, 1997).

While ethnic identity remains relatively stable from one day to the next (Sellers et al., 1998; Yip, 2005; Yip & Fuligni, 2002), studies have found that that the salience of ethnic identity varies across the lifespan (Yip et al., 2008) and across situations (Cross & Strauss,

1998; Yip & Douglass, 2013; Yip & Fuligni, 2002). From a developmental perspective, ethnic-racial identity is "an interaction between maturation and context" (Umaña-Taylor et al., 2014, p.3). In childhood, one begins to develop the ability to identify self and others according to ethnic and racial categories. Erikson's theory of psychosocial development highlights adolescence as a key developmental period for identity formation (Erikson, 1968). As social and cognitive capacities mature in adolescence, including perspective taking and a more sophisticated understanding of the *meaning* of one's race/ethnicity, individuals start to develop an ethnic group consciousness and may internalize values from one's racial/ethnic group (Quintana, 1994). It is common for adolescents to engage in *ethnic identity exploration,* i.e., "quest for knowledge and understanding about one's ethnic and racial heritage" (Umaña-Taylor et al., 2014, p.5). Exposure to racial discrimination, as adolescents increase interactions with nonfamilial agents such as peers, may also serve as an impetus for engaging in more exploration of one's identity (Umaña-Taylor et al., 2014; Yip et al., 2014). Another aspect of ethnic identity pertains to how individuals feel towards their ethnic-racial group (*ethnic identity commitment)*. Research shows that these processes salient in adolescence continue to expand and mature in one's young adulthood (Syed & Azmitia, 2009). Much of the literature conducted on young adults has focused on those attending college, as college years is a time of self-discovery (Ethier & Deaux, 1994), promoting a "consciousness-raising experience" as individuals engage in new social environments, coursework, and personal growth (Azmitia et al., 2008). For Asian Americans, it would make sense that the salience of their ethnic identity may be heightened in response to the social context (e.g., attending a Predominantly White Institution for college, heightened anti-Asian violence during COVID-19).

2.6.1.3 Ethnic Identity and Psychological Outcomes

Ethnic identity has been linked to a plethora of positive psychological and social outcomes in racial ethnic minority individuals. For example, a positive ethnic identity is associated with higher self-esteem (Phinney, 1991), improved academic orientations and outcomes (Chavous et al., 2003), greater levels of daily happiness and less daily anxiety (Kiang et al., 2006). Particularly among Asian Americans, high levels of ethnic identity have been associated with self-esteem (Rivas-Drake et al., 2008; J. L. Tsai et al., 2001; Usborne & Taylor, 2010); fewer school problems (Shrake & Rhee, 2004), higher levels of intrinsic interest in school (Fuligni et al., 2005); psychological well-being (M. H. Chae & Foley, 2010; Yip & Fuligni, 2002); lower odds of maladaptive health behaviors such as alcohol abuse or dependence disorders (D. H. Chae et al., 2008), lower rates of suicide attempts (J. K. Y. Cheng et al., 2010).

2.6.1.4 Ethnic Identity as Buffer Against Race-Related Stress

How ethnic minority individuals relate to their ethnic identity, including where they are developmentally in forming their identity as well as how they feel about their identity shape how they experience, interpret, and respond to discrimination (Sellers & Shelton, 2003; Yip, 2018). The positive association between discrimination and ethnic identity has been explained in several ways. Experiences of racial/ ethnic discrimination may motivate individuals to learn more about their ethnic/racial group as it increases the salience of the identity for the individual (Brittain & Dinger, 2015; Pahl & Way, 2006). At the same time, studies have shown that individuals who report high levels of exploring their identity *and* individuals who report their ethnicity to be of importance to them, are more likely than their counterparts, to report their experiences with discrimination (Burrow & Ong, 2010; Pahl & Way, 2006; Sellers & Shelton,

2003). Given the link between ethnic identity and racial discrimination *and* the positive associations between ethnic identity and psychosocial outcomes, ethnic identity has been studied as a potential buffer against stress and racism among racial ethnic minority individuals.

There are two theories underlying the opposing hypotheses of the role of ethnic identity in the context of discrimination. Both theories stem from the social identity perspective (Hogg et al., 2004). First, social identity theory (Tajfel & Turner, 1986) posits that individuals categorize themselves and others into social groups as a way to define their self-concept and gain a sense of belonging and self-esteem. From this perspective, a strong sense of ethnic identity can protect ethnic minorities from the negative effects of racial discrimination by allowing them to focus on their positive group membership (Phinney, 2003). When faced with outgroup stigmatization, individuals who have strong ties to their ethnic group may benefit from social support and feelings of solidarity. Affirming one's ethnic identity by connecting to cultural traditions, values, cultural norms, and stories can "validate one's experience of marginalization, celebrate resilience, and encourage agency" (Wadsworth et al., 2018, p.1027). This theory also underscores that individuals may try to maintain a positive image of their ingroup in order to enhance their own self-view (Owuamalam & Zagefka, 2011). The rejection-identification model (Branscombe et al., 1999) proposes that the attribution of experiences of racial discrimination matters. Those who are strongly committed to their ethnic identity may attribute discriminatory experiences to others' prejudice as a way to maintain a positive image of their ingroup, thereby mitigating the negative effects of racial discrimination on their mental health.

In contrast, the self-categorization theory (Turner, 1999) contends that a strong ethnic identity may exacerbate the relationship between discrimination and mental health outcomes.

Specifically, self-categorization focuses on how individuals cognitively sort through cues in their immediate social context to categorize themselves and others into meaningful groups, and how these categorizations influence perceptions and intergroup dynamics. From this perspective, racial/ethnic minorities who are highly identified with and engaged with their ethnic group may have higher race-based rejection sensitivity (Downey & Feldman, 1996), i.e., expect rejection based on race-based judgments more than their counterparts who identify with their ethnic group to a lesser extent (Mendoza-Denton et al., 2002). This heightened awareness increases the vigilance and salience of prejudice and discrimination, inducing stress for those who are constantly being rejected for an identity with which they are strongly identified (Yoo & Lee, 2008).

Indeed, studies that have examined the role of ethnic identity in moderating the relationship between racial discrimination and mental health outcomes among Asian Americans have yielded mixed findings. In support of social identity theory, several studies found ethnic identity to be a protective factor against experiences of racial discrimination among Asian Americans, which is in line with previous research on other racial minority groups such as African Americans (Sellers & Shelton, 2003). For example, Mossakowski (2003) found that cognitive, affective, and behavioral components of ethnic identity served as a protective factor that ameliorated the effects of lifetime discrimination on depressive symptoms in a large sample of adult Filipino Americans. In a sample of Korean American college students (R. M. Lee, 2005), higher levels of ethnic identity buffered the effects of discrimination on depressive symptoms and social connectedness. Moreover, in an examination of 2007 Asian American adults, Chae et al. (2008) found that Asian Americans who reported experiencing unfair treatment had higher odds of history of alcohol

abuse/dependence disorder. Notably, ethnic identification moderated the influence of racial/ethnic discrimination: among Asian Americans with low levels of ethnic identification, racial/ethnic discrimination was associated with greater odds of having a history of alcohol disorder, than those who reported high levels of ethnic identification (D. H. Chae et al., 2008).

A more recent study conducted since the onset of COVID-19 has also identified the buffering effect of ethnic identity for Asian Americans who have experienced racial discrimination. In a study of 187 both Chinese immigrants and Chinese Americans (mean age - 31.6 years, SD = 9.6), Litnam & Oh (2022) investigated the potential buffering effects of ethnic identity specifically in the face of racial discrimination faced since the COVID-19 outbreak. Indeed, they found that the relationship between COVID-19-related racial discrimination and depression was weaker among Chinese and Chinese Americans who reported more positive views of their ethnic identity, as compared to those who endorsed less positive views of their ethnic identity (Litam & Oh, 2022).

Another group of studies have found the opposite effect, where strong ethnic identity among Asian Americans was found to exacerbate the relationship between experiences of racial discrimination and psychological distress. In a sample of 647 Southeast Asian refugees in Canada, Noh et al. (1999) found that high ethnic identification strengthened the link between perceived discrimination and depression. In Yoo and Lee (2008)'s quasi-experimental vignette study, a sample of 128 Asian American college students was given one or two randomized survey packets: all participants filled out a demographic questionnaire as well as an ethnic identity measure (MEIM; Phinney, 1992), but the participants were randomized to read either a vignette that prompted them to imagine a single incident of racial discrimination or a vignette that prompted them to imagine multiple incidents of racial discrimination. As the final step, all

participants filled out the situational well-being measure which assessed positive and negative affect. Asian Americans endorsing high ethnic identity reported lower situational well-being (i.e., lower positive effect) when imagining multiple incidents compared to imagining single incidents of racial discrimination. In line with the rejection sensitivity theory, individuals with more ethnic pride may be more sensitized to racial discrimination, and in turn, experience lower levels of well-being.

Yet another group of studies have found no support of either the social identity theory/ buffering effects of ethnic identity or the self-categorization theory/ exacerbating effects of ethnic identity. These studies found null effects, where ethnic identity did not influence the relationship between perceived discrimination and mental health outcomes among Asian Americans in any one way. In a sample of 176 Asian American ninth graders in an emerging immigrant community (North Carolina: where the Asian American population is growing but remains a small proportion of the geographic location) (mean age = 14.97 years, *SD* .84), Stein et al. (2014) found that ethnic identity neither buffered nor exacerbated the relationship between discrimination and mental health outcomes. Similarly, ethnic identity did not significantly moderate the relationship between discrimination and antisocial behavior in a sample of 1362 East and South Asian American college students (Park et al., 2013) or between discrimination and psychological well-being among 91 Asian American undergraduate students in Texas (R. M. Lee, 2003). These null effect findings are aligned with a study that found no moderating effect of racial identity on the relationship between perceived discrimination and psychological well-being among African American youth (Seaton et al., 2011).

Some studies which have investigated different aspects of ethnic identity have found that the moderating role of ethnic identity on the perceived discrimination-psychological distress link varied by the ethnic identity dimension. For example, in a sample of 136 transnationally adopted Korean American adolescents (Mean age=15.16, *SD* =1.54), Lee et al. (2015) found that the affective dimension of ethnic identity (e.g., having a strong sense of belonging with one's ethnic group) exacerbated the relation between discrimination and externalizing problems such as losing temper, fighting, getting others to do what they want. Specifically, discrimination was positively associated with externalizing problems, only for those who reported higher levels of pride in their ethnic group. Additionally, they found the behavioral dimension of ethnic identity (e.g., participating in ethnic cultural practices) had an exacerbating effect on the relation between discrimination and substance use, such that there was a significant positive association between discrimination and substance use for transnationally adopted Korean American adolescents who reported higher levels of behavioral engagement with their ethnic group (J. P. Lee et al., 2015). Furthermore, this study found no interaction effect between the cognitive dimension of ethnic identity (i.e., having a clear sense and understanding regarding membership in one's group; Phinney, 1992) and discrimination on mental health outcomes among this sample. Further, In a paper highlighting the ethnic/racial identity as a "double-edged sword," Yip et al. (2018) suggests from a broader body of literature conducted on other racial minority groups that individuals who report high levels of ethnic identity *exploration* may be especially susceptible to negative effects of discrimination (e.g. Torres & Ong, 2010) whereas those who endorse high levels of ethnic identity *commitment/affirmation*, i.e., those who have already committed to their ethnic/racial group membership may be more protected from the harmful effects of discrimination (e.g., Romero et

al., 2014). These studies highlight that dimensions of ethnic identity serve different functions and calls for further aggregate study of ethnic identity components as they may have differential effects on well-being and developmental trajectories (Juang & Nguyen, 2010; Yip, 2018; Yoo & Lee, 2008).

Further complicating the interconnection between ethnic identity, mental health, discrimination, some studies have also highlighted that whether a strong ethnic identity buffers or exacerbates the relationship between racial discrimination experiences and psychological distress *depends on other variables*, such as age, level of perceived discrimination, and awareness of stereotypes. In other words, these studies examined 3-way-interactions of perceived discrimination x ethnic identity x additional variable on mental health outcomes such as psychological distress. In a nationally representative sample of 2,047 Asians, Yip, Gee, Takeuchi (2008) examined the additional interactive roles of age and nativity status. They found that ethnic identity buffered the association between discrimination and mental health for U.S.-born individuals 41 to 50 years old; however, ethnic identity had the opposite effect of exacerbating the negative effects of discrimination on mental health for U.S. born individuals 31 to 40 years old and 51 to 75 years old (Yip et al., 2008). Moreover, Lee (2005) found among 84 Korean American college students that those with higher levels of pride reported fewer depressive symptoms and higher social connectedness when the level of perceived ethnic discrimination was low. However, when the perceived discrimination was high, there was an increase in depressive symptoms and decrease of social connectedness for this group. For those endorsing low levels of ethnic pride, depressive symptoms were high and social connectedness was low regardless of level of perceived discrimination. As such, these authors concluded that affective pride one has for their ethnic group may be most beneficial when perceived

discrimination is low (R. M. Lee, 2005). In a recent study of 276 Asian American emerging adults, Atkin and Tran (2020) found that high levels of ethnic identity commitment buffered the racial discrimination and psychological distress link for individuals who possessed high levels of meta stereotype awareness (i.e., awareness regarding stereotypes others hold of their group) *and* low levels of ethnic identity buffered racial discrimination and psychological distress link for individuals who possessed *low* levels of meta stereotype awareness (Atkin & Tran, 2020).

What explains the equivocal findings? One explanation is the dimension of ethnic identity studied. Scholars have also highlighted the multidimensional nature of ethnic identity resulting in heterogeneous operationalizations and measurement of the construct (Schwartz et al., 2014; Yip, 2018). The lack of consensus could also be attributed to the different ethnic groups studied within Asian Americans, and other variables such as age, nativity status, geographic location… etc. Nonetheless, given the mixed findings thus far, more research is needed to explore the nuanced and complex picture of the potential buffering role of ethnic identity among Asian Americans, particularly in light of the uptick in anti-Asian discrimination since the onset of COVID-19.

In line with Yip (2018)'s synthesis of the literature on ethnic identity among Asian Americans, I hypothesize in this sample of Asian young adults that different ethnic identity dimensions may have different moderating effects on the association between perceived discrimination and psychological distress. Namely, I hypothesize ethnic exploration as a risk factor, such that the relationship between discrimination and mental health outcomes (depression, anxiety, PTSD) is stronger for participants with higher levels of ethnic exploration than participants with lower levels of ethnic exploration. This is grounded in the conjecture that

exploration of one's ethnic identity may precede the development of positive regard/affirmation for one's ethnic identity. Given the context of heightened anti-Asian racism during COVID-19, young adults who engage in high levels of ethnic identity exploration may actively be acquiring more knowledge about the long history of anti-Asian racism, which may in turn exacerbate the distress resulting from perceived racial discrimination. On the other hand, I hypothesize ethnic identity commitment to be a protective factor, such that those who endorse high levels of ethnic identity *commitment*, i.e., those who have already committed to their ethnic/racial group membership may be more protected from the harmful effects of discrimination, as compared to counterparts with lower levels of ethnic identity commitment.

2.6.2 Social Support

According to the minority stress theory (Meyer, 2003), when confronted with stressors based on one's stigmatized identity (such as race-based discrimination), one's social support can serve a stress-ameliorating function. Social support is defined as "the perceived or actual instrumental and/or expressive provisions supplied by the community, social networks, and confiding patterns" (Lin, 1986. P. 18). Examples of social support include emotional support (e.g., showing empathy, care, reassurance), informational support (e.g., advice to cope with problems; instrumental support (e.g., material goods such as lending money), and appraisal support (e.g., affirmation and feedback) (Alvarez et al., 2016).

It is well-established that people with supportive networks such as friends and family members who provide psychological and material resources are in better health conditions than those who lack supportive social contacts (Cohen & Wills, 1985). Specifically, scholars have defined *perceived support* as "support believed to be available should a stressor occur," (Birditt et al., 2012, p.728). Those who have higher levels of perceived support may benefit from "an

available secure base from which he or she may explore and attend to new situations with reasonable risk" (Alvarez et al., 2016, p.90), in turn, experience less anxiety than those who do not perceive to have this "secure base." Perceived support has been identified as a protective factor for various stressors, including perceived racism (Brondolo et al., 2009).

2.6.2.1 Main Effect Model

There are two main models that have been posited to explain the two pathways through which social support positively impacts individuals' well-being. The first is called the *main effect* model (Cohen & Wills, 1985), whereby one's social support directly increases overall well-being, irrespective of whether persons are under stress (Cohen & Wills, 1985, p.310). This theory proposes that social support "provides positive affect, a sense of predictability, and stability in one's life situation, and a recognition of self-work" (Cohen & Wills, 1985), in turn, leading to overall well-being. This theory stems from psychological perspectives of social interaction, social integration, relational reward, and status support (Levinger & Huesmann, 1980; Moos & Mitchell, 1982; Reis, 1984; Wills, 1985).

2.6.2.2 Stress-Buffering Hypothesis

Cohen and Wills (1985) proposed an alternative model, called the *Stress-Buffering Hypothesis,* whereby social support "buffers" the detrimental effects of stress on health and mental health outcomes, in other words, high levels of social support attenuate the relationship between stressors and resultant mental health problems (Cohen & Wills, 1985). Grounded in Lazarus and Folkman's Stress and Coping Theory (1984), an individual feels stress when they appraise a situation as threatening and lacks the appropriate coping resources to respond to the stressor (Lazarus & Folkman, 1984). When this happens, an individual will experience negative affect, elevated physiological response (e.g., increase in heart rate), and/or behavioral

adaptations (e.g., maladaptive coping) (Baum et al., 1981; Lazarus & Folkman, 1984). Appraised stress leads to *feelings of helplessness* and *loss of self-esteem* (Garber & Seligman, 1981). It has been noted that although one isolated stressful event may not overwhelm an individual's ability to cope, accumulated stressful events will be demanding in the sense that it will cause strain and overwhelm an individuals' ability to problem-solve and cope with the stressors (Cohen & Wills, 1985). Since anti-Asian racism is baked into the DNA of the U.S., Asians Americans experience discrimination that accumulates over time.

The stress-buffering hypothesis proposes that there are *two* different points in the causal chain of stress to illness that provide "buffering" functions (Cohen & McKay, 1984; Gore, 1981). First, by having social support, one's stress appraisal response may be lessened or prevented: "the perception that others can and will provide necessary resources may redefine the potential for harm posed by a situation and/or bolster one's perceived ability to cope with imposed demands, and hence prevent a particular situation from being appraised as highly stressful" (Cohen & Wills, 1985, p.312). Alternatively, when one has social support, it may function to intervene the process between when one has appraised the event as stressful and the onset of pathological outcome by "reducing or eliminating the stress reaction or by directly influencing physiological processes" (Cohen & Wills, 1985, p.312). Namely, social support can alleviate the stress appraisal by bolstering/optimizing psychological processes such as appraisals (e.g. reducing the perceived importance of a stressor), emotions or moods (e.g., reducing the physiological reactivity to problem, enhancing self-esteem, facilitating effective coping behaviors), and feelings of control (e.g., bolstering the sense of personal control) in response to challenges (Cohen & Wills, 1985; Sangalang & Gee, 2012).

It follows from the stress-buffering hypothesis that the harmful psychological effects of racial discrimination among Asian Americans may be mitigated under conditions of high social support. Indeed, social support from family members has been cited as the most effective coping resources for members of ethnic minorities suffering from racial discrimination (Mossakowski & Zhang, 2014). Social support may be particularly important in cultures that emphasize interdependence and have collectivistic cultural orientations, such as Asian cultures (Kramer et al., 2002, p. 20; Sangalang & Gee, 2012; White et al., 2009; Yeung & Kung, 2004). In collectivistic cultures, positive social relationships are considered to be central to well-being (Markus & Kitayama, 1991) and family may be "the first line in seeking help for mental health problems" (Sangalang & Gee, 2012, p.51). However, some research also suggests a collectivistic orientation, e.g., among Asian Americans, may *hinder* disclosure of personal problems "in fear of burdening others, disrupting group harmony, or losing face" (B. S. K. Kim et al., 2001; H. S. Kim et al., 2006). In support of this, studies found that compared with white Americans, Asian Americans sought less social support in response to stress (Taylor et al., 2004); and perceived support to be less helpful in dealing with stress than white students (H. S. Kim et al., 2006). Given the nuanced influences of culture on help-seeking, it will be important to explore the potential role of social support in mitigating distress from racial discrimination among Asian American young adults.

In support of the *main effect* model, social support has been associated with less depression, PTSD, stress, and burnout (see Zell & Stockus, 2024, for review). Among Asian Americans specifically, social support has been associated with lower levels of depressive symptoms (Mui, 2000; Sangalang & Gee, 2012; Xu & Chi, 2013), and anxiety symptoms (Sangalang & Gee, 2012).

A body of literature supports the stress-buffering hypothesis, whereby high levels of social support can help mitigate negative effects of racism on mental health among people of color. For example, in a sample of 969 low-income African American women with young children, instrumental support buffered the negative influence of moderate levels of perceived discrimination on psychological distress (Ajrouch et al., 2010). In another context, social support moderated the effect of perceived discrimination on depressive symptoms in a sample of 347 migrants who moved from Mainland China to Hong Kong (Chou, 2012).

Studies examining social support specifically among Asian Americans have yielded nuanced findings. In a nationally representative sample of Asian Americans, perceived emotional support from family about a serious problem, but not support about general worries, was found to moderate the relationship between everyday discrimination and psychological distress, such that support from family buffered the negative effects of discrimination (Mossakowski & Zhang, 2014). However, this buffering effect was not observed for perceived support from friends. Similarly, among a sample of 169 South Asians, greater social support was associated with a weaker link between perceived discrimination and past-year depression, although peer support did not emerge as a significant moderator (Tummala-Narra et al., 2012). In contrast, social support from friends, but not from family, was found to buffer the effects of discrimination on psychological distress in a sample of 1,639 Asian Americans (Singh et al., 2015). Together, these studies underscore the complexity of social support and highlight the importance of differentiating between sources of support, such as family and friends.

Studies conducted since the onset of COVID-19 have yielded findings that support both the main effect model and the stress-buffering model of social support. In a study of 790 Korean Americans (M = 42.74, SD = 10.96) conducted in May–June 2020, high levels of

social support—reflected in strong relationships with family and friends—was negatively associated with psychological distress (Min et al., 2021). Similarly, among a sample of 410 Asian Americans (M = 26.5, SD = 7.8), social support was found to buffer the effects of discrimination on depressive symptoms and marginally on physical symptoms. Additional nuance emerged in a study of 218 Asian and Asian American college students during the early phase of the COVID-19 pandemic (March–April 2020), in which the interaction between racial discrimination, social support, and locus of control was examined (Lu & Wang, 2022). Results indicated significant three-way interactions, suggesting that the protective effect of social support varied depending on individuals' level of external locus of control and the specific type of racial discrimination experienced. Specifically, social support significantly buffered against direct online racial discrimination, but only for those with moderate to high levels of external locus of control.

Grounded in the body of research that points to social support from family and friends as a stress-buffering factor for Asian Americans facing racial discrimination (including recent studies conducted since COVID-19), I anticipate finding social support from family and friends will separately attenuate the relationship between perceived racial discrimination and psychological distress (depression, anxiety, and PTSD) for the current sample of Asian young adults, such that the association between perceived discrimination and psychological distress is weaker for participants with higher levels of social support from family and friends than those with lower levels of social support from family and friends.

2.7 Purpose of Study & Hypotheses

The current study examines the relationship between perceived racial discrimination and psychological distress (depression, anxiety, and PTSD) among East and Southeast Asian

young adults during COVID-19. Specifically, the study aims to explore the potential moderating roles of 4 variables: ethnic identity exploration, ethnic identity commitment, and social support from family, social support from friends on the association between perceived racial discrimination and psychological distress. The hypotheses of the current study are listed below:

2.7.1 Main Effects

2.7.1.1 Hypothesis 1 (H1)

Perceived racial discrimination and psychological distress (i.e., depression, anxiety, and PTSD) are positively associated, such that those who report higher levels of racial discrimination report higher levels of psychological distress.

2.7.1.2 Hypothesis 2a (H2a)

Ethnic identity exploration and psychological distress (i.e., depression, anxiety, and PTSD) are positively associated, such that those who experience higher levels of ethnic identity exploration report higher levels of psychological distress.

2.7.1.3 Hypothesis 2b (H2b)

Ethnic identity commitment and psychological distress (i.e., depression, anxiety, and PTSD) are negatively associated, such that those who experience higher levels of ethnic identity commitment report lower levels of psychological distress.

2.7.1.4 Hypothesis 3a (H3a)

Social support from family and psychological distress (i.e., depression, anxiety, and PTSD) are negatively associated, such that those who experience higher levels of social support from family report lower levels of psychological distress.

2.7.1.5 Hypothesis 3b (H3b)

Social support from friends and psychological distress (i.e., depression, anxiety, and PTSD) are negatively associated, such that those who experience higher levels of social support from friends report lower levels of psychological distress.

2.7.2 Moderation Effects

2.7.2.1 Hypothesis 4a (H4a)

Ethnic identity exploration moderates the association between perceived racial discrimination and psychological distress, such that this association is stronger for participants with higher levels of ethnic identity exploration than participants with lower levels of ethnic identity exploration.

2.7.2.2 Hypothesis 4b (H4b)

Ethnic identity commitment moderates the association between perceived racial discrimination and psychological distress, such that this association is weaker for participants with higher levels of ethnic identity commitment than participants with lower levels of ethnic identity commitment.

2.7.2.3 Hypothesis 5a (H5a)

Social support from family moderates the association between perceived racial discrimination and psychological distress, such that this association is weaker for participants with higher levels of social support from family than participants with lower levels of social support from family.

2.7.2.3 Hypothesis 5b (H5b)

Social support from friends moderates the association between perceived racial discrimination and psychological distress, such that this association is weaker for participants

with higher levels of social support from friends than participants with lower levels of social support from friends.

Chapter 3: Methods

3.1 Participants

The sample of participants consisted of 429 individuals of East and Southeast Asian descent who live in the U.S. The sample consisted of 72.5% female, 25.6% male, 1.9% "Other" gender. The age of participants ranges from 20.03 to 32.99 years old (Mean = 25.53; SD = 3.46). The ethnicity breakdown is as follows: Chinese (42.9%), Filipino (14.9%), Vietnamese (14.2%), Korean (11.4%), Taiwanese (5.6%), Japanese (4.9%), Cambodian (2.3%), Hmong (0.7%), Thai (0.9%), Malaysian (0.7%), Burmese (0.5%), Laotian (0.5%), and Mongolian (0.5%). 63.2% of participants were born in the U.S. and 36.8% was not. Demographic information is provided in Table 1.

3.2 Procedure

Data for the present study were drawn from the COVID-19 Adult Resilience Experiences Study (CARES), a longitudinal investigation examining the physical and emotional well-being of U.S.-based young adults during the COVID-19 pandemic. The present analyses utilized Wave 4 data, collected from February to June 2022, and focused on the subsample of East and Southeast Asian participants. Given the challenges of conducting research during the height of the pandemic, the original longitudinal cohort was initially recruited via social media, email listservs, and word of mouth. At Wave 4, an additional age-matched sample was recruited to increase sample size and ensure greater racial diversity among young adults. Thus, the analytic sample used in this study was derived from two sources: retained participants from the original cohort and a newly recruited age-matched sample obtained via Qualtrics panel services.

Prior to survey administration, participants provided informed consent electronically. As compensation, they received either a $30 gift card or an equivalent value in redeemable points. To ensure data quality, the survey included attention check items and human verification procedures to detect potential bot-generated or fraudulent responses. All procedures were approved by the Institutional Review Board at Boston University.

3.3 Measures

3.3.1 Perceived Racial Discrimination

To assess participants' experiences of racial discrimination, the study utilized the Everyday Discrimination Scale (EDS; Williams et al., 1997), a widely used 9-item measure of perceived day-to-day discrimination. Participants indicated how often they experienced each item in their daily life (e.g., "you are treated with less respect than other people," "people act as if they are better than you are," "you are threatened or harassed") using a 4-point Likert scale ranging from 0 (never) to 3 (often).

Consistent with the approach taken for other scales in the study, a mean score was computed across the 9 EDS items administered, resulting in a score range from 0 to 3, with higher values indicating greater perceived racial discrimination. The scale has demonstrated strong reliability and validity in racially diverse samples, including African American, Asian American, and Latinx populations (Cronbach's $\alpha = .89$; Cokley et al., 2017), and specifically in Asian American samples (Cronbach's $\alpha = .87$; Haft & Zhou, 2021). In the current study, Cronbach's α was .89, indicating good internal consistency.

3.3.2 Ethnic Identity

Participants completed the Multigroup Ethnic Identity Measure – Revised (MEIM-R; Phinney, 1992) to assess ethnic identity. The 12-item scale captures two core

dimensions: ethnic identity exploration and ethnic identity commitment. Each item was rated on a 4-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). The MEIM-R has demonstrated good psychometric properties and has been used in multiple studies with Asian American populations (Iwamoto & Liu, 2010; Juang et al., 2006; Park et al., 2013).

3.3.2.1 Ethnic Identity Exploration

The exploration subscale includes 5 items (e.g., "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs," "In order to learn more about my ethnic background, I have talked to other people about my ethnic group"). A mean score was computed across the 5 items, resulting in a score range from 1 to 4. Higher scores indicate greater engagement in exploring one's ethnic background. Internal consistency for this subscale was acceptable (Cronbach's $\alpha = .78$).

3.3.2.2 Ethnic Identity Commitment

The commitment subscale includes 7 items (e.g., "I have a strong sense of belonging to my own ethnic group," "I feel good about my cultural or ethnic background"). A mean score was computed across the 7 items, also resulting in a score range from 1 to 4. Higher scores indicate greater identification and affective attachment to one's ethnic group. Internal consistency was excellent (Cronbach's $\alpha = .91$).

3.3.3 Social Support

Participants completed the 12-item Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988) **to** assess perceived social support from three sources: family, friends, and a "special person." The "special person" subscale was omitted in the present study due to its conceptual ambiguity. Family social support was assessed using 4 items (e.g., "My family really tries to help me"), and friend social support was assessed using 4 items (e.g., "I

can talk about my problems with my friends"). All items were rated on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree).

To maintain consistency with the scoring approach used for other variables in the study, mean scores were computed across the four items for each subscale, resulting in a possible score range of 1 to 7. Higher scores indicate greater perceived support from family or friends. The MSPSS has been used in Asian American samples (Lee & Waters, 2021; Lu & Wang, 2022) and has demonstrated acceptable reliability and validity in these populations (Cronbach's $\alpha > .80$). In the current sample, Cronbach's α was .91 for the family subscale and .92 for the friend subscale, indicating excellent internal consistency.

3.3.4 Depression

Participants completed the Patient Health Questionnaire-8 (PHQ-8; Kroenke et al., 2009) to assess symptoms of depression experienced over the past two weeks. The PHQ-8 includes 8 items rated on a 4-point Likert scale from 0 **(**not at all**)** to 3 (nearly every day**).** Sample items include "little interest or pleasure in doing things," "feeling down, depressed, or hopeless," and "trouble falling or staying asleep, or sleeping too much."

Although the standard scoring procedure yields a total score ranging from 0 to 24, in the present study, a mean score was computed across the 8 items to maintain consistency with the scoring approach used for other outcome variables. This resulted in a final score range of 0 to 3**,** with higher scores indicating greater depressive symptom severity. The PHQ-8 has demonstrated acceptable reliability and validity in general outpatient populations (Cronbach's $\alpha = .89$; Shin et al., 2019) and has been used in studies with Asian American samples (Liu et al., 2020; Lozano et al., 2021; Shyamsunder et al., 2023). In the current study, internal consistency was excellent **(**Cronbach's $\alpha = .91$).

3.3.5 Anxiety

Participants completed the Generalized Anxiety Disorder 7-item scale (GAD-7; Spitzer et al., 2006) to assess symptoms of anxiety experienced over the past two weeks. The GAD-7 includes 7 items**,** each rated on a 4-point Likert scale from 0 (not at all) to 3 (nearly every day). Sample items include "feeling nervous, anxious, or on edge," "not being able to stop or control worrying," and "being so restless that it's hard to sit still."

Although the standard scoring method yields a total score ranging from 0 to 21, in the present study, a mean score was computed across the 7 items to maintain consistency with the scoring approach used for other outcome variables. This resulted in a final score range of **0 to 3**, with higher scores indicating greater anxiety symptom severity. The GAD-7 has been used in Asian American samples (Atkin & Tran, 2020; A. C. Chen et al., 2014) and has demonstrated acceptable reliability and validity in these populations (Cronbach's α = .78–.90). In the current study, internal consistency was excellent (Cronbach's α = .94).

3.3.6 Post-Traumatic Stress Disorder

Participants completed the PTSD Checklist – Civilian Version (PCL-C; Weathers et al., 1993) to assess symptoms of post-traumatic stress disorder (PTSD) experienced over the past month. The PCL-C includes 17 items, each rated on a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely). Sample items include "repeated, disturbing memories, thoughts, or images of a stressful experience from the past," "suddenly acting or feeling as if a stressful experience were happening again (as if you were reliving it)," and "feeling emotionally numb or being unable to have loving feelings for those close to you."

Although the total score typically ranges from 17 to 85, in the present study, a mean score was computed across the 17 items to maintain consistency with the scoring approach

used for other outcome variables. This resulted in a final score range of 1 to 5, with higher scores indicating greater PTSD symptom severity. The PCL-C has been used in Asian American samples (Hahm et al., 2022; Liu et al., 2020; J. Tsai et al., 2014; Whealin et al., 2013) and has demonstrated acceptable reliability and validity in these populations (Cronbach's α = .93–.97). In the current study, internal consistency was excellent (Cronbach's α = .96).

3.4 Data Cleaning

Data cleaning procedures were conducted to ensure data quality. First, the three embedded attention check items were summed to create a score ranging from 0 to 3. The following criteria were applied, and cases meeting any of these were removed from the dataset: 1) participants who did not provide informed consent, 2) participants who did not complete the survey, 3) participants who completed the survey in 15 minutes or less, 4) participants who answered two or more attention check items incorrectly, and 5) participants who failed the automated bot verification check.

3.5 Data Analyses

All analyses were conducted using SPSS version 30.0 and the PROCESS macro version 4.2 (Hayes, 2022). Descriptive statistics were calculated to characterize the sample in terms of demographic variables, including age, gender, ethnicity, nativity, and sexual orientation. For all study variables, means, standard deviations, variances, skewness, and kurtosis were computed to assess normality. Multicollinearity among predictor variables was assessed using bivariate correlations and Variance Inflation Factor (VIF) values.

Prior to hypothesis testing, several demographic variables were evaluated as potential covariates by examining their associations with the mental health outcome variables. Age,

gender, nativity (U.S.-born vs. non-U.S.-born), family subjective social status, sexual orientation, and ethnic group (Southeast Asian vs. East Asian) were considered as covariates in subsequent analyses.

Hypotheses 1–3 were tested using multiple regression analyses in SPSS. For Hypothesis 1, perceived racial discrimination was entered as the independent variable, with depression, anxiety, and PTSD symptoms each entered separately as dependent variables, controlling for the relevant covariates. Hypotheses 2a and 2b examined whether ethnic identity exploration and ethnic identity commitment, respectively, were associated with psychological distress (depression, anxiety, PTSD), using multiple regression. In these models, either ethnic identity exploration or commitment was entered as the predictor, while the other dimension, along with the identified demographic controls, was included as a covariate. Hypotheses 3a and 3b examined whether family social support and friend social support, respectively, were associated with psychological distress (depression, anxiety, PTSD), using multiple regression. In these models, either family social support and friend social support was entered as the predictor, while the other dimension, along with the identified demographic controls, was included as a covariate.

Hypotheses 4–6 were tested using moderation analyses conducted via the PROCESS macro for SPSS (Model 1; Hayes, 2022). Hypotheses 4a and 4b tested whether ethnic identity exploration and ethnic identity commitment, respectively, moderated the association between perceived racial discrimination and psychological distress. Hypotheses 5a and 5b tested whether social support from family and social support from friends, respectively, moderated the same relationship. When one subscale served as the moderator, the other was included as a covariate, in addition to the demographic controls listed above.

A total of 12 separate moderation models were tested to examine the effects of each moderator (ethnic identity exploration, ethnic identity commitment, family support, and friend support) on the relationship between perceived racial discrimination and each psychological distress outcome (depression, anxiety, PTSD). The PROCESS macro generated interaction terms between discrimination and each moderator and tested whether these interactions significantly predicted psychological distress outcomes. For significant interaction effects, we examined the simple slopes and visualized the interactions**,** probing the conditional effects of discrimination at low (–1 SD), mean, and high (+1 SD) levels of the moderator, in accordance with Hayes (2022).

Chapter 4: Results

4.1 Preliminary Analyses

4.1.1 Assumptions

Prior to testing hypotheses, each of the analyses were subjected to assumption testing. Following the recommendations of Hayes (2022), all analyses utilized mean centered predictors for moderator analyses. Multicollinearity was not a concern in the regression models, as the largest Variance Inflation Factor (VIF) value across all analyses was 2.11, well below the commonly used thresholds of 5 or 10 (Cohen et al., 2003). Regarding assumption of normality of residuals, P-P plots of residuals indicated a roughly normal distribution. Scatterplots of standardized predicted scores by standardized residuals showed some evidence for heteroscedasticity. To address this issue, all moderator analyses use heteroscedasticity-adjusted standard errors.

4.1.2 Descriptive Statistics

Table 2 presents the mean, standard deviations, and distributions of key variables that were examined to test the assumptions required for the proposed statistical analyses. Regarding data distribution, all variables were found to be within the recommended limits of -3.0 to +3.0 for skewness and -10.0 to +10.0 for kurtosis (Weston & Gore, 2006).

Table 2: Descriptive Statistics

				Skewness		Kurtosis	
	M	*SD*	Variance	Statistic	*SE*	Statistic	*SE*
1. Depression	0.92	0.76	0.573	0.704	0.114	-0.362	0.227
2. Anxiety	0.92	0.82	0.672	0.855	0.114	-.088	0.227
3. PTSD	2.00	0.89	0.787	1.076	0.114	0.566	0.227
4. Discrimination	1.83	0.60	0.361	0.489	0.114	-0.213	0.227
5. EI Exploration	2.93	0.62	0.387	-0.278	0.118	0.032	0.235
6. EI Commitment	3.08	0.61	0.375	-0.403	0.118	0.238	0.235
7. Social Support from Family	5.34	1.09	1.183	-0.516	0.114	-0.105	0.227
8. Social Support from Friends	5.28	1.09	1.185	-0.485	0.114	-0.215	0.227

4.2 Correlation Analyses

Bivariate correlations between key variables are presented in Table 3. Perceived racial discrimination was significantly and positively associated with depression ($r = .37$, $p < .001$), anxiety ($r = .32$, $p < .001$), and PTSD ($r = .37$, $p < .001$). Ethnic identity exploration was positively correlated with discrimination ($r = .20$, $p < .001$), ethnic identity commitment ($r = .69$, $p < .001$), and both social support from family ($r = .17$, $p < .001$) and friends ($r = .21$, $p < .001$). Ethnic identity commitment was also positively correlated with social support from family ($r = .28$, $p < .001$) and friends ($r = .20$, $p < .001$). Social support from both family ($r = –.35$, $p < .001$) and friends ($r = –.26$, $p < .001$) was negatively associated with depression, as well as with anxiety ($r = –.29$ and $–.26$, respectively, $p < .001$).

Table 3: Bivarirate Correlations

Variable	1	2	3	4	5	6	7	8
1. Depression	—							
2. Anxiety	.79***	—						
3. PTSD	.76***	.79***	—					
4. Discrimination	.37***	.32***	.37***	—				
5. EI Exploration	.08	.09	.02	.20***	—			
6. EI Commitment	-.03	-.01	-.06	.03	.69***	—		
7. Social Support from Family	-.35***	-.29***	-.35***	-.13**	.17***	.28***	—	
8. Social Support from Friends	-.26***	-.26***	-.26***	-.11*	.21***	.20***	.39***	—

Note. * indicates $p < .05$. ** indicates $p < .01$.

4.2.1 Demographic Effects

I examined whether there was any significant difference in mental health outcomes (i.e., depression, anxiety, and PTSD) across variables such as gender, nativity, family subjective social status (as proxy for social class, Adler et al., 2000), sexual orientation, ethnic group (Southeast Asian vs. East Asian) to determine what to include for covariates.

Pearson correlations indicated that age was not significantly associated with depression ($r = –.04$, $p = .47$), anxiety ($r = –.01$, $p = .87$), or PTSD symptoms ($r = –.04$, $p = .39$). Given the lack of significant associations, age was not included as a covariate in subsequent analyses.

Between U.S.-born and foreign-born participants, no significant differences in mental health outcomes were observed: no significant differences in depression, $t(353.27) = -0.61$, $p = .27$; anxiety, $t(427) = -1.45$, $p = .15$; or PTSD symptoms, $t(349.32) = -1.39$, $p = .17$. Effect sizes were small across all outcomes (Cohen's $ds = -0.06$ to -0.15). Thus, nativity was not included as a covariate in subsequent analyses.

There were no significant differences in depression, $t(426) = -1.39$, $p = .154$, or anxiety symptoms, $t(427) = -0.93$, $p = .352$, between heterosexual (coded 0) and non-heterosexual

(coded 1) participants. A marginal difference emerged in PTSD symptoms, $t(425) = -1.91$, $p = .056$, with non-heterosexual individuals reporting slightly higher scores. However, effect sizes were small to small-to-moderate (Cohen's *ds* = -0.11 to -0.22), and the overall pattern was inconsistent. As a result, sexual orientation was not included as a covariate in subsequent analyses.

In contrast, one-way ANOVAs were conducted to examine whether mental health outcomes differed by gender identity (1 = woman, 2 = man, 3 = "other"). Significant group differences were found for depression, $F(2, 425) = 4.66$, $p = .010$, anxiety, $F(2, 426) = 4.65$, $p = .010$, and PTSD symptoms, $F(2, 424) = 3.23$, $p = .041$. Post hoc tests indicated that women reported significantly higher depression and anxiety symptoms than men ($p = .027$ and $p = .012$, respectively). Although post hoc comparisons involving individuals identifying with "other" gender were not statistically significant, this subgroup (n = 8) reported the highest mean levels of depression, anxiety, and PTSD. Given these findings, gender was included as a covariate in all subsequent analyses.

Family subjective social status was significantly negatively correlated with depression ($r = –.15$, $p = .002$), anxiety ($r = –.15$, $p = .002$), and PTSD symptoms ($r = –.14$, $p = .004$), such that lower perceived class was associated with higher symptom severity. Given these consistent associations, family subjective social status was included as a covariate in all subsequent analyses.

Significant group differences were observed by ethnic subgroup (0 = Southeast Asian, 1 = East Asian). Participants identifying as Southeast Asian reported higher levels of depression, $t(426) = 2.88$, $p = .004$, anxiety, $t(427) = 2.06$, $p = .040$, and PTSD symptoms, $t(254) = 3.27$, $p = .001$, relative to East Asian participants. Effect sizes ranged from

small to moderate (Cohen's *ds* = 0.21–0.35). These findings supported the inclusion of ethnic subgroup as a covariate in subsequent analyses.

4.2 Primary Analyses

To test Hypothesis 1-3, a series of linear regressions were conducted to examine the associations between perceived racial discrimination (H1), ethnic identity exploration (H2a), ethnic identity commitment (H2b), social support from family (H3a) and friends (H3b) with psychological distress outcomes (i.e., depression, anxiety, and PTSD). All models controlled for gender, family subjective social status, and ethnic subgroup.

4.2.1 Hypothesis 1: Racial Discrimination & Mental Health Outcomes

In support of Hypothesis 1, greater perceived racial discrimination significantly predicted higher levels of psychological distress across all three domains. Specifically, discrimination was positively associated with symptoms of depression, β = .35, $p < .001$; anxiety, β = .30, $p < .001$; and PTSD, β = .35, $p < .001$ (see Table 4).

Table 4: Regression Results for Perceived Racial Discrimination Predicting Psychological Distress

Outcome	B	SE B	β	t	p
Depression	.440	.057	.348	7.72	< .001
Anxiety	.410	.063	.301	6.54	< .001
PTSD	.522	.068	.348	7.70	< .001

Note. Perceived racial discrimination was the primary predictor. All models controlled for gender, family subjective social status and ethnic subgroup.

4.2.1 Hypothesis 2-3: Main Effects of Ethnic Identity & Social Support

In support of Hypothesis 2a, ethnic identity exploration was significantly associated with greater psychological distress across all outcomes (see Table 5). Specifically, higher levels of exploration predicted higher levels of depression (β = .19, $p = .006$), anxiety (β = .18, $p = .008$), and PTSD symptoms (β = .16, $p = .020$), controlling for gender, family

subjective social class, and ethnic subgroup. These findings suggest that engaging in ethnic identity exploration may coincide with elevated distress during periods of heightened racialization.

In contrast, and in support of Hypothesis 2b, ethnic identity commitment was significantly associated with lower psychological distress (see Table 5). Greater commitment predicted lower levels of depression (β = –.18, p = .010), anxiety (β = –.16, p = .019), and PTSD symptoms (β = –.15, p = .030), controlling for covariates. These results support suggest that a strong, positive connection to one's ethnic group may buffer against the psychological impact of stressors.

Table 5: Regression Results for Ethnic Identity Predictors of Psychological Distress

Predictor	β (Depression)	p	β (Anxiety)	p	β (PTSD)	p
Ethnic Identity Exploration	0.19	.006	0.18	.008	0.16	.020
Ethnic Identity Commitment	-0.18	.010	-0.16	.019	-0.15	.030
Gender	-0.07	.162	-0.09	.058	-0.05	.283
Family Subjective Social Status	-0.13	.011	-0.15	.002	-0.13	.004
Ethnic Subgroup	-0.15	.002	-0.11	.025	-0.10	.030

Note. Standardized beta coefficients (β) are reported. All models control for gender, family subjective social status, and ethnic subgroup.
p < .05*, p < .01**, p < .001***

In support of Hypothesis 3a, greater social support from family was significantly associated with lower levels of psychological distress across all outcomes (see Table 6). Specifically, higher family support predicted lower depression (β = –.27, p < .001), anxiety (β = –.20, p < .001), and PTSD symptoms (β = –.27, p < .001), controlling for gender, subjective social class, and ethnic subgroup. These findings highlight the important protective role of

familial support in reducing mental health symptoms among Asian American young adults during the COVID-19 pandemic.

Similarly, and in support of Hypothesis 3b, social support from friends significantly predicted lower psychological distress, although the effect sizes were slightly smaller than those for family support (see Table 6). Specifically, higher friend support was associated with lower depression ($\beta = -.14$, $p = .005$), anxiety ($\beta = -.17$, $p = .001$), and PTSD symptoms ($\beta = -.14$, $p = .006$), above and beyond the effects of family support and other covariates. These results indicate that support from friends contributes uniquely to psychological well-being,

While both sources of support were significantly associated with lower psychological distress, social support from family showed consistently stronger effects across all three models. For depression, the standardized beta for family support was $\beta = -.27$ ($p < .001$), compared to $\beta = -.14$ ($p = .005$) for friend support. For anxiety, family support was $\beta = -.20$ ($p < .001$), whereas friend support was $\beta = -.17$ ($p = .001$). For PTSD, family support again showed a stronger association ($\beta = -.27$, $p < .001$) compared to friend support ($\beta = -.14$, $p = .006$). These differences in effect sizes suggest that, while both forms of support are beneficial, family support exerted a greater protective influence on mental health in this sample.

Table 5: Regression Results for Social Support Predictors of Psychological Distress

Predictor	β (Depression)	*p*	β (Anxiety)	*p*	β (PTSD)	*p*
Social Support – Family	-0.27	<.001	-0.20	<.001	-0.27	<.001
Social Support – Friends	-0.14	.005	-0.17	.001	-0.14	.006
Gender	-0.07	.143	-0.10	.036	-0.05	.283
Family Subjective Social Status	-0.05	.246	-0.07	.152	-0.04	.384
Ethnic Subgroup	-0.07	.128	-0.04	.443	-0.10	.030

Note. Standardized beta coefficients (β) are reported. All models control for gender, family subjective social status, and ethnic subgroup.
p < .05*, p < .01**, p < .001***

4.2.1 Hypotheses 4-5: Moderation Effects of Ethnic Identity & Social Support

Hypotheses 4 and 5 were tested using Hayes' PROCESS macro (Model 1). A total of 12 separate moderation models were conducted, examining whether ethnic identity exploration, ethnic identity commitment, social support from family, and social support from friends moderated the relationship between perceived racial discrimination and psychological distress. For each moderator, three models were tested—one for each mental health outcome (depression, anxiety, and PTSD). In all models, perceived racial discrimination was entered as the independent variable, and gender, family subjective social status, and ethnic subgroup (Southeast Asian vs. East Asian) were included as covariates. In cases of significant moderation, follow-up analyses using simple slopes were conducted to probe the interaction at –1 SD, the mean, and +1 SD levels of the moderator variable.

Hypothesis 4a was supported for anxiety and marginally supported for PTSD, but not supported for depression.

Table 7 presents the analysis for depression. The overall model was statistically significant, $R^2 = .17$, $F(7, 387) = 11.19$, $p < .001$. However, ethnic identity exploration did not

moderate the relationship between discrimination and depression, as the interaction term was not significant (B = 0.15, $p = .107$). This finding suggests that ethnic identity exploration does not significantly alter the effect of discrimination on depression.

Table 8 presents the analysis for anxiety. The overall model was statistically significant, $R^2 = .14$, $F(7, 388) = 9.50$, $p < .001$. In support of Hypothesis 4a, the interaction between discrimination and ethnic identity exploration was significant (B = 0.25, $p = .011$). Probing the interaction further showed that discrimination was significantly associated with anxiety at low (–1 SD; B = 0.22, $p = .016$), mean (B = 0.38, $p < .001$), and high (+1 SD; B = 0.54, $p < .001$) levels of ethnic identity exploration. As illustrated in Figure 1, the association between discrimination and anxiety was strongest for participants high in ethnic identity exploration, suggesting ethnic identity exploration amplify the psychological impact of racial discrimination.

Table 9 presents the analysis for PTSD. The overall model was statistically significant, $R^2 = .17$, $F(7, 387) = 11.06$, $p < .001$. The interaction between perceived racial discrimination and ethnic identity exploration approached significance (B = 0.21, $p = .054$), providing marginal support for Hypothesis 4a. Probing the interaction further showed that discrimination was significantly associated with PTSD symptoms at low (–1 SD; B = 0.36, $p = .0004$), mean (B = 0.49, $p < .001$), and high (+1 SD; B = 0.62, $p < .001$) levels of ethnic identity exploration. As illustrated in Figure 2, the association between discrimination and PTSD was strongest for participants high in ethnic identity exploration, suggesting that exploration may heighten psychological vulnerability to the effects of racial discrimination.

Table 7: Depression Predicted by Discrimination, EI Exploration, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.80	6.05	<.001
Discrimination	0.41	6.63	<.001
EI Exploration	0.11	1.31	.191
Discrimination x EI Exploration	0.15	1.61	.107
EI Commitment	-0.14	-1.70	.090
Gender	-0.12	-1.70	.091
Family subjective social status	-0.03	-1.74	.084
Ethnic subgroup	-0.21	-2.89	.004
R^2 Model	0.17	11.19	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Table 8: Anxiety Predicted by Discrimination, EI Exploration, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.88	5.85	<.001
Discrimination	0.38	5.70	<.001
EI Exploration	0.14	1.62	.106
Discrimination x EI Exploration	0.25	2.59	.010
EI Commitment	-0.15	-1.70	.091
Gender	-0.18	-2.33	.020
Family subjective social status	-0.04	-1.75	.082
Ethnic subgroup	-0.17	-2.13	.034
R^2 Model	0.15	9.50	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

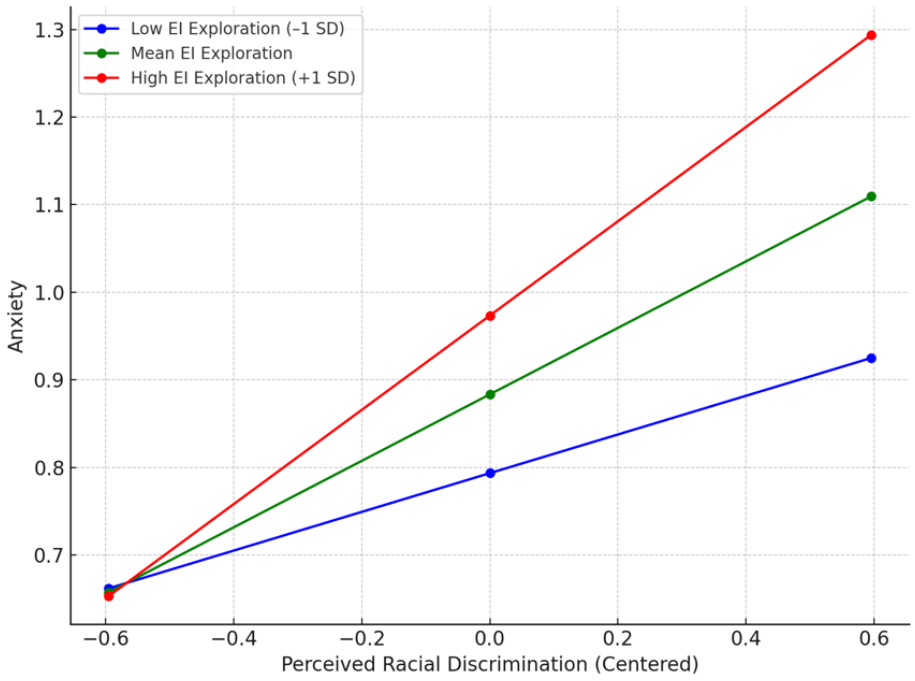

Figure 1: Anxiety Predicted by Discrimination, EI Exploration, and Their Interaction

Table 9: PTSD Predicted by Discrimination, EI Exploration, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	2.97	8.34	<.001
Discrimination	0.49	6.65	<.001
EI Exploration	0.04	0.44	.659
Discrimination x EI Exploration	0.21	1.93	.054
EI Commitment	-0.16	-1.65	.100
Gender	-0.13	-1.46	.145
Family subjective social status	-0.03	-1.36	.173
Ethnic subgroup	-0.30	-3.40	.001
R^2 Model	0.17	11.06	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

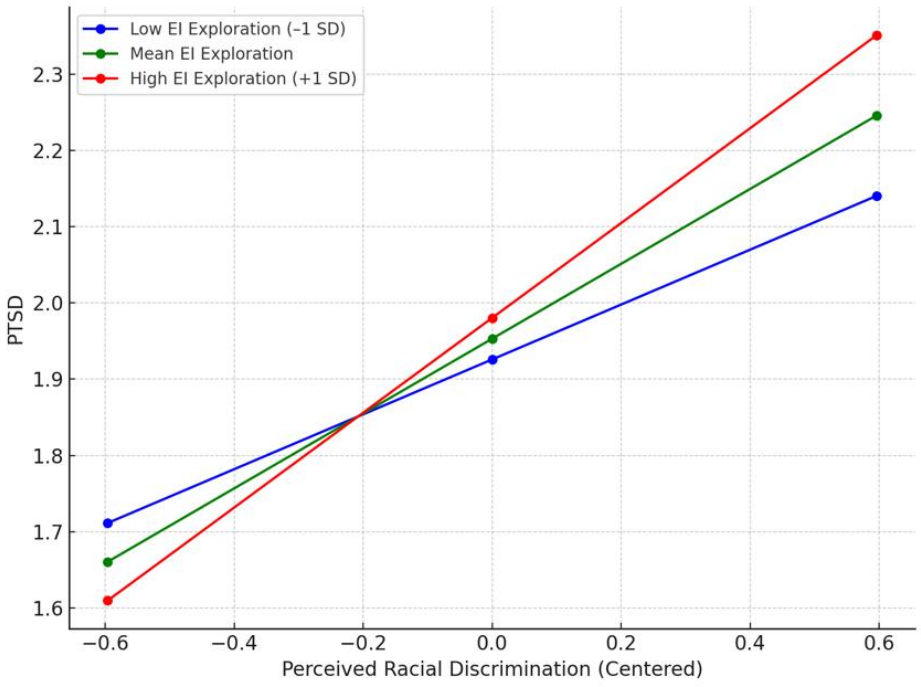

Figure 2: PTSD Predicted by Discrimination, EI Exploration, and Their Interaction

Hypothesis 4b proposed that ethnic identity commitment (affirmation) would moderate the association between perceived racial discrimination and psychological distress. This hypothesis was not supported. The interaction between racial discrimination and ethnic identity commitment was not significant for depression (B = 0.12, p = .206), anxiety (B = 0.13, p = .215), or PTSD (B = 0.03, p = .786), indicating that ethnic identity commitment did not significantly alter the relationship between discrimination and psychological distress in this sample. Table 10 presents the analysis for depression, Table 11 for anxiety, and Table 12 for PTSD.

Table 10: Depression Predicted by Discrimination, EI Commitment, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.12	3.97	<.001
Discrimination	0.40	6.60	<.001
EI Commitment	-0.13	-1.56	.120
Discrimination x EI Commitment	0.12	1.27	.206
EI Exploration	0.09	1.10	.271
Gender	-0.11	-1.61	.107
Family subjective social status	-0.03	-1.77	.077
Ethnic subgroup	-0.21	-2.85	.0051
R^2 Model	0.17	11.02	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Table 11: Anxiety Predicted by Discrimination, EI Commitment, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.09	3.56	<.001
Discrimination	0.38	5.66	<.001
EI Commitment	-0.13	-1.45	.148
Discrimination x EI Commitment	0.13	1.24	.215
EI Exploration	0.11	1.26	.209
Gender	-0.16	-2.11	.035
Family subjective social status	-0.04	-1.75	.081
Ethnic subgroup	-0.16	-2.01	.045
R^2 Model	0.13	8.65	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Table 12: PTSD Predicted by Discrimination, EI Commitment, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	2.42	7.09	<.001
Discrimination	0.49	6.64	<.001
EI Commitment	-0.14	-1.46	.144
Discrimination x EI Commitment	0.03	0.27	.786
EI Exploration	0.02	0.15	.879
Gender	-0.11	-1.24	.216
Family subjective social status	-0.03	-1.33	.184
Ethnic subgroup	-0.29	-3.27	.001
R^2 Model	0.16	10.44	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Hypothesis 5a was supported for depression and anxiety but not supported for PTSD.

Table 13 presents the analysis for depression. The overall model was statistically significant, $R^2 = .26$, $F(7, 419) = 21.05$, $p < .001$. In support of Hypothesis 5a, the interaction between discrimination and social support from family was significant (B = 0.08, $p = .013$). Probing the interaction further showed that discrimination was significantly associated with depression at low (–1 SD; B = 0.28, $p = .0002$), mean (B = 0.40, $p < .001$), and high (+1 SD; B = 0.52, $p < .001$) levels of family support. As illustrated in Figure 3, social support from family was more protective at lower levels of discrimination, whereas its protective effect diminished at higher levels of discrimination. In other words, the inverse relationship between family support and depression was steepest when discrimination was low.

Table 13: Depression Predicted by Discrimination, Social Support from Family, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.64	7.61	<.001
Discrimination	0.40	7.36	<.001
Social Support Family	-0.13	-5.35	<.001
Discrimination x SS Family	0.08	2.49	.013
Social Support Friends	-0.08	-2.72	.007
Gender	-0.09	-1.39	.165
Family subjective social status	-0.01	-0.57	.567
Ethnic subgroup	-0.11	-1.53	.126
R^2 Model	0.26	21.05	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

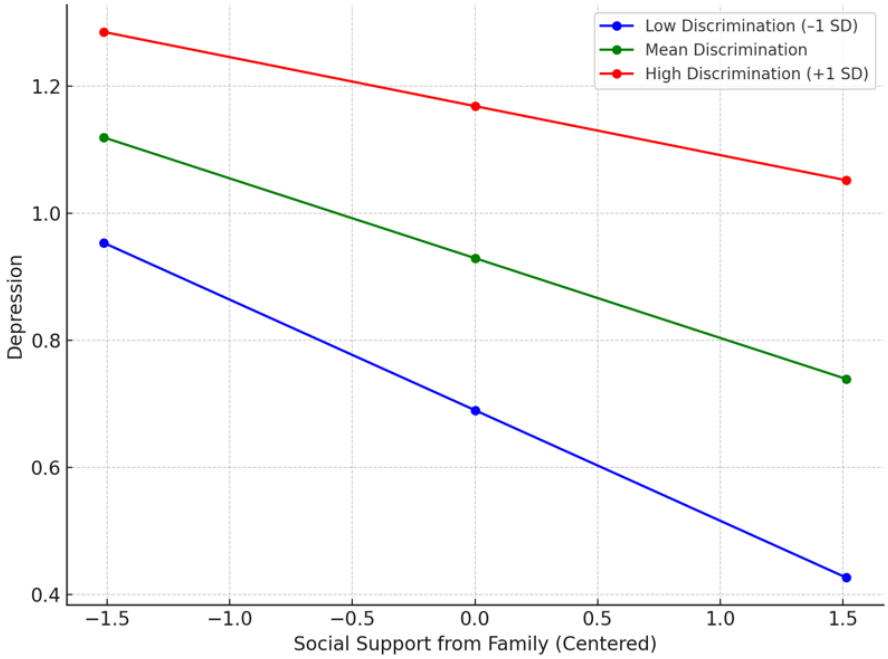

Figure 3: Depression Predicted by Discrimination, Social Support from Family, and Their Interaction

Table 14 presents the analysis for anxiety. The overall model was statistically significant, $R^2 = .20$, $F(7, 420) = 15.41$, $p < .001$. In support of Hypothesis 5a, the interaction between discrimination and social support from family was significant (B = 0.08, $p = .022$).

Probing the interaction further showed that discrimination was significantly associated with anxiety at low (–1 SD; B = 0.24, $p = .003$), mean (B = 0.37, $p < .001$), and high (+1 SD; B = 0.49, $p < .001$) levels of family support. As illustrated in Figure 4, social support from family was more protective at lower levels of discrimination, whereas its protective effect diminished at higher levels of discrimination. In other words, the inverse relationship between family support and anxiety was strongest when discrimination was low.

Table 14: Anxiety Predicted by Discrimination, Social Support from Family, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.87	7.79	<.001
Discrimination	0.37	6.10	<.001
Social Support Family	-0.10	-3.79	<.001
Discrimination x SS Family	0.08	2.29	.022
Social Support Friends	-0.11	-3.21	.001
Gender	-0.15	-2.08	.038
Family subjective social status	-0.02	-0.96	.339
Ethnic subgroup	-0.06	-0.73	.464
R^2 Model	0.20	15.41	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Figure 4: Anxiety Predicted by Discrimination, Social Support from Family, and Their Interaction

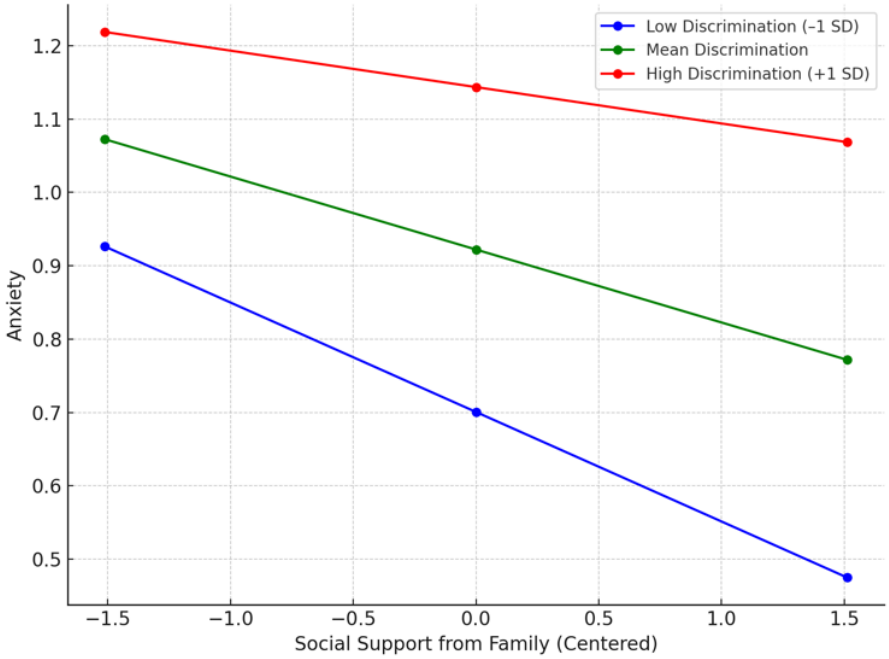

Table 15 presents the analysis for PTSD. The overall model was statistically significant, $R^2 = .25$, $F(7, 418) = 19.76$, $p < .001$. Although both perceived racial discrimination ($B = 0.47$, $p < .001$) and social support from family ($B = –0.14$, $p < .001$) were significant predictors of PTSD symptoms, the interaction between discrimination and family support was not significant ($B = 0.05$, $p = .215$). Thus, Hypothesis 5a was not supported for PTSD, indicating that social support from family did not significantly moderate the relationship between discrimination and PTSD symptoms.

Table 15: PTSD Predicted by Discrimination, Social Support from Family, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	2.73	10.60	<.001
Discrimination	0.47	7.27	<.001
Social Support Family	-0.14	-5.09	<.001
Discrimination x SS Family	0.05	1.24	.215
Social Support Friends	-0.09	-2.56	.011
Gender	-0.07	-0.93	.351
Family subjective social status	-0.00	-0.20	.839
Ethnic subgroup	-0.18	-2.17	.031
R^2 Model	0.25	19.46	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Hypothesis 5b was **s**upported for depression and anxiety, but not supported for PTSD.

Table 16 presents the analysis for depression. The overall model was statistically significant, $R^2 = .26$, $F(7, 419) = 20.68$, $p < .001$. In support of Hypothesis 5b, the interaction between discrimination and social support from friends was significant (B = 0.09, $p = .040$). Probing the interaction further showed that discrimination was significantly associated with depression at low (–1 SD; B = 0.30, $p < .001$), mean (B = 0.40, $p < .001$), and high (+1 SD; B = 0.50, $p < .001$) levels of friend support. As illustrated in Figure 5, social support from friends was more protective against depression at lower levels of discrimination, whereas its protective effect diminished as experiences of discrimination increased. In other words, the inverse relationship between friend support and depression was strongest when discrimination was low.

Table 16: Depression Predicted by Discrimination, Social Support from Friends, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.77	10.73	<.001
Discrimination	0.40	7.41	<.001
Social Support Friends	-0.09	-2.83	.005
Discrimination x SS Friends	0.09	2.07	.040
Social Support Family	-0.12	-5.27	<.001
Gender	-0.10	-1.46	.144
Family subjective social status	-0.01	-0.59	.558
Ethnic subgroup	-0.10	-1.46	.144
R^2 Model	0.26	20.68	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Figure 4: Depression Predicted by Discrimination, Social Support from Friends, and Their Interaction

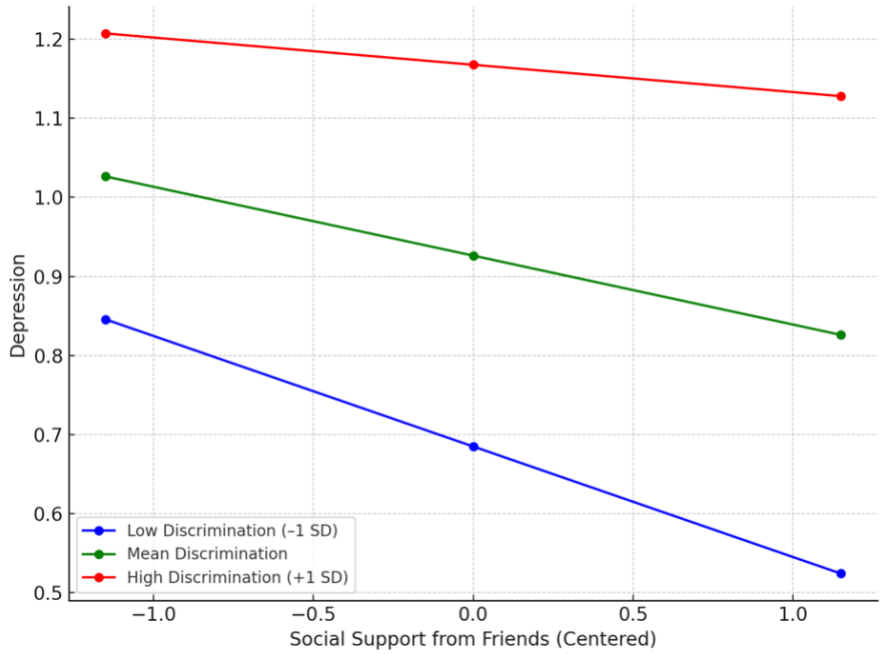

Table 17 presents the analysis for anxiety. The overall model was statistically significant, $R^2 = .20$, $F(7, 420) = 15.19$, $p < .001$. In support of Hypothesis 5b, the interaction between discrimination and social support from friends was significant (B = 0.10, $p = .045$).

Probing the interaction further showed that discrimination was significantly associated with anxiety at low (–1 SD; B = 0.26, $p = .001$), mean (B = 0.37, $p < .001$), and high (+1 SD; B = 0.48, $p < .001$) levels of friend support. As illustrated in Figure 6, friend support was more protective at lower levels of discrimination, while its protective effect diminished under high levels of discrimination.

Table 17: Anxiety Predicted by Discrimination, Social Support from Friends, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	1.73	9.42	<.001
Discrimination	0.37	6.15	<.001
Social Support Friends	-0.11	-3.31	.001
Discrimination x SS Friends	0.10	2.01	.045
Social Support Family	-0.10	-3.73	<.001
Gender	-0.16	-2.16	.032
Family subjective social status	-0.02	-0.98	.329
Ethnic subgroup	-0.05	-0.67	.503
R^2 Model	0.20	15.19	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Figure 4: Depression Predicted by Discrimination, Social Support from Friends, and Their Interaction

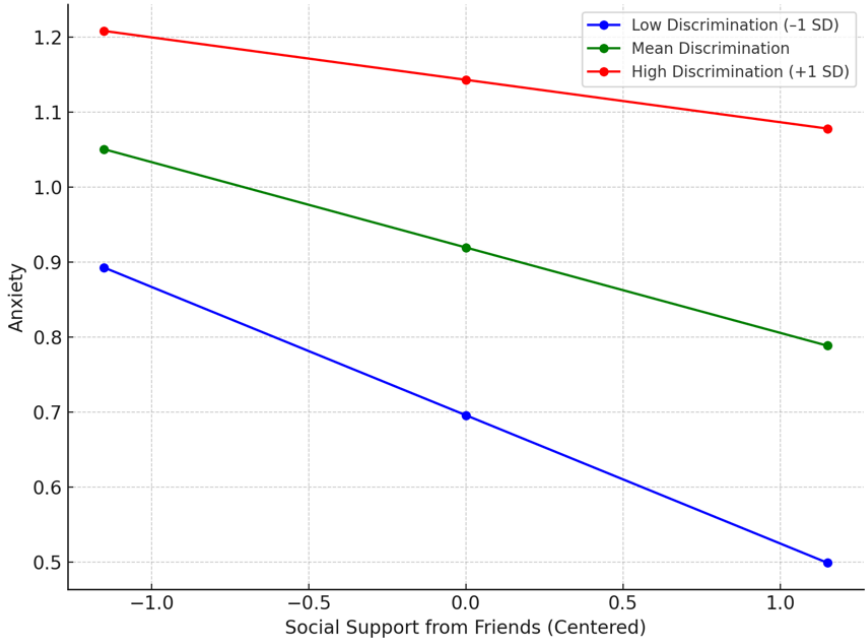

Table 18 presents the analysis for PTSD. The overall model was statistically significant, $R^2 = .25$, $F(7, 418) = 19.68$, $p < .001$. Although perceived racial discrimination (B = 0.47, $p < .001$) and social support from friends (B = –0.10, $p = .009$) were each significantly associated with PTSD symptoms, their interaction was not significant (B = 0.05, $p = .289$). These findings suggest that while both discrimination and friend support independently predict PTSD symptoms, social support from friends does not significantly moderate the effect of discrimination on PTSD in this sample.

Table 18: PTSD Predicted by Discrimination, Social Support from Friends, and Their Interaction

Variable	B	*t/F*	*p*
Intercept	2.90	14.63	<.001
Discrimination	0.47	7.30	<.001
Social Support Friends	-0.10	-2.61	.009
Discrimination x SS Friends	0.05	1.06	.289
Social Support Family	-0.14	-5.04	<.001
Gender	-0.08	-0.97	.333
Family subjective social status	-0.00	-0.21	.832
Ethnic subgroup	-0.18	-2.14	.033
R^2 Model	0.25	19.68	<.001

Note. Unstandardized regression coefficients (*B*) are reported. All continuous predictors were mean-centered. Gender was coded as 1 = woman, 2 = man, 3 = other. Ethnic subgroup was coded as 0 = Southeast Asian, 1 = East Asian. *p* values are two-tailed.

Chapter 5: Discussion

This study examined the mental health impact of racial discrimination during the COVID-19 pandemic among Asian American young adults, a group disproportionately impacted by both the virus and the surge in anti-Asian racism. Grounded in Clark's biopsychosocial model (Clark et al., 1999), Harrell's conceptualization of racism-related stress (Harrell, 2000), Minority Stress Theory (Meyer, 2003), and the Race-based Traumatic Stress Model (Carter, 2007), the study explored how perceived everyday discrimination related to symptoms of depression, anxiety, and PTSD, and whether ethnic identity and social support moderated these relationships. As hypothesized, discrimination was significantly associated with higher levels of depression, anxiety, and PTSD.

Ethnic identity exploration was positively associated with depression, anxiety, and PTSD symptoms, while ethnic identity commitment was negatively associated with these outcomes. These findings suggesting exploring one's ethnic identity may have coincided with greater psychological distress, perhaps reflecting the emotional toll of navigating identity in a hostile sociopolitical climate. Conversely, those who reported feeling a strong sense of belonging and positive regard towards their ethnic group tended to fare better in terms of mental health. Consistent with prior research, social support from friends and family were associated with lower levels of depression, anxiety and PTSD.

In terms of moderation effects, ethnic identity exploration significantly strengthened the association between discrimination and anxiety and showed a marginally significant effect moderating the relationship between discrimination and PTSD. Social support from both family and friends were associated with lower depression and anxiety overall. However, the protective effects of support were more pronounced at low levels of discrimination, suggesting

when confronting high racial stress, the benefits of support from friends and family may diminish. Identifying these moderating effects is crucial in determining for whom and under what conditions the negative effects of discrimination on Asian young adults' mental health may be mitigated or exacerbated. They also point to the importance of leveraging individual and contextual protective factors to design targeted clinical and community-based interventions.

5.1 Ethnic Identity

5.1.1 Ethnic Identity Direct Effect

Consistent with hypotheses, ethnic identity exploration was associated with higher levels of depression, anxiety, and PTSD, whereas ethnic identity commitment was associated with lower levels of these symptoms. While exploring ethnic identity may foster deeper understanding and connection to one's cultural background, for Asian American young adults navigating an overtly anti-Asian sociopolitical climate, this process may also incite fear and sadness. For example, identity confusion has been found to mediate ethnic identity exploration and mental health outcomes (Schwartz et al., 2009) and among ethnic minorities in a white-dominant society, ethnic identity exploration may bring about ambiguity and conflict (Phinney et al., 2006). In contrast, those with an already established and affirmed sense of ethnic identity may have a higher baseline of self-esteem and be more grounded in communities that affirm their ethnic identity. This finding offers an important contribution to the literature, given that prior research has tended to examine ethnic identity using a unidimensional, composite score, which has generally been found to correlate with better psychological functioning (Smith & Silva, 2010). The opposite valence of the associations underscores the need to examine

exploration and commitment/affirmation as distinct dimensions, especially in the context of anti-Asian racism among young adults.

However, the cross-sectional nature of this study limits causal interpretations. It is also plausible that young adults who are experiencing psychological distress may be more inclined to explore their ethnic identity in effort to make sense of their experiences. Conversely, those with better mental health may have more emotional capacity to affirm their identity and feel cultural pride. Longitudinal research is needed to clarify the temporal and directional relationships between ethnic identity exploration, discrimination, and mental health outcomes. For instance, Gonzales-Backen et al. (2017) found that ethnic-racial identity exploration predicted higher subsequent experiences of ethnic-racial discrimination among Latinx youth, whereas Yip et al. (2019) reported that ethnic-racial discrimination predicted subsequent increases in ethnic-racial identity exploration. Other studies suggest that perceived discrimination may prompt increased ethnic-racial identity exploration, but not necessarily ethnic identity resolution or affirmation (Del Toro et al., 2021; Greene et al., 2006; Meca et al., 2022). Taken together, experiences of racial discrimination may serve as a catalyst for deeper reflection of identity, especially in emerging and young adulthood, a developmental period marked by increased autonomy, peer influence, and exposure to diverse social and workplace contexts (Syed & Azmitia, 2010; Phinney, 2006).

5.1.2 Ethnic Identity Moderation Effect

Ethnic identity exploration significantly moderated the association between perceived discrimination and anxiety and marginally moderated the association between discrimination and PTSD. In both cases, the relationships were stronger for individuals reporting higher levels of ethnic identity exploration compared to those with lower levels. During COVID-19, a

climate marked by heightened discrimination, actively exploring one's ethnic identity may have left individuals more susceptible to anxiety and trauma-related symptoms. Consistent with past conceptualizations, the current findings reinforce the view of ethnic identity exploration as a potential vulnerability factor in the context of racial discrimination (Torres & Ong, 2010; Yip et al., 2019). This pattern has been observed not only among Asian Americans (Yoo & Lee, 2008) but also across other racially minoritized populations (Torres et al., 2011).

Such patterns are consistent with self-categorization theory (Turner, 1999), which posits that individuals become more attuned to environmental cues relevant to the social categories with which they identify. Asian young adults actively exploring their ethnic identity may develop heightened awareness of racial discrimination, as suggested by the rejection sensitivity hypothesis (Downey & Feldman, 1996), potentially leading to increased stress. This may be linked to the centrality or salience of an individual's ethnic identity, with research showing that minoritized youth who perceive their racial identity as more central report greater experiences of racial discrimination (Neblett et al., 2004; Sellers et al., 2003; Sellers & Shelton, 2003; Operario & Fiske, 2001). Supporting this, the association between racial discrimination and depression was stronger among Southeast Asian refugees living in Canada with high ethnic identity salience as compared to low salience (Noh et al., 1999). More recently, an experimental study found that individuals with higher racial identity centrality report increased post-simulation stress and negative affect after experiencing virtual reality simulations of racial discrimination, as compared to counterparts with lower racial identity centrality (Gobrial & Liu, 2025). Future research should empirically examine whether identity centrality mediates the relationship between ethnic identity exploration and heightened psychological stress, thereby testing the rejection sensitivity and identity salience hypotheses.

Another possibility for why ethnic identity exploration exacerbates the association between perceived racial discrimination and anxiety is that ethnic identity exploration inherently involves a degree of uncertainty with one's own ethnicity (Phinney, 1992). Individuals may experience ambivalence towards one's ethnic/racial identity as they grapple with its "double-edged sword" nature (Yip, 2018), wherein it can serve as both a source of protection and vulnerability in the face of racial discrimination. Consequently, when individuals are still actively exploring and constructing their ethnic identity, the impact of perceived racial discrimination may be especially disorienting and psychologically taxing. Notably, ethnic identity exploration significantly moderated the relationship between perceived racial discrimination and anxiety, and showed a marginally significant moderating effect on PTSD, and not for depression. These findings highlight the need to distinguish between mental health outcomes. One possible explanation for the specific moderating pattern lies in the physiological and somatic stress responses associated with experiencing and anticipating racial discrimination (Adam et al., 2015; Slopen, Lewis, & Williams, 2016). Ethnic identity development is shaped by historical and sociopolitical contexts (Kiang, Tseng, & Yip, 2016; Tseng et al.., 2016). In 2022, Asian American young adults exploring their ethnic identity did so amid heightened anti-Asian violence, including the Atlanta spa shootings and violent killings of two Asian women in New York. For individuals in the midst of exploring what it means to be Asian American, this context may have heightened perceived threat and vulnerability. Compared to depression, anxiety and PTSD—measured through the GAD-7 and PLC-C, may better capture the cognitive and physiological stress that arise from racial discrimination. Items assessing uncontrollable worry, restlessness, and hypervigilance reflect

both the anticipatory anxiety and embodied arousal that may be especially acute for those exploring their ethnic identity in a climate of racial hostility.

5.2 Social Support

5.2.1 Social Support Main Effect

Perceived social support from family, while controlling for social support from friends, was significantly associated with lower levels of depression, anxiety, and PTSD. Similarly, perceived social support from friends, while controlling for family support, was also uniquely associated with lower depression, anxiety, and PTSD. Together, these associations suggest that both sources of support independently contribute to better mental health outcomes among Asian American young adults. This contributes to the growing literature supporting the main effect model of social support (Cohen & Wills, 1985), which posits that higher levels of social support are associated with improved psychological well-being. The current results also align with prior research demonstrating the protective effects of social support on mental health among Asian Americans (Chae et al., 2012; Sangalang & Gee, 2012; Singh, McBride, & Kak, 2015; Sung, Lee, & Lee, 2018; Wong et al., 2023; Zhang & Ta, 2009) and other racial-ethnic minoritized communities (Ajrouch et al., 2010).

The protective effects of social support from friends and family offer a hopeful message, especially given the developmental, cultural, and sociopolitical contexts surrounding Asian American young adults. First, Asian Americans have historically underutilized formal mental health services due to factors such as stigma, cultural values, and the model minority myth (Bauer et al., 2010; Chou, 2008; Tran, 2018), and instead often rely on informal support from friends and family (Kim et al., 2016; Leong & Lau, 2001). Second, given the increased

social isolation and heightened racism during COVID-19, informal support may have served as a particularly essential buffer during this developmental period.

Despite these findings, the observed relationship between social support and mental health outcomes does not establish causality. It is possible that individuals experiencing greater psychological distress actively seek out and perceive more social support, or conversely, that those with greater perceived social support experience less psychological distress. Future research should explore the mechanisms underlying these relationships, such as whether perceived social support reduces distress through factors like enhanced self-esteem (Rippon et al., 2022) and post-traumatic growth (Ning et al., 2023).

5.2.2 Social Support Moderation Effects

The stress-buffering hypothesis suggests that individuals with greater social support may feel more equipped, self-efficacious, and empowered to manage distress from discriminatory experiences (Cohen & Wills, 1985). However, the findings from the moderation analyses reveal nuanced patterns. Social support from family significantly moderated the relationship between racial discrimination and both depression and anxiety. Although both outcomes were inversely associated with social support from family (i.e., consistent with the main effect model), the protective effect of family social support was stronger at lower levels of discrimination, echoing past studies (Button, 2008; Brondolo et al., 2009; Chae et al., 2012; Keum et al., 2025). According to the transactional theory of stress and coping (Lazarus & Folkman, 1984), perceived social support can offer some relief in the face of low, manageable levels of racial discrimination. However, when discrimination becomes severe and overwhelming, the capacity of social support to buffer against distress may be exceeded (Ajrouch et al., 2010; Keum et al., 2025). This pattern has been observed not only in mental

health outcomes but also in physical health outcomes. For example, Wong et al. (2023) found that among Chinese American women, as perceived stress increased, the protective benefits of social support diminished, leading to poorer self-rated health.

Importantly, these findings highlight that social support is not unequivocally beneficial, especially amid the racialized waters Asian American young adults swam through during the COVID-19 era. Family support has been found to buffer the negative effects of racism on depressive symptoms among Asian American adults in one study (Wei et al., 2013) while not buffering the effects of racism on health in other studies (Kim & Epstein, 2021; Mossakowski & Zhang, 2014). Against this backdrop of mixed findings, it is important to consider what family support may have looked like specifically in the context of heightened anti-Asian racism during COVID-19 for the participants in this present study. Notably, racial discrimination during COVID-19 was a collective and intergenerational experience for Asian Americans, with a particularly alarming surge in violence against Asian American elders. For example, nationally, older Asian Americans (60+ years old) accounted for 7.3% of the 2,808 self-reported incidents to Stop AAPI Hate (126 cases) between March 19 and December 31, 2020 (Stop AAPI Hate, 2021). Older Asian individuals have been found to face an even higher risk of physical assault and discrimination compared to their younger counterparts (Li et al., 2024). In this context, familial discussions about racial discrimination may have led to increased worry rather than relief. Similarly, some Asian American families uphold a culture of silence or colorblindness regarding racism (Wong & Santos, 2022), which could render family discussions about discrimination unhelpful or even distressing. Indeed, in a study examining anti-Asian racism discussions among 309 Asian American adolescents between the ages of 14-18, Atkin and colleagues (2024) found that some adolescents brought up a lack of conversation

about anti-Asian racism among their family, and/or parents downplaying or denying racism, and expressing a wish for more race-conscious support from their family.

Friendships, too, can protect against identity-based discrimination (Tao & Fisher, 2025), and this study found that social support from friends was negatively associated with depression, anxiety, and PTSD. There was also a moderation effect, similar to that of social support from family, suggesting that the link between friend support and depression and anxiety was stronger for those facing higher levels of discrimination than low levels of discrimination. While friends can offer racial empowerment messages that mitigate the impact of discrimination (Su et al., 2020), some studies have found such support can also contribute to distress through co-rumination—excessively rehashing negative experiences in ways that amplify psychological symptoms rather than fostering problem resolution (Rose, 2002). Indeed, co-rumination has been found to mediate the relationship between racism exposure and mental health symptoms, particularly among women of color (Tao & Fisher, 2025; Hacker et al., 2016). Thus, while social support from friends is generally protective, in the context of high discrimination, it may contribute to distress through co-rumination, potentially diminishing the overall helpfulness.

The present study's findings underscore the complexity of social support. Wong & Santos (2022) and Atkin et al., (2024) documented ways that Asian Americans during COVID-19 perceived their social support networks as inadequate, citing experiences such as minimization of anti-Asian racism, denial of racial trauma, and even victim-blaming. These findings caution against assuming that social support is inherently beneficial for all individuals in all contexts.

Moreover, while individual-level coping mechanisms such as seeking social support are important, they do not address the systemic roots of racism. Scholars argue that interventions must move beyond placing the onus on individuals to cope with racism and instead focus on broader systemic change. Wong & Santos (2022) suggest systemic-level solutions such as legitimizing anti-Asian racism, integrating Asian American history into education, increasing access to culturally competent mental health services, and fostering cross-racial solidarity. Future research and advocacy should work toward these broader structural interventions to better support Asian Americans' mental health.

5.3 Limitations & Future Research

There are several limitations of the current study, including how key variables were operationalized, challenges in capturing intersectionality and context, and the reliance on self-report surveys. These limitations, along with directions for future research, are discussed in the following section.

5.3.1 Operationalizations of Key Variables

5.3.1.1 Ethnic Identity

Findings elucidate the importance of examining ethnic identity commitment and exploration as distinct dimensions (Phinney & Ong, 2007; Yip et al., 2019). Studies utilizing composite measures of ethnic identity as a moderator have yielded mixed results (Yip et al., 2019). Given that ethnic identity exploration peaks in young adulthood at around age 24 (Yip et al., 2019), distinguishing between exploration and commitment is particularly important when studying this developmental stage.

While separating exploration and commitment is valuable, Yip et al. (2019) caution the broader goal is to understand the complexities of individual identity development rather than

solely focusing on separate dimensions of variables, as originally conceptualized by Erikson (1968). Beyond investigating how ethnic identity exploration and commitment individually interact with racial discrimination and mental health, future research should also examine how combinations of ethnic identity commitment and exploration (e.g., low exploration/ high commitment) interact with racial discrimination among Asian young adults. This person-centered approach would clarify how individuals navigate their ethnic-racial identity within a discriminatory society.

5.3.1.2 Social Support

The perceived social support measure used in this study (MSPSS, Zimet et al., 1988) assessed general perceived social support rather than support specifically related to experiences of racial discrimination. This distinction is critical, as prior studies used more targeted measures to assess support for racism-related stress during COVID-19 (Atkin et al., 2024; Woo & Jun, 2022). Cohen and Wills (1985) suggest that social support is most effective when it aligns with the nature of the stressor, such as financial assistance in times of economic hardship (Ajrouch et al., 2010). Thus, individuals may perceive general social support yet still feel isolated and unsupported when it comes to discussing and processing experiences of racial discrimination.

Given the variability in how social support is measured, including co-ethnic network composition and support availability (Fischer & Shaw, 1999; Noh & Kaspar, 2003), family support availability (Weems et al., 2007), frequency of support-seeking (Sanders Thompson, 2006), and agreement on support availability (Atri et al., 2007), future research should incorporate more nuanced or qualitative methods to better capture how Asian Americans experience social support in the context of racial discrimination.

5.3.1.3 Racial Discrimination

While this study focuses on everyday racial discrimination—defined as routine experiences of unfair treatment and disrespect (Williams et al., 1997)—this represents just one facet of racism experienced by Asian Americans. Other manifestations, including vicarious, online, microaggressive, and systemic racism, are not captured by the current measure and warrant further investigation (Harrell, 2000; Keum & Miller, 2018; Kirkinis et al., 2021; Nadal et al., 2014). For example, emerging research highlights the psychological impact of vicarious racism during COVID-19, as Asian Americans were frequently exposed to racist content via social media and news platforms (Chae et al., 2021; ElTohamy et al., 2024). Online contexts can intensify racism through anonymity and lack of accountability (Keum & Miller, 2018), with many Asian young adults reporting near-daily exposure to digital discrimination (ElTohamy et al., 2024). Microaggressions—subtle, often unintentional slights—also differ from daily discrimination and have distinct effects on mental health (Oh et al., 2022; Rastogi et al., 2024). Furthermore, structural racism, including employment disparities and institutional neglect, remains an underexplored but critical domain, especially in Asian American communities (Brown et al., 2025; Cheng et al., 2021; Hussain, 2020).

Future research should explore these varied forms of racism to more fully understand their psychological consequences and how protective factors like social support and ethnic identity may function differently across them.

5.3.2 Intersectionality

Racism does not operate in isolation from other forms of oppression. Intersectionality highlights the complex experiences of individuals who hold multiple marginalized identities and the compounded effects of discrimination across interlocking systems of oppression, such

as racism, heterosexism, and transphobia (Crenshaw, 1989). Despite its importance, intersectionality remains under examined in psychological research on racism. A recent review found that only 16.6% of studies explicitly addressed multiple forms of oppression, such as those faced by Latinx gay men or women of color, revealing a significant gap in the literature (Neville et al., 2024). Without an intersectional lens, research risks oversimplifying how racism operates and overlooking the ways in which overlapping social identities (e.g., race, gender, sexuality) shape experiences of discrimination–-thus limiting our ability to develop comprehensive strategies to address the psychological impact of racism and facilitate healing.

For example, Asian men and women encounter gendered racial microaggressions shaped by longstanding and harmful stereotypes, such as the fetishization of Asian women and the emasculation of Asian men (Ahn et al., 2022; Iwamoto & Liu, 2008; Keum & Oh, 2022). LGBTQ+ Asian Americans face additional vulnerabilities, including family rejection and the compounded structural oppression (Ching et al., 2018; Pease et al., 2025). Furthermore, systemic racism intersects with classism to exacerbate marginalization, particularly for Asian Americans who do not align with the model minority stereotype, such as low-wage workers, who are often overlooked in public discourse and policy (Horsley, 2020). These intersecting forms of discrimination shape psychological well-being and social support needs in distinct ways. It is imperative to move beyond reductive, one-dimensional portrayals of Asian Americans to better understand the diversity and complexity of their lived experiences.

Relatedly, one notable limitation of the study was its gender and ethnic composition. The sample is predominantly female (72.5%), likely overrepresenting the experiences of Asian young women while underrepresenting those of men and gender-diverse individuals. It also centers East and Southeast Asian participants, based on research indicating higher levels of

discrimination among these groups during COVID-19 (Wong-Padoongpatt et al., 2022; Zhang et al., 2022), but this may oversimplify the diversity of experiences across Asian ethnicities. Scholars have emphasized the need for disaggregated data to better capture ethnic group-specific challenges (Gee et al., 2023; Okazaki et al., 2022). Multiracial Asian individuals were excluded, despite research showing multiracial individuals may experience higher rates of depression and internalizing symptoms than their monoracial peers (Chen et al., 2019; Fisher et al., 2014; Weller et al., 2022). Future studies should consider how ethnic identity functions as a protective or exacerbating factor among multiracial Asians, and how experiences differ based on parental racial background.

Other contextual factors–such as the racial makeup of one's environment, school setting, or family– can influence how Asian American young adults perceive support and develop ethnic identity. While this study examined individual-level moderators like ethnic identity and social support, it did not assess participants' immediate social or institutional environments, which likely play a role in shaping these constructs. For instance, same-race peers may buffer against identity threats (Davis & High, 2019), but can also foster co-rumination (Tao & Fisher, 2025). White peers or supervisors may unintentionally invalidate racialized experiences (Wong & Santos, 2022). Transracial adoptees may navigate these dynamics in particularly distinct ways (Wing & Park-Taylor, 2024). Broader systems such as campus racial climate (Tausen et al., 2020), geographic setting (Islam et al., 2010) and institutional inclusion also shape how racial discrimination is perceived and processed.

These environments also influence individuals' ideology and identity development. Internalization of racism and of harmful stereotypes such as model minority myth can impact how individuals interpret discrimination and seek support (Ahn et al., 2022; Garcia et al., 2019;

Liu et al., 2022; Wong-Padoongpatt et al., 2022). Conversely, critical consciousness may enhance resistance and contribute to a more resilient identity development (Maker Castro et al., 2022). These ideological processes were not directly measured in the study but likely interact with the individual-level moderators examined.

Future research should incorporate measures of participants' social and institutional contexts including campus climate, peer group racial composition, and family racial attitudes, to better understand how these factors intersect with ethnic identity and social support. Doing so could help disentangle under what conditions these constructs serve as protective or risk factors for Asian young adults facing racial discrimination.

5.3.3 Expanding Methodology

This study is also limited by its reliance on cross-sectional self-report survey data. Scholars such as Neville (2024) have called for expanding the diversity of empirical methodologies to study racism beyond traditional quantitative measures. Incorporating qualitative and mixed-methods approaches can provide richer, person-centered insights that capture more nuanced facets of racism. For instance, autoethnographic research (e.g., Wang et al., 2024) allows for deeper contextual analysis of lived experiences, while innovative methodologies such as daily process studies (e.g., Cheeks et al., 2020; Hoggard et al., 2015; Ong et al., 2023) allow for examination of the complex, real-time dynamics of racism. This kind of approach can open up the possibility to examine questions such as when, where, and with whom experiences of racial-ethnic discrimination occur, and the immediate emotional and psychological impacts of discrimination (Sladek et al., 2025). By adopting a broader range of methodological approaches, future studies can generate more comprehensive and contextually

relevant understandings of racism, which in turn can inform more effective interventions and pathways for healing.

5.4 Implications for Practice

The findings from the present study offer insights into the types of systemic interventions and institutional supports needed, as well as guidance for mental health practitioners on how to more effectively support Asian young adults coping with racial discrimination during and beyond the COVID-19 pandemic.

5.4.1 Beyond Individual Coping: Toward Institutional and Collective Support

This study examined individual-level moderators such as social support from friends and family and ethnic identity that may buffer the association between racial discrimination and mental health outcomes. While these factors are important, it is crucial to recognize racism as a "social toxin" (Chae et al., 2021, p.514) that demands contextual, community-based, and systemic interventions to address its root causes, rather than focusing solely on individual coping. Notably, the protective effects of family and friend support were more evident at lower levels of discrimination, suggesting that under high discrimination, the capacity of social support to offset distress may be diminished. This underscores the need to shift the burden away from individuals and toward structural systems that create safer, more supportive environments for Asian young adults, ultimately mitigating the mental health impacts of racism.

Online support groups, psychoeducational workshops, and webinars, particularly organized by community-based organizations, can offer culturally tailored spaces for Asian American individuals to share their experiences and learn effective coping strategies for navigating COVID-19-related anti-Asian racism (Wong et al., 2022). Given that Asian

Americans often rely on informal sources of support rather than professional mental health services (Wong & Santos, 2022), and that experiences of racial discrimination during the pandemic were linked to delays and avoidance of mental health care among East and Southeast Asians (Zhang et al., 2022), these community-based approaches may be less stigmatizing and more culturally congruent. Importantly, as Wong and Santos (2022, p. 13) note, social support "must be understood as a collective responsibility, implemented at the social level." This includes promoting initiatives such as bystander intervention training to foster a broader societal commitment to addressing anti-Asian racism.

Ethnic identity exploration has been found to intensify the association between discrimination and anxiety, and marginally for PTSD, among Asian American young adults in the current study. For those navigating questions of identity in an anti-Asian racist landscape, where people who look like them are targeted not only through acts of physical violence but also through ideological narratives that dehumanize their existence, exploration may amplify stress responses, particularly when the threat of racial discrimination feels both real and unresolved. Such findings highlight the importance of equipping young people with strengths-based resources during this vulnerable developmental stage. Scholars have pointed to critical consciousness, defined as critical reflection on systemic oppression, one's position within it, and the motivation to challenge structural inequities (Freire, 1970; Watts et al., 2011), as a means of rendering identity exploration a more empowering and agentic process (Mathews et al., 2020). Affinity groups that foster both critical consciousness and community connection may help mitigate the psychological costs of identity exploration. Promoting critical consciousness through education that acknowledges anti-Asian racism as a longstanding part of U.S. history, for example, integrating critical race theory and mandatory ethnic studies into K–

12 curricula, can help buffer against the damaging effects of racism on self-esteem. This approach encourages critical discernment of the historical and ongoing marginalization of racial and ethnic minority communities (Comas-Díaz, 2007). Increased public awareness of anti-Asian racism through such educational initiatives may provide young adults with a more balanced and historically grounded perspective on their ethnic-racial identity before they actively explore it. In fact, awareness of structural inequality has been linked to rejecting harmful stereotypes (e.g., the model minority myth) and fostering a stronger, more positive Asian American identity (Tran & Curtin, 2017).

5.4.2 Recommendations for Mental Health Practitioners

Mental health practitioners are uniquely positioned to support Asian American young adults in healing from racial trauma by offering race-conscious therapeutic spaces that center emotional processing, identity development, and empowerment.

Clinical training programs must intentionally integrate content on anti-Asian racism, racial and ethnic identity development, intergroup solidarity, and advocacy to cultivate psychology trainees' critical and intersectional consciousness. Given the historical and ongoing invisibility of Asian American struggles within the field of psychology often characterized by the dismissal of Asian Americans as a group with legitimate psychological concerns (Kim & Omizo, 2005; Sue et al., 2012), this curricular focus is one way to acknowledge and legitimize the enduring impact of anti-Asian racism. Psychologists should be trained to thoughtfully adapt manualized, evidence-based treatments to better align with the cultural values and needs of Asian clients (e.g., Ching, 2022; Hall et al., 2011; Hwang, 2016), while also attending to the complex and varied relationships Asian individuals may have with their racial and ethnic identities. Scholars such as Eng and Han (2019) have conceptualized

racial melancholia, dissociation, and racialized rage or guilt as distinct psychological responses that may emerge among Asians across generations. Importantly, psychologists must approach their work with cultural humility, acknowledging the vast diversity within Asian American communities and tailoring interventions to clients' specific histories of immigration, racialization, and sociopolitical and familial contexts (Miller et al., 2018; Moon et al., 2019).

Strength-based approaches are essential alongside trauma-informed care; the tripartite model of collective psychosocial resilience (Cheng et al., 2021) and the application of liberation psychology principles (Comas-Diaz & Torres Riverra, 2020) to Asian American clients (Garrison et al., 2024) offer useful guidance to supporting Asian Americans in cultivating critical consciousness, strengthening racial and ethnic identity, and engaging in meaningful advocacy. Psychologists can play a key role in helping Asian clients challenge internalized oppression, reclaim cultural histories and traditions, foster community, and support student activism as avenues of empowerment and resistance (Chopra & Tong, 2023; Singh, 2019). However, it is also essential to recognize that engagement in advocacy may expose individuals to experience burnout and fatigue as well as resistance from others including their families and academic institutions (Chopra et al., 2024). As such, practitioners must support clients in developing strategies for sustainable resistance and self-preservation.

Beyond individual therapy, practitioners should also consider systemic modalities including family, couples, and group therapy to address racial trauma within relational and intergenerational contexts. Group therapy, for instance, can offer Asian American clients a shared space for validation, community, and collective meaning-making. One example is "Healing Our People Through Engagement" (HOPE), a culturally grounded group initiated by the AAPI Equity Alliance (AAPI Equity Alliance, 2024), which draws on the "Radical Healing

Framework" developed by Black Liberation psychologists. This model creates intentional spaces for Asian American communities to connect and heal from the ongoing impact of racism. Family therapy can facilitate nuanced intergenerational dialogue around mental health and racism, particularly in families where cultural values such as face-saving or stigma shape how racial discrimination and healing are perceived. Well-intentioned remarks from family members may inadvertently dismiss or invalidate a young person's experiences when not grounded in racial consciousness (Wong & Santos, 2022). Similarly, couples therapy, particularly in interracial partnerships, can bring to the surface dynamics of invisibility, erasure, or misunderstanding that echo broader societal power structures. Therapists can support Asian American partners in articulating their lived experiences and exploring how racialization and white supremacy shape relational dynamics, including those related to intimacy, vulnerability, and self-worth (Cheng, 2024; Scheinkman, 2019). Systemic and relational approaches grounded in critical understandings of race, identity, and power should be seriously considered when working with Asian American clients, particularly given the social and relational nature of racism and the potential for these approaches to foster deeper healing.

Above all, it is essential that psychologists adopt a sustained antiracist stance which involves ongoing self-reflection and a deep examination of how their own identities, values, and positions of power shape the therapeutic relationship (Williams et al., 2022). This commitment requires confronting internalized racial biases, including assumptions specific to Asian American clients, such as the internalization of the model minority myth, perceptions of perpetual foreignness, or stereotypes around passivity and leadership (Garrison et al., 2024; Moon et al., 2019). It also entails a critical understanding of one's own racial and ethnic

identity and sociopolitical positionality (Miller et al., 2018). Psychologists must develop the capacity to tolerate and engage with the discomfort that can arise when power dynamics are reenacted in the therapy space. Cultivating the tools to name and navigate these moments is necessary, and approaches such as relational-cultural therapy (Jordan, 2018) can offer a useful framework for doing so with openness, empathy, and accountability.

5.5 Conclusion and Summary

The surge of anti-Asian racism during COVID-19 represents yet another iteration of the long and enduring history of racism experienced by Asian Americans in the U.S. The current study focused on East and Southeast Asian young adults during a very specific period: February to June 2022, two years after the onset of the pandemic. During this time, the Omicron variant was widespread and hate crimes against Asian Americans remained elevated (FBI, 2022). It was also one year after the tragic Atlanta spa shootings in March 2021, and in the early months of 2022, the targeted killings of Michelle Go (January) and Christina Yuna Lee (February) in New York City contributed to a climate of fear and grief within Asian American communities. These events underscored the continued pervasiveness and danger of anti-Asian violence.

Given the widespread and damaging mental health effects of racial discrimination during this period, identifying both risk and protective factors is necessary. This aligns with the social justice mandate of psychologists to alleviate the suffering of marginalized communities (Vasquez, 2012). The current study found that ethnic identity exploration amplified the association between racial discrimination and anxiety. While social support from family and friends was generally protective against depression and anxiety, its buffering effect was strongest at lower levels of discrimination. These findings highlight the emotional toll of

exploring one's identity in a discriminatory society. They also point to the importance of promoting critical consciousness, not only among minoritized individuals but also among non-Asian communities, so that anti-Asian racism is approached with a historical and contextual lens—and not as an individual burden placed solely on Asian Americans, but as a collective responsibility shared by society. A deeper understanding of systemic racism in U.S. history can open up possibilities for resilience and cross-group solidarity (Cheng et al., 2021).

The findings related to social support further emphasize the urgent need for community-based and institutional interventions that create safe and affirming spaces for Asian American young adults. Asian Americans, as Truong-Vu (2023) notes, often live at the margins of both hypervisibility and hyper-invisibility. They are simultaneously cast as scapegoats during public health crises and erased in mainstream racial discourse. During COVID-19, they were both highly visible as targets of pandemic-related violence and invisible through their reduction to the model minority stereotype, positioned ambiguously in a society that is often racialized as "Black and White" (Kim, 1999). As the public spotlight on anti-Asian racism fades with the receding of the pandemic, there is a real risk for these communities to be silenced or sidelined in racial justice conversations, yet again.

It is pivotal that we continue to shed light on this incredibly diverse community, legitimize the existence and impact of anti-Asian racism, including the harms of the model minority myth and the perpetual foreigner stereotype, and resist taking an ahistorical view of race in America. Clinicians and practitioners are called to examine their internalized beliefs about Asians and to engage with the often "unthought" subjectivity of Asian Americans (Eng, Han, & Brewster, 2024), those who, as Cathy Park Hong (2020) writes, often "struggle to prove themselves into existence" (p.104) in a racist world.

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Appendix A

Table 1: Demographic characteristics of participants (N=429)

Factors	N (%) or M (SD/ Range)
Age (years)	Mean = 25.53 (Range = 20.03-32.99)
Gender	
Female	331 (72.5%)
Male	110 (25.6%)
Other	8 (1.9%)
Ethnicity	
Burmese	2 (0.5%)
Cambodian	10 (2.3%)
Chinese	184 (42.9%)
Filipino	64 (14.9%)
Hmong	3 (0.7%)
Japanese	21 (4.9%)
Korean	49 (11.4%)
Laotian	2 (0.5%)
Malaysian	3 (0.7%)
Mongolian	2 (0.5%)
Taiwanese	24 (5.6%)
Thai	4 (0.9%)
Vietnamese	61 (14.2%)
Family Subjective Social Status	5.59 (1.88)
Sexual Orientation	
Heterosexual	330 (76.9%)
Gay	7 (1.6%)
Lesbian	5 (1.2%)
Bisexual	44 (10.3%)
Asexual	13 (3.0%)
Questioning	8 (1.9%)
Other	22 (5.1%)
U.S. Born	
No	158 (36.8%)
Yes	271 (63.2%)