

Abstract

Title of thesis: MODERATING EFFECTS OF CRITICAL CONSCIOUSNESS AND ACCULTURATIVE STRESS ON THE RELATION BETWEEN RACISM AND LOW-INCOME ASIAN AMERICANS' MENTAL HEALTH

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Anti-Asian racism has been a pervasive challenge for Asian American communities (Sue et al., 2007), which has increased by nearly 150% from 2019-2020 post the onset of the COVID-19 pandemic (Yam, 2021). An expansive body of research has found that racism is significantly related to an array of negative mental health outcomes among Asian Americans (Hahm et al., 2010). However, there remains a dearth of research specifically examining mental health outcomes among low-income Asian Americans, who may be at greater risk for stress due to exposure to both racism and classism. The present study examined the relation between racism and psychological outcomes amongst low-income Asian American adults. Critical consciousness and acculturative stress were examined as potential moderators in that relation. A sample of low-income Asian American adults ($N = 365$) participated in an online survey to respond to measures on demographic information, racism, psychological distress, psychological well-being, critical consciousness, and acculturative stress. Results showed that racism was a significant predictor of psychological distress and psychological well-being while controlling for age and subjective social status among low-income Asian Americans. The moderation analyses found that acculturative stress was a significant moderator in the association between racism and

psychological well-being whereas critical consciousness was not a significant moderator in the association between racism and psychological well-being nor distress. Clinical implications and recommendations for future research are also discussed.

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ACCULTURATIVE STRESS ON THE RELATION BETWEEN
RACISM AND LOW-INCOME ASIAN AMERICANS' MENTAL HEALTH

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Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park in partial fulfillment
of the requirements for the degree of
Master of Arts
2022

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2022

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Moderating Effects of Critical Consciousness and Acculturative Stress on the Relation Between Racism and Low-Income Asian Americans' Mental Health

Since the outbreak of the COVID-19 pandemic, discrimination against Asian Americans has surged (Kandil, 2020; Kantamneni, 2020; Ruiz et al., 2020). From 2019 to 2020, anti-Asian hate crimes increased by nearly 150% (Yam, 2021), and Asian communities throughout the world have been facing various hateful incidents including microaggressions, physical and verbal assaults, and online harassment (Cheng et al., 2021; Coates 2020; Joubin 2020). In a recent study with over 400 Asians and Asian Americans living in the United States, 30% reported an increase in discrimination since the pandemic, and over 40% reported an increase in anxiety, depression, and sleep difficulties (Lee & Waters, 2020). The spike of anti-Asian racism and attacks in the United States culminated with the heinous Atlanta shootings in March 2021 that killed six women of Asian descent working at massage parlors. Hate crimes directed toward working-class Asian American women have stirred up a considerable amount of fear and anxiety among Asian communities and, especially, for those who live at the intersection of these marginalized identities.

Racism and discrimination have been pervasive challenges for Asian Americans even prior to COVID-19 (Gee et al., 2009; Lee et al., 2017; Sue et al., 2007). There is a large body of empirical research supporting the relationship between racism and negative mental and physical health outcomes for ethnic minority groups, including Asian Americans (Cheng et al., 2010; Green et al., 2006; Lee & Waters, 2020; Paradies, 2006; Pascoe & Smart Richman, 2009; Pieterse et al., 2012; Syed & Juan, 2012). Despite advances in the literature to better understand the influence of racism on the mental and physical health of Asian Americans (Gee et al., 2007; Hahm et al., 2010; McMurtry et al., 2019), there is still a dearth of research that focuses on the

racism experiences of low-income Asian Americans. This significant gap in the literature base has prevented us from identifying and incorporating important clinical implications for practitioners when working with low-income Asian Americans. For instance, low-income Asian Americans may be at increased risk for poor mental health due to the intersecting layers of discrimination they encounter in both racism as well as classism. Further, given their unique sociocultural background, previously established interventions for Asian Americans may not be as effective for Asian Americans from low-income backgrounds. Thus, it is imperative that we explore the intersecting systems of oppression of racism and classism faced by low-income Asian Americans and their implication on low-income Asian Americans' mental health.

This study is inspired by intersectionality theory and extends Clark et al.'s (1999) biopsychosocial model of racism by proposing critical consciousness and acculturative stress as potential moderators that influence the role of racism on mental health outcomes among low-income Asian American adults. First, the literature on racism and Asian American mental health will be briefly reviewed. Next, intersectionality theory and its potential relevance for low-income Asian Americans will be discussed. Then, the role of critical consciousness will be highlighted as a potential moderator that may serve as a protective factor in the link between racism and mental health outcomes among low-income Asian Americans. Lastly, the role of acculturative stress will be described as a potential moderator that may act as a risk factor in the relationship between racism and mental health outcomes among low-income Asian Americans.

Numerous meta-analyses and systematic reviews have consistently found a positive association between perceived racism and discrimination and greater psychological distress as well as poorer physical health outcomes in racial and ethnic minorities (Harrell et al., 2003; Lee & Ahn, 2013; Paradies, 2006; Pascoe & Smart Richman, 2009; Pieterse et al., 2012). Racism can

be defined as “the beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics or ethnic group affiliation” (Clark et al., 1999, p. 805). Discrimination is a type of expression of racism such as differential behavioral acts, ranging from exclusion to physical assault, that disadvantage an individual or group based on social group membership (e.g., Brown & Bigler, 2005; Gee et al., 2009). Among Asian Americans, racism has been found to be significantly related to greater levels of anxiety (Gee et al., 2007; Chia-Chen Chen et al., 2014), depression (Chau et al., 2018; Rivas-Drake et al., 2008), suicidal ideation (Hwang & Goto, 2008; Li et al., 2018), and overall psychological distress (Hahm et al. 2010; Kwon, 2020; Zhang et al., 2012).

One issue that has been raised in this area of research is the lack of psychometrically sound measures that directly assess discriminatory experiences of Asian Americans. Previous studies have modified other discrimination measures without properly testing their validity and reliability among samples of Asian Americans (Cassidy et al., 2004; Lee, 2005; Utsey et al., 2002). A few measures, such as the *Asian American Racism-Related Stress Inventory* (Liang et al., 2004), have been developed specifically to measure Asian Americans’ experiences of racism and contributed to the advancement in better understanding the racism experiences of Asian Americans. However, scholars have commented on limitations associated with these scales including their inability to differentiate between classic blatant forms of racism versus subtle forms of racism, which is more prevalent in modern society (Dovidio, 2001; Jones, 1997; Sears et al., 2000; Sue, 2005; Wu, 2002; Yoo et al., 2010). To address this limitation, Yoo and Lee (2005) developed the *Subtle and Blatant Racism Scale for Asian Americans* that measures perceived subtle and blatant racism experiences of Asian Americans. Given the recent rise in anti-Asian racism, such a scale can help us examine these different forms of discrimination

experienced by Asian Americans and explore their ramifications on Asian Americans' mental health.

Theoretical Framework

One theoretical framework that helps us better understand the psychological, social, and physiological effects of racism is the biopsychosocial model of racism (Clark et al., 1999). The model proposes that racism 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). Such exposure to racism can thus act as a life stressor in which biological, psychological, and social stress responses influence an individual's mental and physical health outcomes (Clark et al., 1999; Williams & Mohammed, 2009). The model also highlights the role of mediating and moderating variables in impacting the role of perceived racism on health outcomes. Clark et al.'s (1999) biopsychosocial model provides a helpful framework to theorize about specific sociodemographic variables (e.g., social status) that may impact racism. A limitation of the biopsychosocial model noted by Lewis et al. (2017) is that it does not address the intersectional discriminatory experiences of individuals with multiply marginalized identities such as those who live at the intersection of racism and classism.

Intersectionality Theory

Intersectionality provides a conceptual framework to explore how a person's multiple identities can impinge on health outcomes (Crenshaw, 1989). Intersectionality theory posits that individuals' social identities (e.g., race, gender, and social class) are interdependent; the meaning of one identity depends on the meanings of other concurrent identities (Cole, 2009; Settles & Buchanan, 2014; Shields, 2008). Scholars have highlighted the value of the intersectional

approach in that it recognizes the simultaneous discrimination experience as being greater than merely the sum of its parts, and that it enables exploration of the simultaneous discrimination that multiply marginalized individuals experience without trying to tease it apart (Bowleg, 2008; Bowleg & Bauer, 2016; Lewis, et al., 2017). Lewis et al. (2017) applied intersectionality theory to study the influence of gendered racism on the mental and physical health of 231 Black women and expanded Clark et al.'s (1999) biopsychosocial model by addressing experiences of those with multiple intersecting marginalized identities.

Among Asian Americans, intersectionality has been applied to study the nature of discrimination that is uniquely experienced by Asian American women as women of color (Mukkamala & Suyemoto, 2018) and those with Asian American and Pacific Islander and sexual and gender minority identities (Tan et al., 2016). In regard to social class, Sutter, Perrin, and Trujillo (2018) explored the moderating role of socioeconomic status on the association between experiences of discrimination and depression among sexual minority individuals of color, but intersectionality research on race and social class is still extremely limited. Specifically, to our knowledge, there has been no literature exploring the complexity of experiences of low-social class Asian Americans, such as low-income Asian Americans, who live at the intersection of racism and classism.

Low-Income Asian Americans' Mental Health

Although the literature base on Asian American mental health has been expanding, little is known about low-income Asian Americans' mental health. The few studies that exist have primarily focused on experiences of Asian American children and adolescents (Diemer et al., 2010; Zhou et al., 2012). The dearth of research on low-income Asian Americans may be partially due to the model minority myth, the notion that Asian Americans achieve universal and

unparalleled academic and occupational success in U.S. society. The term “model minority” was first introduced in the 1960s. It was used to describe Japanese and Chinese Americans in *New York Times Magazine* (Petersen, 1966) and *U.S. News and World Report* (1966) with the intention of praising their accomplishments and suggesting that other minoritized racial and ethnic groups should follow their example (Tran & Birman, 2010). The media has continued to portray Asian Americans as the model minority by associating the group with greater wealth, upward social mobility, and freedom from crime and mental health problems (Wong & Halgin, 2006). Throughout the decades, scholars have criticized the model minority myth (Sue & Okazaki, 1990; Suzuki, 1977; Yu, 2006) for undermining discrimination experiences faced by Asian Americans. It masks the inequalities Asian Americans continue to face in society with the idea that hard work can help them overcome any obstacle. Further, such a monolithic stereotype does not take into account any of the variance within the Asian American community such as different ethnicities, generational status, immigration histories, and social class. This could have impacted the types of questions or the types of samples that scholars have sought in conducting research with Asian Americans, diverting their attention away from marginalized Asian Americans who are different from the model minority stereotype.

The experiences of marginalized Asian Americans have been largely overlooked especially for low-income Asian Americans. Based on the literature that has shown how individuals’ intersecting identities can have a significant negative impact on their mental health, low-income Asian Americans are likely to be at high risk of psychological distress as they face unique challenges associated with their dual minority status. In addition, low-income Asian Americans may experience high levels of discrimination because of their lack of fit with the societal expectations of being the model minority. Thus, low-income Asian Americans’

experiences with discrimination and mental health need to be further examined and elucidated. By gaining a better understanding of their experiences, we may be able to identify clinical implications that can inform and enhance counseling interventions for low-income Asian Americans.

A Potential Protective Factor: Critical Consciousness

In recent years, there has been a growing body of research that explored various moderators for the relations between discrimination and psychological outcomes (Asakura et al., 2008; Choi et al., 2020; Chung & Epstein, 2014; Syed & Juan, 2012; Tran & Sangalang, 2016; Wei et al., 2010). Lee and Ahn (2011) conducted a meta-analysis to summarize existing literature on these moderators. The authors found that among Asian Americans, intrapersonal forms of resources, such as personal constructs and strengths, had equal or stronger relationships with racism and mental health in comparison to interpersonal forms of resources, such as social support and cultural identity. This finding suggests that while Asian cultures tend to be perceived as more interpersonal-oriented than western cultures (e.g., focus on family and community), intrapersonal forms of resources may be equally important as, if not more than, interpersonal forms of resources for Asian Americans' mental health. In addition, Lee and Ahn compared the relationship between various intrapersonal forms of resources and overall psychological distress. The results showed that personal constructs and strengths, such as just-world beliefs and self-esteem, had the strongest negative correlation with psychological distress, suggesting the relevance of exploring individuals' perception of the world and of themselves as moderators when examining Asian Americans' mental health.

Given the accumulating literature on the associations between racism experiences and negative psychological consequences in Asian Americans, it is important to investigate potential

moderators that may protect against or exacerbate the harmful effects of discriminatory experiences. One worthwhile personal construct to explore includes critical consciousness. Introduced by Brazilian educator and philosopher Paulo Freire (1968, 2000), critical consciousness is a personal construct that conceptualizes the process through which a marginalized individual learns to think critically about social inequities and subsequently engages in action to change them (Diemer et al., 2006). As marginalized individuals gain critical consciousness, they develop a deeper understanding of oppressive forces in their society which leads to a shift in their perspective of themselves and increased feelings of autonomy and empowerment. Researchers have found a link between critical consciousness and a number of adaptive outcomes: reduction of substance use among recently incarcerated Black men and women (Windsor et al., 2014), protection against mental health issues for Black adolescents living in under-resourced contexts (Zimmerman et al., 1999), improved critical thinking skills among young Black men (Watts et al., 2002), greater political participation among lower SES white youth and youth of color (Diemer & Li, 2011), higher academic achievement, performance on standardized tests, and graduation rates among high school students of color (Cabrera et al., 2014; Seider et al., 2020; McWhirter & McWhirter, 2016), and improved occupational objectives for female survivors of domestic violence (Chronister & McWhirter, 2006).

Critical consciousness is considered to be particularly potent for those with multiple marginalized identities, such as low-income, immigrant, and sexual minority youth and youth of color (Diemer & Li, 2011; Godfrey & Burson, 2018). Given these study findings that supported the buffering effects of critical consciousness in various marginalized populations and its relevance to those with intersecting marginalized identities, critical consciousness may be an important moderator to consider in understanding low-income Asian Americans' mental health.

By investigating the protective effects of critical consciousness against the detrimental impact of discrimination that low-income Asian Americans face, the study could inform the development of future interventions, education curriculums, and policies to help reduce the deleterious effects of discrimination on mental health among low-income Asian Americans.

While critical consciousness may serve as a protective factor for marginalized communities, drawbacks to critical consciousness have also been identified. In a study of minoritized racial and ethnic youth, Godfrey and colleagues (2019) found that critically reflective youth with low levels of trust in the government reported significantly greater depressive symptoms as well as lower academic performance when compared to peers who were less critically reflective but more trusting of the government. Additionally, the authors found that amongst the youth who trusted the government, critically reflective youth showed worse academic performance than their less critically reflective peers. The authors highlight that critical reflection alone may not always be related to positive outcomes and that other relevant factors, such as the importance of sociopolitical efficacy, need to be taken into consideration when exploring the effects of critical reflection. Furthermore, other studies have shown mixed results with the directionality of the moderating effects of critical consciousness. In a study of critical consciousness and work amongst adults of color, Autin et al. (2021) examined one's awareness of social injustices as a potential moderator for the association between economic constraints and career development. They found that participants with moderate and high perceived inequality had stronger negative correlations between economic constraints and career adaptability when compared to those with low perceived inequality. These results indicate that individuals' critical consciousness may exacerbate the negative impacts from economic constraints on their adaptability at work. However, in the relation between economic constraints and having decent

work (i.e., safe working conditions, adequate compensation and hours), the results showed that participants with high perceived inequality had the weakest negative association between economic constraints and decent work. This suggested that individuals' critical consciousness could buffer the detrimental effects of economic constraints on their ability to find a satisfying work environment, contradicting the directionality of the earlier moderation effects. Taken together, the moderating role of critical consciousness needs to be closely examined within the context of the population of interest and their experiences of marginalization.

A Potential Risk Factor: Acculturative Stress

Another construct that has been researched extensively as a potential culture-related moderator for Asian American mental health is acculturation. Acculturation is a process of rendering one's traditional cultural values and behaviors while adapting to the values and behaviors of the dominant culture (Suinn et al., 1987). Literature on the relation between acculturation and risk of health problems in Asian Americans has yielded mixed findings. Some studies indicate that immigrants' risks for developing mental and physical illnesses increase as they acculturate (Escobar & Vega, 2000; Hwang et al., 2005; Wang & Mallinckrodt, 2006). This phenomenon is referred to as the immigrant health paradox where lower social class racial and ethnic minorities and immigrants actually exhibit similar or more favorable health outcomes than their wealthier, U.S.-born, more acculturated counterparts (de Castro et al., 2010; Gavin et al., 2010; Kimbro et al., 2008; Leu et al., 2008; Sanchez-Vaznaugh et al., 2009). On the other hand, other studies suggest that those who are less acculturated are at greater risk for psychological maladjustment and distress than those who are more acculturated (Alamilla et al., 2017; Shim & Schwartz; 2008; Yeh, 2003). One limitation with these studies is that they have mainly focused on exploring the level of acculturation. Overall, research suggests that acculturation itself does

not make an individual susceptible to mental or physical illnesses. What could be masked by varying levels of acculturation is different exposure to acculturative stressors that increase vulnerability to problem development (Hwang et al., 2005; Hwang & Myers, 2007).

A more direct and proximal risk factor for maladjustment associated with the process of adjusting to a new culture is acculturative stress (Escobar, 1998). Acculturative stress refers to the psychocultural stress marked by reduction in the physical and mental health of racial and ethnic minorities as they undergo the process of adaptation to a new culture (Nwadiora & McAddo, 1996). Evidence shows that acculturative stress is associated with worse mental health (e.g., anxiety, depression), greater psychosomatic symptoms, and more adjustment-related struggles, including feelings of marginality and alienation as well as identity confusion (Berry & Annis, 1974; Crockett et al. 2007; Hovey 2000; Smart & Smart, 1995; Thomas & Baek Choi, 2006; Walker et al. 2008). Even though research on this relation between acculturative stress and poor mental and physical health outcomes in Asian immigrants is limited, even more so for low-income Asian immigrants, such a relationship has been found specifically with other communities of marginalized, low-income people of color (Dressler & Bernal, 1982; Zychinski & Polo, 2012).

Unsurprisingly, experiences of racism such as daily racial discrimination and major racist events have been associated with increased levels of acculturative stress (Araújo Dawson & Panchanadeswaran, 2010). Given the association between discrimination and acculturative stress, discriminatory experiences are often considered as an aspect of acculturative stress (Alderete et al., 1999; Finch et al., 2000). However, discrimination and acculturative stress can be differentiated in several ways. While discrimination originates from an individual's ethnic or social position within the United States, acculturative stress is integral to the adaptation process

(Rodriguez et al., 2002). Further, whereas individual level discrimination is conceptualized as a sudden, negative event that is out of one's control (Carter, 2007; Flores et al., 2010), acculturative stress is delineated as problematic but controllable and surmountable (Berry, 2006). Thus, Torres, Driscoll, and Voell (2012) assert that considering discrimination and acculturative stress as distinct but related constructs would provide a clearer depiction of immigrants' experiences and limit confounding of these variables.

To examine the role of acculturative stress as a discrete construct from acculturation, Hwang and Ting (2008) conducted a study with Asian American college students exploring the relations between level of acculturation, acculturative stress, and mental health outcomes. While acculturation was associated with higher psychological distress and depression, acculturation lost significance when acculturative stress was introduced into the model. Their findings suggest that acculturative stress may be a more proximal exacerbator of psychological maladjustment than level of acculturation, even after controlling for general stress. Further, in another study done with an ethnically diverse sample of 969 emerging adults, Gomez, Miranda, and Polanco (2011) found that not only acculturative stress and perceived discrimination were both significant predictors of suicide attempts among Asians, but also Asians reported the highest levels of acculturative stress out of all racial/ethnic groups. Taken together, these studies highlight the importance of examining the role of acculturative stress as a moderator on the relation between racism and psychological outcomes for Asian Americans. In this study, we aim to build upon these findings by investigating acculturative stress as a potential risk factor that can exacerbate the negative impact of racism on low-income Asian Americans' mental health. By gaining a better understanding of the role of acculturative stress, the study could clarify how acculturation-

related processes increase risk for maladjustment among Asian Americans and accordingly inform future interventions to help reduce such risk.

Present Study

In the present study, we examined critical consciousness as a potential protective factor that may reduce the negative impact of racism on psychological outcomes, and acculturative stress as a potential risk factor that may exacerbate the negative consequences of racism on psychological outcomes among low-income Asian American adults. This study was informed by the biopsychosocial model (Clark et al., 1999) and intersectionality theory (Crenshaw, 1989) to better understand the experience of discrimination experienced by low-income Asian Americans. Three main objectives in this study were to 1) investigate the direct effects of racism on mental health outcomes among low-income Asian Americans, 2) examine the degree to which critical consciousness moderates the association between racism and mental health outcomes among low-income Asian Americans, and 3) examine the degree to which acculturative stress moderates the association between racism and mental health outcomes. We included two separate mental health measures as outcome variables, psychological distress and psychological well-being, in order to comprehensively capture participants' mental health that goes beyond the mere absence of negative symptoms. When assessing mental health in nonclinical populations, it has been recommended to use concomitant measures of psychological distress and well-being that capture both negative and positive manifestations of mental health (Massé et al., 1998).

For the relation between racism and mental health, we hypothesized that greater levels of racism will be associated with greater psychological distress and lower psychological well-being. We also hypothesized that greater levels of critical consciousness will be associated with less psychological distress and greater psychological well-being whereas greater levels of

acculturative stress will be associated with greater distress and lower psychological well-being. Finally, for the moderating effects, we hypothesized that those with greater critical consciousness will show a weakened positive relation between racism and psychological distress and a weakened negative relation between racism and psychological well-being. For the moderating effect of acculturative stress, we hypothesized the opposite where those with greater acculturative stress will report an increased positive relation between racism and psychological distress and an increased negative relation between racism and psychological well-being.

Method

Participants

Participants were 365 low-income Asian American adults living in the United States. All participants identified as English-speaking Asian Americans, at least 18 years of age, and have a household income that is at or lower than 200% of the federal poverty level (U.S. Department of Health & Human Services, 2020). The low-income criterion was set based on the cutoffs used in previous studies on low-income individuals (Cook et al., 2016; Merhout & Doyle, 2019, Silverman et al., 2015) and guidelines of government assistance programs that use percentages of the federal poverty level for determining poverty status.

Participants ranged in age between 18 and 81 ($M = 37.0$, $SD = 16.2$; descriptive statistics are presented in Table 1). Respondents reported their ethnic/national origins as Chinese (23%), Filipino (22%), Indian (13%), Korean (10%), Japanese (9%), Vietnamese (10%), Pakistani (3%), Hmong (2%), Thai (2%), Laotian (1%), and Cambodian (1%); the remaining participants identified as multiethnic (7%). The generational composition of the sample was primarily first generation (30%), second generation (35%), or third generation (11%). For gender, a vast majority identified as women (69%) or men (26%), and the remainder identified as non-binary, transgender, and other. In regard to sexual orientation, most of participants identified as heterosexual/straight (81%) followed by bisexual (9%), and the remainder identified as lesbian, gay, asexual, questioning, queer, pansexual, or other. Many participants held a high school diploma or GED (35%), bachelor's degree (26%), associate's degree (17%), or graduate degree (10%); the remainder reported that they attended trade school or technical school, did not receive a high school diploma, or selected other. Most of the respondents identified themselves as belonging to the working class (43%) or middle class (36%), and the rest identified as lower

class (13%), upper-middle class (7%), upper class (0.3%), or other (0.8%). Additionally, participants provided subjective reports of their socioeconomic status on a 10-rung ladder (Adler et al., 2000), and their responses generally trended toward the center of the scale ($M = 5.1$, $SD = 2.1$).

Measures

The current study was part of a larger study that examined various intrapersonal, interpersonal, and contextual factors associated with low-income Asian Americans' mental health. In the larger survey, participants completed 12 scales and a demographic questionnaire, and data from those who reached the end of the survey were included for analysis. Below are the measures used in this study.

Demographics

Participants' demographic information was collected including their age, gender, sexual orientation, generational status, educational attainment, and subjective social status (Adler et al., 2000). For subjective social status, participants were asked to rank their social standing in relation to others in the United States on a 10-rung ladder, with those at the top representing the people who have the most money, the best education, and the most respected jobs and those at the bottom representing the people who have the least money, least education, and the least respected job or no job. This self-reported social status measure was included as a covariate in the analysis in order to account for the subjective experiences of being associated with low social class. The measure has shown adequate test-retest reliability (Operario et al., 2004) and predictive validity (Dennis et al., 2012).

Subtle and Blatant Racism Scale for Asian Americans (SABR-A²)

Experience of racism was assessed using the 8-item SABR-A² (Yoo & Lee, 2005). SABR-A² is one of the few racial discrimination measures that are culturally sensitive to the experiences of Asian Americans. The original scale, consisting of ten items, was developed and tested with Asian American college students. In a later validation study, two of the items that were most applicable to college students (e.g., related to dating and academic success) were removed due to small factor loadings, and the revised SABR-A² with eight items has been used in a study with a larger sample of Asian Americans that included non-college students (Kim & Epstein, 2021; Yoo et al., 2010). The measure consists of two subscales, each with four items. Items in the first subscale describe situations concerning subtle forms of racism toward Asian Americans (e.g., “In America, I am treated differently because I'm Asian”), and the items in the second subscale describe situations that are more blatant (e.g., “In America, I am called names such as, ‘chink, gook, etc.’ because I'm Asian”). The original scale asks participants to rate each situation on a 5-point Likert scale, ranging from *almost never* (1) to *almost always* (5). Since the wording of the instructions did not include a timeframe for experiencing each situation, the question was modified to “During your life, how often has this happened to you?” in order to clearly measure the individual's lifetime frequency of experiencing each situation (Kim & Epstein, 2020). The overall score will be calculated by dividing the total score by the number of items, with higher scores indicating greater experiences of racial discrimination. Previous research with SABR-A² has reported acceptable levels of reliability coefficients for overall racism ($\alpha = .88$) as well as the subtle ($\alpha = .82$), and blatant ($\alpha = .77$) racism subscales (Yoo et al., 2010). There was also evidence for convergent validity where total racism and its subscale scores were significantly and positively correlated with measures of psychological distress (i.e., depression, anxiety, and stress; Yoo et al., 2010).

Additionally, to capture more recent anti-Asian racism experiences specifically related to COVID-19, we consulted with the author of the original scale and decided to add three COVID related items. These items included, “I have heard people use the terms ‘china-flu, kung-flu, Chinese-virus, etc.’ referring to the COVID-19 virus”, “I have been verbally or physically attacked during the COVID-19 pandemic because I’m Asian”, and “I have seen or heard about acts of violence against Asians during the COVID-19 pandemic.” For this study’s sample, the internal reliability estimate was .90 with the COVID items and .88 without.

Kessler Psychological Distress Scale (K6)

Psychologist distress was measured via the 6-item K6 (Kessler et al., 2002, 2003) which assesses the frequency of experiencing psychological distress across six different manifestations over the past 30 days: so depressed that nothing could cheer you up, nervous, hopeless, restless or fidgety, worthless, and everything was an effort. Response formats fell on a 5-point Likert scale response continuum, ranging from *none of the time* (0) to *all of the time* (4). Items were summed to create a composite score, where higher scores indicate higher levels of distress. Jang and colleagues (2018) reported evidence of high reliability (ranging between $\alpha = .85$ and $\alpha = .91$) of the measure in a large, non-clinical, Asian American sample ($N = 1,606$). Support for convergent validity was found with significant correlations with depression measures in a sample of elderly Asian Americans (Min & Lee, 2015). In the current study, the internal consistency reliability estimate was .92.

Scales of Psychological Well-Being (SPWB)

The 18-item SPWB (Ryff, 1989) was used to measure the participants’ psychological well-being across six dimensions: self-acceptance, positive relations with other people, autonomy, environmental mastery, purpose in life, and personal growth (three items per

dimension). Participants responded to each item using a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). After reverse-scoring ten of the items, the overall score was computed by dividing the total score by the number of items in the scale (Springer et al., 2006), where higher scores suggest greater psychological well-being (i.e., higher self-actualization and acceptance). Subscales were not analyzed separately due to low subscale reliability. In Iwamoto and Liu's study (2010), good reliability estimates ($\alpha = .83$) were found for the overall SPWB scale in a sample of 402 Asian American and Asian international undergraduate students. The scale also had demonstrated desirable psychometric properties including convergent and discriminant validity (Ryff & Keyes, 1995). In this sample, the internal reliability estimate was .81.

Contemporary Critical Consciousness Measure (CCCM)

Critical consciousness was assessed using the 19-item CCCM (Shin et al., 2016). The scale measured participants' awareness of the systemic, institutionalized barriers that cause many of the psychological and social difficulties experienced by marginalized groups. It assessed participants' overall critical consciousness. For each item, participants will rate their level of agreement on a 7-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (7). Sample items include, "All Whites receive unearned privileges in U.S. society", "Most poor people are poor because they are unable to manage their expenses well", and "Discrimination against gay persons is still a significant problem in the United States." Items were summed to create a composite score, where higher scores indicate greater levels of critical consciousness. The authors reported acceptable levels of reliability coefficients for the general ($\alpha = .90$), racism ($\alpha = .79$), classism ($\alpha = .88$), and heterosexism ($\alpha = .85$) scales. There was also support for convergent validity having shown significant predictive relationships between the CCCM and its

subscales with existing measures of racism, classism, and homophobia (Shin et al., 2016). In this study, the internal reliability estimates for the general scale was .84.

Riverside Acculturation Stress Inventory (RASI)

Acculturative Stress was assessed using the RASI (Benet-Martinez & Haritatos, 2005). The RASI consists of five 3-item subscales, each of which represents a unique acculturative stressor. The subscales are: language skills (e.g., “It bothers me that I have an accent [in English or an Asian language]”), work (e.g., “Because of my Asian background, I have to work harder than most Americans”), intercultural relations (e.g., “I have had disagreements with Americans for liking Asian customs or ways of doing things”), discrimination (e.g., “I have been treated rudely or unfairly because of my Asian background”), and cultural makeup of the community (e.g., “I feel that there are not enough Asian people in my living environment”). For the purpose of this study, the discrimination items were excluded from analysis in order to avoid potential confounding with the racism measure. Each item was answered using a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5). The overall score was computed by dividing the total sum by the number of items in the scale, with higher scores suggesting higher levels of acculturative stress. In a study with 730 Asian American participants, the RASI was established as an appropriate measure of acculturative stress among Asian Americans (Miller et al., 2011). Adequate levels of internal consistency reliability estimates have been reported for the RASI total score (ranging between $\alpha = .79$ and $\alpha = .87$) and its subscale internal consistency coefficients (ranging between $\alpha = .68$ and $\alpha = .84$; Benet-Martinez & Haritatos, 2005). Further, there was evidence for convergent validity, such that the RASI total scores were significantly and positively correlated with measures of bicultural identity integration and psychological

adjustment (Chen et al., 2008). In the current study's sample, the internal reliability estimate was .86 without the discrimination items.

Procedure

Prior to data collection, we obtained approval from the Institutional Review Board of a large university in the mid-Atlantic region of the United States. Due to the hard-to-reach nature of the targeted population, we used Qualtrics Panels, an online database run by Qualtrics, that has access to over two million research participants from across the United States. Qualtrics partners with numerous online sample providers to gather and manage a diverse population of survey participants who sign up from a variety of sources (e.g., social media, airline rewards programs, retail websites) and has assisted over 2,500 universities recruiting their target groups. A random sample of participants who met the inclusion criteria received an email invitation to participate in the study via Qualtrics Panels. Participants were provided a link to the Qualtrics survey if they chose to participate. The first showed the consent form for participants with a brief explanation of the purpose of the research and additional information about participation in the study. The consent form detailed that participants could discontinue their participation in the study at any time. Once they consented, participants proceeded to complete the rest of the survey which assessed demographic information, racism, psychological distress, psychological well-being, critical consciousness, acculturative stress, and other constructs that were not part of this study. After the demographics survey, the scales were shown in a randomized counterbalanced order. The entire survey took approximately 20 min to complete. Participants were compensated by Qualtrics Panels based on their payment structure for completing the entire survey.

Data Analytic Plan

To test our research questions, the following analyses were conducted with mean-centered variables of interest. First, bivariate correlations were calculated to explore associations between our study variables and demographic variables. Next, to examine the relations between racism and psychological distress and well-being as well as the potential moderating effects of critical consciousness and acculturative stress, hierarchical moderated regression analyses were conducted based on Hayes' (2013) recommended practices. For Step 1, control variables were entered into the regression. For Step 2, racism and one of the outcome variables, psychological distress or well-being, as well as the moderator of interest (i.e., critical consciousness or acculturative stress) were added to examine the main effect of racism and each moderator on low-income Asian Americans' psychological outcomes. Lastly, for Step 3, the interaction term between racism and the moderator of interest was entered to investigate whether the effect of racism on psychological distress or well-being was different for participants with higher levels of critical consciousness or acculturative stress than those with lower levels of critical consciousness or acculturative stress. This three-step hierarchical moderated regression analysis was tested separately for two outcome variables, psychological distress and well-being, with each of the moderating variables, critical consciousness and acculturative stress. Thus, a total of four moderation analyses were conducted. All these analyses were run with mean-centered study variables.

Results

Preliminary Analyses

Out of 365 participants who were included in the analysis, a very small amount of missing data remained. Analysis of the patterns of missing data found that all measures in this study had .8% or less missing cases. In addition, Little's (1988) missing completely at random analysis revealed an insignificant chi-square statistic, $\chi^2(460) = 443.47, p = .70$, indicating that the data were missing completely at random. Given such a small amount of missing data and that the missing data were missing at random, we followed recommended practices (Parent, 2013) and used pairwise deletion to account for missing data, where missing data points were excluded only for analyses that directly involved those missing data points. According to sample size recommendations for moderation analysis (Aiken & West, 1991), our sample size and estimated parameters had enough power to detect moderate effect sizes.

Prior to running regression analyses, we conducted assumption tests of linearity, normality of errors, independence of errors, homoscedasticity, and multicollinearity (Kelley & Bolin, 2013). The assumption of linearity was tested and confirmed by examining scatterplots of all independent and dependent variables that showed approximately linear relationships between the variables. To test for normality of errors, P-P plots were examined and confirmed that the residuals were distributed normally. The data also met the assumption of independent errors based on the calculated Durbin-Watson values which were all near 2. To test for homoscedasticity, the studentized residuals against the unstandardized predicted values were plotted between the racism independent variable and each of the potential moderators (i.e., critical consciousness and acculturative stress) against each of the outcome variables (i.e., distress, well-being). There were no patterns in the data points indicating homoscedasticity.

Multicollinearity was explored using the variance inflation factor (VIF) of each independent variable. The calculated VIFs were all significantly less than the recommended cutoff of 10 (Lin, 2008) suggesting there was no evidence of multicollinearity. Furthermore, Cook's distance was calculated to confirm that the regression analyses were not unduly influenced by multivariate outliers. Because no case had a Cook's distance greater than 1, which is a general indication for significant outliers, an unduly influence of multivariate outliers was not a concern. Lastly, data met guidelines for skewness and kurtosis where acceptable values were defined as $|\text{skewness}| < 2$ and $|\text{kurtosis}| < 7$ for studies with over 300 participants (Kim, 2013).

Correlational Analyses

Correlations of the main study variables are presented in Table 2. In support of our first set of hypotheses, racism was significantly and positively correlated with psychological distress ($r = .44, p < .01$) and negatively correlated with psychological well-being ($r = -.27, p < .01$). Interestingly, there were significant negative correlations between both age and subjective social status with racism ($r = -.21, p < .01$ and $r = -.14, p < .01$, respectively). With age and subjective social status, we also found significant negative correlations with psychological distress ($r = -.34, p < .01$ and $r = -.21, p < .01$, respectively) and significant positive correlations with psychological well-being ($r = .25, p < .01$ and $r = .27, p < .01$, respectively) although there was no significant correlation between age and subjective social status. These variables were thus added as covariates in the subsequent regression analyses. Gender, on the other hand, did not yield any significant differences ($p > .05$) for all the variables of interest when comparing women and men (nonbinary participants were excluded in these correlations given the small number of nonbinary participants in our sample). For generational status, we compared those born outside of the United States (1st generation) and those born in the United States (2nd or later generation)

and found no significant difference between the groups for racism nor psychological well-being (both $p > .05$) with the exception of psychological distress ($p = .03$). However, we did not include generational status in the regression analyses because when included, generational status did not turn out to be a significant predictor in any of the models that were tested.

In regard to relations between critical consciousness and mental health outcomes, we found the opposite of what was initially hypothesized with psychological distress where critical consciousness was significantly and positively correlated with psychological distress ($r = .22, p < .01$). The correlation between critical consciousness and psychological well-being was nonsignificant ($r = -.05, p = .34$). For acculturative stress, on the other hand, our hypotheses were supported such that it was significantly and positively correlated with psychological distress ($r = .28, p < .01$) and negatively correlated with psychological well-being ($r = -.25, p < .01$).

Regression Analysis

We conducted a multiple hierarchical regression analysis exploring the association between racism and each of psychological outcomes (i.e., psychological distress and well-being) and whether critical consciousness or acculturative stress moderates the association between racism and the outcome variable. For each of the moderators, we conducted two multiple hierarchical regression analyses, one for psychological distress and one for psychological well-being. In Step 1 for both regressions, we inputted participants' age and self-reported socioeconomic status as covariates, given that these two demographic variables were significantly correlated with both predictive and outcome variables. In Step 2 for both regression analyses, we inputted racism as the predictive variable as well as one of the moderators (i.e., critical consciousness or acculturative stress). Then, in Step 3 for both of the moderation

analyses, we inputted the interaction terms between racism and the moderator of interest. For the first regression, psychological distress was the outcome variable, and for the second regression, psychological well-being was the dependent variable. We ran these two regressions with critical consciousness as the moderator first and then acculturative stress as the moderator which resulted in a total of four multiple hierarchical regressions discussed below.

Starting with critical consciousness, first regression was tested with psychological distress as the outcome variable (see Table 3). At Step 1, the age and the subjective social status variables accounted for a significant amount of the variance for psychological distress [$F(2, 357) = 31.28, p < .01, R^2 = .15$]. Age and subjective social status were both significantly and negatively associated with psychological distress ($b = -.32, p < .01$ and $b = -.19, p < .01$, respectively). Then, at Step 2, racism and critical consciousness variables were entered. Adding the variables at Step 2 increased the amount of variance explained by 13% for psychological distress [$F(4, 354) = 34.55, p < .01, R^2 = .28$]. Within this step, racism was significantly and positively associated with psychological distress ($b = .36, p < .01$). Critical consciousness was not significantly associated with psychological distress ($b = .05, p = .31$). In Step 3, the interaction term between racism and critical consciousness was added. This step did not explain a significant increment of variance for psychological distress ($\Delta F(1, 353) = .27, p = .61$). Within this step of the model, the interaction between racism and critical consciousness was nonsignificant for predicting psychological distress ($b = .16, p = .61$).

Moving to our second regression analyses, as shown in Table 4, with psychological well-being as the outcome variable and critical consciousness as the moderator, in Step 1, the age and the subjective variables accounted for a significant amount of the variance for psychological well-being [$F(2, 357) = 25.09, p < .01, R^2 = .12$]. Age and subjective social status were both

significantly and positively associated with psychological well-being ($b = .23, p < .01$ and $b = .25, p < .01$, respectively). In Step 2, adding racism and critical consciousness variables increased the amount of variance explained by 4% for psychological well-being [$F(4, 354) = 17.58, p < .01, R^2 = .17$]. Within this step, racism was significantly and negatively associated with psychological well-being ($b = -.22, p < .01$). Similar to the first regression, critical consciousness was not significantly associated with psychological well-being ($b = .08, p = .12$). In Step 3, the interaction term between racism and critical consciousness was added. This step did not explain a significant increment of variance for psychological well-being ($\Delta F(1, 353) = .69, p = .41$). The interaction between racism and critical consciousness was again nonsignificant for psychological well-being ($b = .28, p = .41$).

These two regression analyses were then repeated with acculturative stress as the moderator instead of critical consciousness. Our third regression took the same approach as the first regression where psychological distress was inputted as the outcome variable (see Table 5). Step 1 comprised of just the age and subjective social status variables and yielded the same results as in the first regression. At Step 2, racism and acculturative stress variables were entered to examine their direct effects. The added variables from Step 2 increased the amount of variance explained by 13% for psychological distress [$F(4, 355) = 34.71, p < .01, R^2 = .28$]. Within Step 2, racism was significantly and positively associated with psychological distress ($b = .34, p < .01$). Acculturative stress, on the other hand, was not significantly associated with psychological distress ($b = .06, p = .27$). In Step 3 for acculturative stress, the interaction term between racism and acculturative stress was added. This step did not explain a significant increment of variance for psychological distress ($\Delta F(1, 354) = 1.25, p = .26$). Further, there was

a nonsignificant interaction between racism and acculturative stress for psychological distress ($b = .27, p = .26$).

Our fourth regression was tested with psychological well-being as the outcome variable, repeating the second regression approach but with acculturative stress as the moderating variable (see Table 6). Step 1 with the age and subjective social status covariates yielded the same results as in the second regression. At Step 2, racism and acculturative stress variables were inputted which led to a significant increase in the amount of variance explained for psychological well-being by 5% [$F(4, 355) = 18.98, p < .01, R^2 = .18$]. Within this step of the model, racism was almost significantly and negatively associated with psychological well-being ($b = -.11, p = .052$). Further, acculturative stress was significantly and negatively associated with psychological well-being ($b = -.15, p < .01$). Finally, in Step 3 for acculturative stress, the interaction term between racism and acculturative stress was added. This step resulted in an additional 1% increase in the amount of variance explained for psychological well-being [$F(5, 354) = 16.26, p < .01, R^2 = .19$]. Within this step, the interaction between racism and acculturative stress yielded a significant p-value for predicting psychological well-being ($b = .54, p = .03$).

To further examine the significant interaction between racism and acculturative stress on psychological well-being, we conducted a simple moderation analysis with Process Model 1 (Hayes, 2018) using Model 1 from the PROCESS Macro v.4.0 for SPSS v.27. A sample size of 10,000 was generated via a bootstrapping procedure to assess the moderation effect of acculturative stress while controlling for age and self-reported social status as covariates. Consistent with the earlier results, the results again showed there was a significant interaction between racism and acculturative stress when predicting psychological well-being ($F(1, 354) =$

4.08, $p = .04$, $\Delta R^2 = .01$). Furthermore, the results revealed that the conditional effect of racism was significantly different from zero for participants whose acculturative stress score was at the mean (95% CI = [-.36, -.06]) and one standard deviation below the mean (95% CI = [-.24, -.02]). However, this conditional effect was no longer significant for participants who scored one standard deviation above the mean on acculturative stress (95% CI = [-.17, .08]). The Johnson-Neyman test showed that the effect of acculturative stress on the relationship between racism and psychological well-being was significant when the value was 2.97 or less. Thus, for low-income Asian Americans with lower or average levels of acculturative stress, experiencing racism was significantly associated with lower psychological well-being; however, for those with higher levels of acculturative stress (i.e., greater than 2.97), the relationship was not significant. This conditional effect of racism on psychological well-being at lower, average, and higher levels of acculturative stress is shown in Figure 1.

Discussion

To our knowledge, the current study is the first to elucidate the association between racism and mental health among low-income Asian American adults, and the first to explore how one's critical consciousness and acculturative stress may or may not affect this association. Low-income Asian American adults who frequently experience racism reported higher levels of psychological distress and lower levels of psychological well-being. Furthermore, one's acculturative stress moderated the association between racism and psychological well-being. In contrast to our initial hypothesis, we found that racism was negatively associated with psychological well-being for those with lower levels of acculturative stress whereas for those with higher levels of acculturative stress, the association was nonsignificant. Other interactions that explored critical consciousness and racism did not reach significance.

Racism Experiences of Low-income Asian Americans

The findings of our study contribute to the literature by exploring the mental health of Asian Americans who live at the intersection of racism and classism. As hypothesized, our study revealed that experiences of racism were positively associated with psychological distress and negatively associated with psychological well-being among low-income Asian Americans. This finding on the association between racism and negative mental health aligns with past research that examined experiences of racism of the broader Asian American population. Prior studies have demonstrated that Asian Americans who experience racism face an increased risk for negative mental health outcomes such as depression and suicidal ideation (Chau et al., 2018; Li et al., 2018). Although, to our knowledge, these relationships have not been tested with low-income Asian American adult samples, based on intersectionality theory (Crenshaw, 1989), low-income Asian Americans may suffer from similar, or even worse, detrimental effects of racism

given their unique challenges and vulnerabilities associated with their dual minority status of race and class. The findings of the current study confirmed that racism not only increases low-income Asian Americans' psychological distress but also depresses their overall psychological well-being, highlighting the importance of considering experiences with racism in this multiply marginalized population.

Interestingly, our results also suggested that participants who were older tended to report less experiences of racism than younger adult participants. The finding is consistent with previous studies that demonstrated a negative correlation between age and experiences of discrimination (Barnes et al., 2004; Luo et al., 2012). One potential explanation is that as Asian Americans age, they may try to settle down in a community or find a routine where they may be less prone to negative life experiences such as racism. Other possible explanations include that older Asian Americans may not be as perceptive to racism due to not having been raised in the United States or that as they get older, they may advance to positions with more authority at work or in their community and, thus, gain more respect which could lead to less exposure to racism (Mroczek, 2004). In addition, our results found that participants who placed themselves higher on the subjective social status ladder were less likely to report experiences of racism than those who endorsed a lower social class position on the ladder. Though this finding diverged from prior research that has shown a negative association between income and experience of discrimination among Asian Americans (Goto et al., 2002), it was unsurprising given that the ladder measures one's subjective experience with social class whereas income represents a more objective, society-based measure of socioeconomic resources. Furthermore, since all participants met the same low-income criterion set for this study, participants' self-reported social status may be more representative of their feelings and perspectives associated with being in the low-income

class. For instance, low-income Asian Americans who experience more racism may perceive it as a consequence of their marginalization related to their social class and place themselves lower on the social ladder than those who experience less racism.

Acculturative Stress

The moderating effect of acculturative stress from this study highlights the importance of considering one's level of acculturative stress when discussing low-income Asian American mental health. Low-income Asian Americans with less acculturative stress were more likely to experience harmful effects of racism than those with greater acculturative stress. This finding was contrary to our hypothesis as we had predicted that those with greater acculturative stress would be more severely impacted by the deleterious effects of racism than those with less acculturative stress because of the additive effects of different stressors. Indeed, previous research has found an exacerbating effect of acculturative stress on mental health among Asian Americans (Hwang & Ting, 2008; Xu & Chi, 2013) as well as in other racial and ethnic minorities (Crockett et al. 2007; Hovey, 2000; Walker et al., 2008). An explanation for this unexpected finding may be that while low-income Asian Americans with less acculturative stress suffer from harmful effects of racism that are similar to experiences of other minoritized groups, those with greater acculturative stress may experience reduced or ambivalent effects of racism because of the pain and suffering that has preexisted in their lives related to their higher level of acculturative stress. In other words, participants who report greater acculturative stress may already feel so depleted and hopeless, which desensitizes them from a greater impact of racist experiences on their psychological well-being. Another interpretation is that acculturative stress may actually be a resilience factor for low-income Asian Americans. It is possible that having experiences of navigating through various challenges associated with acculturation leads them to

grow stronger which can ultimately enable them to protect themselves against the harmful effects of racism, an experience closely related to acculturative stress. The different patterns of interactions between racism and acculturative stress uncovered in this study could be supported by prior research that suggested the negative impact of discrimination may vary depending on the role of acculturative stress in one's life and its contribution to mental health struggles (Cook et al., 2009). In addition, one important aspect of the results that needs to be considered is that in our sample, only 1% of our sample had the average acculturative stress score of 5 suggesting that this sample may be more representative of low-income Asian Americans with low to moderate levels of acculturative stress than those with high levels.

Another important finding of the current study is that the impact of racism on low-income Asian American mental health became more statistically significant when the interaction between acculturative stress and racism was taken into consideration than without the interaction. This demonstrated that despite our efforts to distinguish acculturative stress from racism by eliminating the discrimination items of the acculturative stress measure, there may be an intricate, inseparable relation between the two that needs to be explored more deeply. Further, our results extend previous research that highlighted the importance of considering discrimination as well as acculturative stress when assessing the mental health of racial and ethnic minorities (e.g., Ahmed et al., 2011; Crockett et al., 2007) by examining them among low-income Asian Americans who have been widely underrepresented in discrimination research.

Critical Consciousness

In further contrast to our hypotheses, critical consciousness did not buffer nor exacerbate the negative impact of racism on low-income Asian Americans' mental health. The lack of an interaction between critical consciousness and racism may speak to the mixed findings on the

moderating effects of critical consciousness in prior research. Although some past studies have found critical consciousness as a protective factor (Kelso et al., 2014), others have reported the opposite or null findings (Godfrey et al., 2019; Autin et al., 2021). It is possible that some low-income Asian Americans with higher critical consciousness are more likely to recognize and experience racist experiences (e.g., microaggressions) than those with lower critical consciousness which could then lead to more frequent, accumulative distress. In fact, our results showed a positive correlation between critical consciousness and psychological distress. On the other hand, it is also plausible that while low-income Asian Americans with higher critical consciousness experience psychological distress due to racism, similar to those with lower critical consciousness, some of them may still be better adapted to circumvent its detrimental impact on their overall psychological well-being than those with lower critical consciousness by utilizing their familiarity with systemic oppression to process those experiences through a critical lens and by reducing internalization of racism. This could be explored further given that critical consciousness was not significantly correlated with psychological well-being whereas it did with psychological distress. Perhaps one's critical consciousness alone is not sufficient to be tested as a protective factor and needs to be explored along with other related factors such as whether and how one engages with their critical knowledge or understanding. This idea fits well with prior research on psychological reactivity to stress that suggested the mechanism through which individuals appraise and cope with stressors may be more important than the frequency of stressors (Lazarus & DeLongis, 1983). Lastly, similarly with acculturative stress, we noted that our sample may not fully capture the experiences of low-income Asian Americans with varying levels of critical consciousness. In this sample, 85% of participants had the average critical

consciousness score between 3 and 5 which could have also contributed to the null moderation findings.

Limitations and Future Research

Despite this study's unique contribution to the gap in the literature on low-income Asian Americans, it possesses several limitations that could be addressed in future research. First, this study examined the experiences of racism among low-income Asian Americans and not their experiences of classism. The idea of including a classism measure was initially explored, but given the surge of anti-Asian racism with the COVID-19 pandemic and a very limited number of classism measures validated with Asian American samples, racism was determined to be the main focus of this study. Thus, this study does not allow us to draw any conclusions around the relative influence of racism versus classism although this population is subject to both forms of oppression. One important aspect to note, however, is that intersectionality theory highlights the importance of exploring multiple forms of discrimination simultaneously instead of trying to separate its parts. To our knowledge, a measure which captures the intersectional experiences of racism and classism does not currently exist. Future studies would benefit from exploring both race and class oppression simultaneously by developing and utilizing such a measure. Similarly, our findings do not help answer whether low-income Asian Americans have experiences of racism and psychological consequences that are different from those of Asian Americans from other social class levels. The purpose of this study was to help better understand the experiences of low-income Asian Americans given their multiply marginalized identities and the literature base that is largely silent on this population, perhaps due to the model minority myth. Future researchers may want to compare how these experiences differ by social class levels by investigating a more socioeconomically diverse sample of Asian Americans.

Additional limitations include that due to the hard-to-reach nature of the population, any self-identified Asian American whose household income is less than 200% of the federal poverty

level was included in the sample as opposed to selecting a certain immigrant generation or Asian ethnic group. As experiences can vary within Asian Americans depending on their demographics, future studies may seek to examine a specific group of low-income Asian Americans (e.g., 1st generation, Korean Americans) to obtain a more precise understanding of that specific population. Future studies could also increase recruitment efforts to target low-income Asian American sexual minorities and explore how their sexual orientation and racial identity interact with social class. Lastly, there were limitations associated with the online data collection method. Collecting data via Qualtrics Panels allowed for data collection from a diverse sample of participants in terms of geographical location and age. However, as shown in the results, the sample was skewed in a way that underrepresented those with high acculturative stress as well as those with low or high critical consciousness. Because the majority of participants at Qualtrics Panels traditionally sign up via social media and online rewards programs, our sample was likely to overrepresent low-income Asian Americans who have access to the Internet and have availability to complete these types of online surveys. Future studies would benefit from making an intentional effort to recruit a community-based sample that may not have Internet access by using paper-and-pencil surveys as well as to target settings where there may be greater variability in critical consciousness and acculturative stress, such as in colleges and universities. With more diverse sample of low-income Asian Americans, future research may arrive at findings that will help provide additional insight into the roles of critical consciousness and acculturative stress.

Implications and Conclusion

In addition to its contribution to the body of research, the current findings also carry important practical implications specific to supporting the mental health needs of low-income Asian Americans. Clinicians need to be informed and sensitive to the detrimental effects of racism and demonstrate empathy and support when working with low-income Asian American clients who may feel particularly vulnerable due to their dual minority status. It is important for practitioners to explore their clients' race-based and class-based identities holistically and to not overlook one dimension of their identity (e.g., race) even if the other identity, or identities, may seem more directly related to their presenting concerns (e.g., financial hardship). Our findings revealed that among low-income Asian Americans, racism and acculturative stress are associated with worse mental health. Further, those with lower levels of acculturative stress were more negatively impacted by racism than those with higher levels of acculturative stress. This finding underscores the clinical importance of considering one's level of acculturative stress when helping low-income Asian Americans combat racism. For example, for low-income Asian Americans with lower acculturative stress, it may be beneficial for psychologists to focus on processing their racism experiences and exploring coping strategies to help relieve their distress. On the other hand, for low-income Asian Americans with higher acculturative stress, practitioners may need to take an integrative approach where they first focus on reducing acculturative stress, such as by discussing different acculturative stressors and reflecting on their contribution to mental health, and then engaging in conversations around their racism experiences. It is important that practitioners do not underestimate the magnitude of the negative impact of racism on low-income Asian Americans with greater acculturative stress—although

they may present in such a way—and should be mindful of prolonged mental burn-out they may be experiencing due to their sustained higher level of acculturative stress.

In this study, critical consciousness did not serve as a protective factor against the harmful effects of racism for low-income Asian Americans. On the contrary, there was a positive association between critical consciousness and psychological distress. These findings suggest that gaining critical awareness alone may not be sufficient to mitigate the harmful effects of racism. Psychologists should strive to develop specific interventions for low-income Asian Americans not just to assist their development of critical consciousness but also to help them gain a sense of agency and help them engage in critical action to challenge and change oppressive conditions they suffer from. For example, clinicians could embrace a scientist–practitioner–advocate approach and explore different ways for their clients to feel empowered and to get involved in social justice advocacy. Practitioners may also consider engaging in radical healing (French et al., 2020) work with low-income Asian American clients to recognize the pain of oppression their clients have endured while trying to foster a sense of hope for justice and freedom, particularly for those suffering from high acculturative stress. Although not a focus of this study, community interventions may similarly be beneficial for low-income Asian Americans by providing them opportunities to locate and address sources of racism that low-income Asian Americans may be exposed to by virtue of their dual minority status.

Anti-Asian racism and discrimination preceded the COVID-19 pandemic. Nonetheless, heightened rates of violence and racism towards Asian communities across the globe witnessed since the pandemic have emphasized the urgent necessity of investigating the psychological consequences of anti-Asian sentiment. By centering the understudied experiences of low-income Asian Americans, the current study takes into account their unique intersecting identities and

informs the impact of racism on low-income Asian Americans' psychological well-being. In doing so, this study takes the first step towards filling a crucial gap in the Asian American mental health literature and providing practical guidelines to enhance low-income Asian Americans' mental health. It is important that we continue to explore different risk and protective factors to help increase our understanding and support of low-income Asian Americans. Moreover, it is imperative that researchers and practitioners proactively pursue opportunities to better understand the experiences of marginalized groups that had been ignored in the past, particularly those who are subject to multiple intersecting forms of systemic oppression.

Table 1*Sociodemographic Characteristics of Sample*

Characteristics	<i>n</i>	%
Age range (years)		
18–24	108	29.6
25–49	180	49.3
50+	77	21.1
Ethnicity ^a		
Chinese	82	22.5
Filipino	79	21.6
Indian	47	12.9
Korean	35	9.6
Japanese	32	8.8
Vietnamese	30	8.2
Gender Identity		
Women	253	69.3
Men	94	25.8
Nonbinary	13	3.6
Transgender	4	1.1
Other	1	0.3
Sexual Identity		
Heterosexual	295	80.8
Bisexual	33	9.0
Gay	4	1.1
Lesbian	2	0.5
Queer	2	0.5
Other ⁺	29	7.9
Generational Status		
First	108	29.8
1.25	23	86.3
1.5	18	5.0
1.75	21	5.8
Second	127	35.0
Third	40	11.0
Adoptee	11	3.0
Other	15	4.1
Education		
High School Diploma	126	34.5
Bachelor's Degree	95	26.0
Associate's Degree	61	16.7
Graduate/Professional Degree	37	10.2
Technical/Trade School	30	8.2
Less than high school	5	1.4
Other	11	3.0
Socioeconomic Status		
Working Class	157	43.0

Middle Class	132	36.2
Lower Class	48	13.2
Upper-Middle Class	24	6.6
Upper Class	1	0.3
Other	3	0.8

Note. $N = 365$.

^a Given the large number of ethnic identifications in this sample, we opted to provide the six most common ethnicities for clarity of presentation.

^b Included in this category are participants that identified as asexual, questioning, pansexual, or other.

Table 2*Descriptive Statistics and Correlations for Study Variables*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. Racism	2.53	.90	—						
2. Psychological Distress	1.39	1.07	.44**	—					
3. Psychological Well-being	4.67	.84	-.27**	-.54**	—				
4. Age	37.00	16.19	-.21**	-.34**	.25**	—			
5. Subjective SES ^a	5.10	2.12	-.14*	-.21**	.27**	.07	—		
6. Critical Consciousness	4.57	.84	.31**	.22**	-.05	-.17*	-.13*	—	
7. Acculturative Stress	2.77	.79	.55**	.28**	-.25**	-.13	-.04	-.05	—

^aSES = Socioeconomic Status.* $p < .01$. ** $p < .001$.

Table 3

Multiple Regression with Psychological Distress as the Outcome Variable and Racism and Critical Consciousness as Predictor Variables

Variable	<i>B</i>	<i>SE B</i>	β	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
<i>Step 1</i>					.39	.15	.15**
Age	-.02	.003	-.32	<.001			
Subjective SES ^a	-.10	.03	-.19	<.001			
<i>Step 2</i>					.53	.28	.13**
Racism	.43	.06	.36	<.001			
Critical Consciousness	.06	.06	.05	.31			
<i>Step 3</i>					.53	.28	.001
Racism \times Critical Consciousness	.03	.06	.16	.61			

^a SES = Socioeconomic Status.

* $p < .05$. ** $p < .01$.

Table 4

Multiple Regression with Psychological Well-Being as the Outcome Variable and Racism and Critical Consciousness as Predictor Variables

Variable	<i>B</i>	<i>SE B</i>	β	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
<i>Step 1</i>					.35	.12	.12**
Age	.01	.003	.23	<.001			
Subjective SES ^a	.10	.02	.25	<.001			
<i>Step 2</i>					.41	.17	.04**
Racism	-.21	.05	-.22	<.001			
Critical Consciousness	.08	.05	.08	.12			
<i>Step 3</i>					.41	.17	.002
Racism \times Critical Consciousness	.04	.05	.28	.41			

^aSES = Socioeconomic Status.

* $p < .05$. ** $p < .01$.

Table 5

Multiple Regression with Psychological Distress as the Outcome Variable and Racism and Acculturative Stress as Predictor Variables

Variable	<i>B</i>	<i>SE B</i>	β	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
<i>Step 1</i>					.39	.15	.15**
Age	-.02	.003	-.32	<.001			
Subjective SES ^a	-.10	.03	-.19	<.001			
<i>Step 2</i>					.53	.28	.13**
Racism	.40	.07	.34	<.001			
Acculturative stress	.08	.07	.06	.27			
<i>Step 3</i>					.53	.28	.003
Racism \times Acculturative stress	.07	.06	.27	.26			

^a SES = Socioeconomic Status.

* $p < .05$. ** $p < .01$.

Table 6

Multiple Regression with Psychological Well-Being as the Outcome Variable and Racism and Acculturative Stress as Predictor Variables

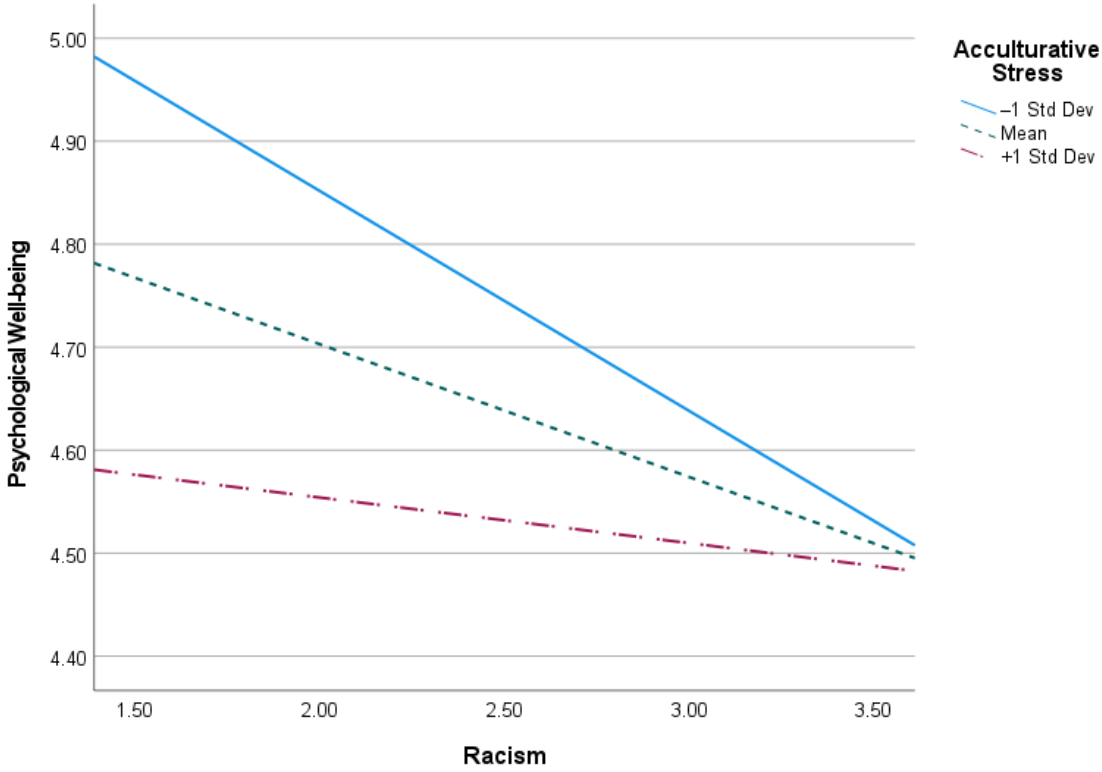
Variable	<i>B</i>	<i>SE B</i>	β	<i>P</i>	<i>R</i>	<i>R</i> ²	ΔR^2
<i>Step 1</i>					.35	.12	.12**
Age	.01	.003	.23	<.001			
Subjective SES ^a	.10	.02	.25	<.001			
<i>Step 2</i>					.42	.18	.05**
Racism	-.11	.06	-.11	.05			
Acculturative stress	-.16	.06	-.15	.01			
<i>Step 3</i>					.43	.19	.01*
Racism \times Acculturative stress	.11	.05	.54	.03			

^a SES = Socioeconomic Status.

* $p < .05$. ** $p < .01$.

Figure 1

Moderation of Acculturative Stress for the Relation Between Racism and Well-being



Note. This figure demonstrates a conditional effect of racism on psychological well-being at lower (significant), average (significant), and higher (nonsignificant) levels of acculturative stress.

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- <https://doi.org/10.1007/s10826-011-9509-5>