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Chinese American Adolescents' Experiences of COVID-19 Racial Discrimination:
Risk and Protective Factors for Internalizing Difficulties

Charissa S. L. Cheah¹, Xiaoli Zong¹, Hyun Su Cho¹, Huiguang Ren¹, Suqing Wang¹,
Xiaofang Xue¹, Cixin Wang²

¹ University of Maryland, Baltimore County

² University of Maryland, College Park

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Abstract

Objectives. The COVID-19 pandemic has fueled anti-Asian racism and xenophobia in the United States, which negatively impact Asian Americans' adjustment. To identify risk and protective factors for Chinese American adolescents' mental health, the present study examined: (1) the associations between Chinese American adolescents' experiences of COVID-19-related racial discrimination and their internalizing difficulties; (2) the moderating roles of (a) adolescents' bicultural identity integration (BII; harmony and blendedness dimensions separately), and (b) parents' promotion of mistrust ethnic-racial socialization (PMERS); and (c) the interplay between BII and PMERS in the associations between racial discrimination and internalizing difficulties. **Methods.** Participants included 211 Chinese American adolescents of 10-18 years old ($M_{\text{age}} = 13.92$, $SD = 2.33$; 48% girls) and their parents ($M_{\text{age}} = 46.18$ years, $SD = 5.17$; 81% mothers). **Results.** Overall, adolescents' experiences of COVID-19-related racial discrimination were associated with more internalizing difficulties, and this association was buffered by BII harmony and blendedness and exacerbated by PMERS. However, a complex interplay among specific BII dimensions and parental PMERS in the associations between racial discrimination and adolescent internalizing problems was revealed. Adolescents with lower levels of BII blendedness were more vulnerable to the negative effects of racial discrimination on their internalizing problems and more susceptible to their parents' PMERS; adolescents who reported higher levels of BII harmony and perceived lower levels of parental PMERS were more protected from the negative effects of racial discrimination on their internalizing problems. **Conclusions.** Both adolescents' and parents' contributions should be considered simultaneously in promoting resilience in Chinese American families.

1 *Keywords:* COVID-19 racial discrimination, Bicultural identity integration, Parental
2 ethnic-racial socialization, Internalizing difficulties, Chinese American adolescents

3
4 **Public Significance Statement**

5 Anti-Asian discrimination fueled by the COVID-19 pandemic was harmful to the mental
6 health of Chinese American adolescents. Having blended and harmonious American and Chinese
7 identities decreased, whereas parents' messages to adolescents that discouraged interactions with
8 other ethnic groups increased the negative impacts of racial discrimination. Bicultural identity
9 and parenting further interacted to impact the mental health of Chinese American adolescents
10 during the COVID-19 pandemic.

Chinese American Adolescents' Experiences of COVID-19 Racial Discrimination: Risk and Protective Factors for Internalizing Difficulties

The spread of the COVID-19 virus in the U.S. has been accompanied by misinformation and xenophobia against Asian Americans, spurred by terms like the “Chinese virus” and “Kungflu” (Gee et al., 2020). Racial discrimination impairs Chinese American adolescents' mental health (Cheah et al., 2020). Thus, the identification of risk factors that can exacerbate, and protective factors that can ameliorate, the negative effects of racial discrimination during this period of heightened racism triggered by the COVID-19 pandemic is imperative. We examined these processes during adolescence, which is a particularly vulnerable developmental period for ethnic-racial minorities due to greater exposure to discrimination with increasing mobility and independence, and growing but still limited cognitive understanding of historical racism, group and identity processes, and coping mechanisms (Juang & Kiang, 2019).

The present study is guided by García Coll et al.'s (1996) integrative model, which emphasizes social position and social stratification variables as core factors for understanding the development of ethnic minority children in the United States. Within this framework, racism and racial discrimination shape the adaptive culture of ethnic minority families and family processes, Under the influence of the adaptive culture, family processes including ethnic-racial socialization and child characteristics such as identity development both independently and interactively contribute to children's development (García Coll et al., 1996). Specifically, we focused on adolescents' bicultural identity integration (BII; i.e., views of their Chinese and American identities as harmonious and blended), and perceptions of their parents' engagement in ethnic-racial socialization practices that promote mistrust of other ethnic-racial groups.

1 The first aim of the present study was to examine the associations between Chinese
2 American adolescents' experiences of racial discrimination and internalizing difficulties during
3 the COVID-19 pandemic. Second, we assessed the moderating roles of (a) Chinese American
4 adolescents' BII (harmony and blendedness dimensions) and (b) parents' promotion of mistrust
5 ethnic-racial socialization (PMERS) in the associations between their racial discrimination
6 experiences and internalization difficulties. Finally, we explored the interplay between Chinese
7 American adolescents' BII and parents' PMERS in moderating the associations between
8 COVID-19-related racial discrimination experiences and internalizing difficulties.

9 **Racial Discrimination Experiences Among Chinese Americans**

10 Racial discrimination is the behavioral component of racism comprising actions by
11 members in the dominant racial group that have differential effects on subordinate racial-ethnic
12 groups (Williams et al., 2003). Although racial categories are widely accepted and proven to be
13 socially constructed, differential treatment based on these categories contributes to racial
14 inequality and poorer mental and physical health (Priest et al., 2012). Perceived racial
15 discrimination has been consistently linked to poorer adjustment among Chinese American
16 adolescents, including increased internalizing difficulties, loneliness, social withdrawal, somatic
17 symptoms, and lower self-esteem (Benner & Kim, 2009; Juang & Alvarez, 2010; Juang &
18 Cookston, 2009). Internalizing difficulties refer to adjustment and mental health problems that
19 generally include emotional problems and disordered mood, anxiety, and depressive symptoms
20 (Garnefski et al., 2005; van der Ende et al., 2020), and a stronger link between racism and poorer
21 mental health, including internalizing difficulties, was found for Asian Americans compared to
22 other racial groups (Paradies et al., 2015). These findings suggest potentially important

1 differences in the deleterious effect of racial discrimination experiences between racial groups
2 due to their distinct migration histories in the United States (Seaton et al., 2018).

3 Asian Americans have historically experienced individual (e.g., interpersonal violence)
4 and institutional discrimination (e.g., Chinese Exclusion Act in 1882) since the late 1800s (Gee
5 et al., 2009; Goto et al., 2002). Although Asian Americans have been “labeled” as model
6 minorities, who have overcome racial and cultural barriers and fulfilled the American dream by
7 adjusting successfully in the mainstream society (Goto et al., 2002), this stereotype, in fact,
8 ignores the diverse experiences among Asian Americans, masks socioeconomic disparities and
9 problems of ongoing discrimination, and neglects the importance of intervening in the systematic
10 disparities (Gee et al., 2009). Moreover, racial discrimination against Chinese Americans has
11 persisted in more subtle forms that consider them as “perpetual foreigners” (Huynh et al., 2011).
12 During the COVID-19 pandemic, Chinese American adolescents perceived that Americans
13 believed China, Chinese individuals, and Chinese culture to be a threat to their public health, and
14 that these sentiments were perpetuated by the media (Cheah et al., 2020).

15 In the present study, we assessed Chinese American adolescents’ perceived direct
16 experiences of racial discrimination due to the COVID-19 pandemic, including outright insults,
17 intimidation, harassment (e.g., being called the “Chinese virus” or told that this pandemic is their
18 fault), as well as microaggressions (e.g., subtle slights, insults, and differential treatment towards
19 them, such as being physically avoided due to their Chinese heritage), which result in a gradual
20 sense of denigration. Social distancing requirements during the COVID-19 pandemic have led to
21 online schooling and increased access to and use of the Internet for many children (Iivari et al.,
22 2020). Chinese American adolescents have been the targets of discrimination both in person and

online due to their ethnic-racial group (Cheah et al., 2020). Therefore, we assessed adolescents' in person and online experiences and their associations with internalizing difficulties.

Bicultural Identity Integration (BII)

The formation of youths' feelings, thoughts, and attitudes related to membership in an ethnic-racial group (i.e. ethnic-racial identity) significantly impacts the ways they experience, interpret, and respond to discrimination (Yip, 2018). At the same time, ethnic-racial minority youth also develop identification with the host-national group (i.e., American identity, for those residing in the United States), which has received little scholarly attention. Chinese American adolescents are faced with the complex and multifaceted challenge of integrating two different and possibly conflicting cultural frameworks in the development of their racial-ethnic and cultural identities. BII (Benet-Martínez & Haritatos, 2005) has been conceptualized along two key dimensions: (1) *cultural distance versus blendedness*, which is the extent to which an individual perceives a compartmentalization or disconnection versus an overlap between the two cultural orientations; and (2) *cultural conflict versus harmony*, which is the extent to which an individual perceives compatibility versus tension between the two cultural orientations. Higher overall BII is associated with greater self-esteem, life satisfaction, and subjective happiness, and lower levels of depression, anxiety, and loneliness (Chen et al., 2008), but BII harmony is more consistently associated with better psychological adjustment than BII blendedness (e.g., Huynh et al., 2018; Tikhonov et al., 2019) and should be examined separately. Moreover, although strong identification towards one's own ethnic-racial group can buffer ethnic-racial minority members against the negative effects of racial prejudice and discrimination (Yip et al., 2019), the protective role of identity integration is less understood.

More recent conceptualization of BII has proposed that it might serve as a psychological resource for individuals with multicultural backgrounds to negotiate their different ethnic and cultural identities and navigate through racial-ethnic related challenges (e.g., racial discrimination; Cheng & Lee, 2009; Huff et al., 2020). However, the specific findings for BII harmony versus blendedness are mixed. For example, Jackson and colleagues (2012) reported that low BII harmony exacerbated the association between perceived racial discrimination and psychological distress among multiracial individuals, whereas BII blendedness did not moderate the effect. Moreover, both BII harmony and blendedness buffered against the negative effects of perceptions of negative attitudes from majority group members on intergroup relations and interactions among bicultural individuals (Huff et al., 2020). We extended this work to an adolescent sample by exploring the direct and moderating role of BII harmony and blendedness in the associations between Chinese American adolescents' COVID-19-related racial discrimination experiences and internalizing difficulties.

Ethnic-Racial Socialization Practices: A Focus on Promotion of Mistrust

Parents of ethnic-racial minority children engage in ethnic-racial socialization, which broadly refers to the transmission of messages from parents to children regarding ethnicity and race (Hughes et al., 2006), including cultural socialization, preparation for bias, and promotion of mistrust (Kiang et al., 2019). Much less is known about ethnic-racial socialization among Asian American families compared to other ethnic-racial minority groups (Juang et al., 2016; Kiang et al., 2019; Wang et al., 2020).

In the present study, we focused on parental promotion of mistrust, which comprises messages that warn children against interactions with other racial-ethnic groups, including discouraging children from being friends with other racial-ethnic group peers, encouraging

1 children to keep a distance from other racial-ethnic groups, and showing that other racial-ethnic
2 groups are dangerous and cannot be trusted (Juang et al., 2016). These practices have been found
3 to be associated with negative adjustment outcomes for Asian Americans in general, including
4 lower social competence (Tran & Lee, 2010), lower self-esteem (Gartner et al., 2014), and
5 greater depression (Liu & Lau, 2013), due to the lack of coping and empowering components to
6 facilitate positive social identity and mental health (Huynh & Fuligni, 2008) of these negative
7 socialization messages (Juang & Kiang, 2019). During the racialized COVID-19 pandemic,
8 parents may use PMERS to protect their children from being the targets of racial discrimination
9 through reducing their interactions with individuals from other ethnic groups; in the long-term,
10 however, such practices may promote intergroup avoidance and eventually contribute to
11 maladjustment (Juang et al., 2017) by exacerbating the harmful effects of racial discrimination
12 on psychological distress (Atkin et al., 2018).

13 **Interactive Effects of BII and Parental Ethnic-Racial Socialization Practices**

14 Drawing on García Coll et al.'s (1996) integrative model and an ecological perspective
15 on ethnic-racial dynamics (Hughes et al., 2006), racial discrimination, ethnic-racial identity, and
16 parental ethnic-racial socialization are three interrelated processes at the core of the development
17 of ethnic minority children. Previous studies tend to conceptualize parents' ethnic-racial
18 socialization practices as antecedents of children's ethnic-racial and cultural identities (e.g.,
19 Gartner et al., 2014). To our knowledge, no studies have examined the interactive effects of
20 children's BII and parental ethnic-racial socialization practices. In the context of a racialized
21 pandemic where Chinese American families are being targeted (Cheah et al., 2020), parents may
22 convey messages promoting mistrust in other ethnic-racial groups, which may interact with

specific dimensions of children's ability to integrate their targeted ethnic-racial identity and their majority group social identity to predict children's adjustment.

Summary of the Present Study: Aims and Hypotheses

The present study had three aims. First, we examined the associations between Chinese American adolescents' experiences of direct racial discrimination and their internalizing difficulties during the COVID-19 pandemic. These experiences of COVID-19 direct racial discrimination were expected to be positively associated with adolescents' internalizing difficulties. Second, we assessed the individual moderating roles of: (a) Chinese American adolescents' BII harmony, BII blendedness, and their parents' PMERS strategies in the associations between adolescent's racial discrimination experiences and their internalization difficulties. Based on the limited previous research, we generally expected Chinese American adolescents' BII to buffer against the negative effects of racial discrimination on their internalization difficulties, but parental engagement in PMERS to exacerbate the associations between Chinese American adolescents' racial discrimination and internalization difficulties. The third aim was to explore the interaction between Chinese American adolescents' BII dimensions and their perceptions of their parents' PMERS strategies in moderating the associations between their perceived COVID-19-related racial discrimination experiences and internalizing difficulties. We expected that the two-way interactions mentioned previously would be further qualified by a three-way interaction between discrimination, Chinese American adolescents' BII, and their parents' PMERS, with generally stronger positive associations between adolescents' experiences with racial discrimination and their internalization difficulties among those with lower levels of BII and higher levels of parental PMERS.

Method

Participants

The participants included 211 Chinese American adolescents between 10 to 18 years old ($M_{\text{age}} = 13.92$, $SD = 2.33$; 48% girls) and their self-identified ethnically Chinese parents (age ranged from 33 to 63 years, $M_{\text{age}} = 46.18$, $SD = 5.17$; 81% mothers). Eighty percent of adolescents were born in the United States, 15% in Mainland China, 1% in Hong Kong, fewer than 1% in Taiwan, and 3% in another place. Almost all parents (98%) were born outside the United States and had lived in the United States for 18.45 years on average. Adolescents were mostly from two-parent intact (89%) middle-class families (Hollingshead Four Factor Index $M = 56.1$, $SD = 12.9$). Twelve percent of fathers and 11% of mothers had a high school degree or lower, 28% of the mothers and 16% of the fathers had a partial college or a bachelor's degree, and 60% of the mothers and 72% of the fathers had an advanced or graduate degree.

Procedure

Participants were recruited through phone calls and flyers e-mailed to community and religious organizations in the United States and on social media (Facebook and WeChat). Interested parents were sent the survey links through email or text messages. Parents provided consent for themselves and their adolescents online. Adolescents separately provided their assent. Both parents and adolescents completed the online surveys via the Qualtrics platform (<https://www.qualtrics.com>) between March 14th to May 31st, 2020. The measures were available in English, simplified, or traditional Chinese using the back-translation method. Parents and adolescents received e-gift cards (\$20 and \$10, respectively) as compensation for their participation. Ethical approval was obtained from the [Blinded] institutional review board.

Measures

Demographics

Parents provided demographic information about their family, including each parent and their children's age, gender, generation status, place of birth, years in the United States, mother and father's education level and occupation type. Family socioeconomic status (SES) was calculated using the Hollingshead Four Factor Index (Hollingshead, 1975).

COVID-19-Related Racial Discrimination

COVID-19-related racial discrimination experienced by adolescents both online and in person was assessed using eight items adapted from existing measures. Four items were adapted from the Online Victimization Scale for Adolescents (Tynes et al., 2010) and four items were adapted from the Racial and Ethnic Microaggressions Scale (Nadal, 2011). Sample items include, "Due to COVID-19, people have said mean or rude things about me because of my race or ethnic group online" and "Due to COVID-19, some people were unfriendly or unwelcoming toward me because of my Chinese background." Adolescents rated how often they experienced each discriminatory incident on a 6-point Likert-type scale (1 = *never* to 6 = *everyday*). The mean score of the eight items was calculated, and Cronbach's α was .87.

Bicultural Identity Integration

The Bicultural Identity Integration Scale-Version 2 (BIIS-2; Huynh et al., 2018) was used to assess adolescents' BII blendedness and BII harmony. The BII blendedness subscale consists of seven items assessing the degree of dissociation versus overlap between the two cultural identities (e.g., "I feel Chinese and American at the same time"). The BII harmony subscale consists of 10 items assessing the degree of tension versus compatibility between the two cultural identities (e.g., "I find it easy to harmonize Chinese and American cultures"). Adolescents rated each statement on a 5-point Likert-type scale (1 = *strongly disagree* to 5 = *strongly agree*). We calculated mean scores and Cronbach's α s were .71 for blendedness and .87 for harmony.

Promotion of Mistrust Ethnic-Racial Socialization

The avoidance of outgroups subscale of the Asian American Parental Racial–Ethnic Socialization measure (Juang et al., 2016) was used to assess adolescents’ perceptions of parental ethnic-racial socialization that promote children’s mistrust towards individuals of other ethnic-racial backgrounds. Adolescents rated how often their parents engage in PMERS practices on a 5-point Likert-type scale (1 = *never* to 5 = *very often*) across four items (e.g., “Told you to avoid another racial or ethnic group”). Mean scores were calculated and the Cronbach’s α was .89.

Adolescent Internalizing Difficulties

Ten items from the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) were used to assess adolescents’ internalizing difficulties (i.e., emotional symptoms and peer relationship difficulties). Sample items include, “Often unhappy, depressed or tearful” and “Picked on or bullied by other children.” Both parents and adolescents rated on adolescents’ behaviors during COVID-19 on a 3-point scale (0 = *not true* to 2 = *certainly true*). The Cronbach’s α s were .76 for parents and .72 for adolescents. Scores of parents’ and adolescents’ reports were used to construct a latent variable of adolescent internalizing difficulties.

Analytic Plan

There were 218 parent-child dyads with children between the ages of 10- to 18-years-old. Among these dyads, 7 adolescents had missing data on almost all the study variables and were excluded, resulting in a final sample of 211 parent-child dyads. In order to minimize missing data, we conducted checks on the survey of each parent-child dyad upon completion. When we detected a large proportion of missing data, we contacted the dyad and ask them to review their responses and complete the missing items. Help with survey completion was provided, if needed. Additional data legitimacy checks were conducted for each case prior to finalizing the case

1 within the dataset. For example, participants with repeating response patterns were contacted via
2 phone or email and asked to review their responses. The participants were responsive when
3 contacted successfully. Surveys that were completed too quickly based on our piloting work and
4 the norm and range of time-completion for the full sample, or survey with responses that were
5 self-contradictory (e.g., participants reported being born in Mainland China but then reported
6 being third-generation immigrants) were excluded from the final dataset. We computed the final
7 scores for the variables by averaging the scores of the items. Therefore, we had less than 2%
8 missing data on the item level, but no missing data on the variable level.

9 Two separate path models were conducted in Mplus 7.0 to examine the main effects and
10 interaction effects of COVID-19-related racial discrimination, each dimension of BII, and
11 parents' PMERS on adolescents' internalizing difficulties. Significant interaction effects were
12 probed using simple slope analysis to examine the association at low (-1 SD) and high (+1 SD)
13 levels of the moderators. Adolescent gender, age, and family SES were controlled as covariates.
14 The assumption of normal distribution was violated, with COVID-19-related racial
15 discrimination and PMERS being positively skewed; thus, the robust maximum likelihood
16 estimator was used. Model fit was evaluated using the robust scaled chi-square ($S-B\chi^2$), the
17 comparative fit index (CFI), the root mean squared error of approximation (RMSEA), and the
18 standardized root-mean-square residual (SRMR). Good model fit was indicated by CFI > .95,
19 RMSEA < .05, and SRMR < .08. Acceptable model fit was indicated by CFI > .90, RMSEA < .08,
20 and SRMR < .10 (Hooper et al., 2008; Hu & Bentler, 1999).

21 Results

22 The means, standard deviations, and correlations among all variables are presented in
23 Table 1. Adolescent internalizing difficulties were positively correlated with COVID-19-related

1 racial discrimination and PMERS, and were negatively correlated with BII blendedness and BII
2 harmony. COVID-19-related racial discrimination was positively correlated with PMERS. Both
3 COVID-19-related racial discrimination and PMERS were negatively correlated with BII
4 harmony and not correlated with BII blendedness.

5 Results of the path models examining main and interactive effects of COVID-19-related
6 racial discrimination, PMERS, and the BII dimensions on adolescent internalizing difficulties are
7 shown in Table 2. After controlling for gender, age, and family SES, adolescents' perceived
8 COVID-19-related racial discrimination and PMERS had positive main effects on their
9 internalizing difficulties, whereas their perceived BII blendedness and BII harmony had negative
10 main effects on their internalizing difficulties. However, the main effect of COVID-19-related
11 racial discrimination on adolescents' internalizing problems was qualified by two significant
12 two-way interactions between COVID-19-related racial discrimination and BII-blendedness and
13 PMERS. Specifically, COVID-19-related racial discrimination predicted higher levels of
14 adolescent internalizing difficulties only at low levels of BII blendedness ($b = 0.76, p < .001$) but
15 not high levels of BII blendedness ($b = -0.01, p = .949$). In addition, COVID-19-related racial
16 discrimination predicted higher levels of adolescent internalizing difficulties only at high levels
17 of PMERS ($b = 0.46, p < .001$) but not low levels of PMERS ($b = 0.13, p = .518$).

18 Moreover, these two-way interactions were further qualified by two significant three-way
19 interactions. Regarding the COVID-19-related racial discrimination x PMERS x BII blendedness
20 interaction (see Figure 1a), adolescents' perceived COVID-19-related racial discrimination
21 predicted higher levels of internalizing difficulties at low levels of BII blendedness, and this
22 association was stronger at low levels of PMERS than at high levels of PMERS (*slope difference*
23 $= 0.28, p = .024$). In contrast, adolescents' perceived COVID-19-related racial discrimination

was not significantly associated with their internalizing difficulties at high levels of BII blendedness, regardless of the levels of perceived PMERS. Regarding the COVID-19-related racial discrimination x PMERS x BII harmony interaction (see Figure 1b), the positive association between COVID-19-related racial discrimination and adolescent internalizing difficulties was significant under all conditions except at high levels of BII harmony and low levels of PMERS. The association was strongest at high levels of BII harmony and high levels of PMERS, which was significantly stronger than at low levels of BII harmony and high levels of PMERS (*slope difference* = 0.47, $p = .019$), but not significantly different from at low levels of BII harmony and low levels of PMERS.

Potential age differences were explored by examining the 4-way interaction between age and racial discrimination, racial- ethnic socialization, and bicultural identity integration in predicting adolescent internalizing difficulties. However, none of the 2-way, 3-way, and 4-way interactions between age and other constructs were significant. Therefore, we excluded the interactive effects of age in the final models for parsimony.

Discussion

The present study focused on Chinese American adolescents' integration of their bicultural identities and perceptions of their parents' promotion of mistrust in outgroups as two ethnic-racial constructs that are particularly relevant for these minority youths' development during the COVID-19 pandemic. Overall, a complex interplay among adolescent's BII dimensions and PMERS in the association between COVID-19-related racial discrimination and adolescent mental health was revealed.

The Independent Effects of COVID-19-Related Racial Discrimination, BII, and PMERS

Chinese American adolescents' experiences of being the direct victims of racial discrimination because of the COVID-19 pandemic were associated with greater internalizing difficulties, consistent with previous research (Cheah et al., 2020; Juang & Alvarez, 2010; Juang & Cookston, 2009). In line with previous findings on mostly adult populations (e.g., Chen et al., 2008; Tikhonov et al., 2019), both BII harmony and BII blendedness were associated with fewer internalizing difficulties among Chinese American adolescents. In the limited literature on BII and mental health outcomes, BII harmony was more consistently associated with positive adjustment outcomes than BII blendedness in adults (Huynh et al., 2018; Tikhonov et al., 2019). Our findings generally indicated that both BII harmony and BII blendedness were associated with fewer internalizing difficulties, perhaps because adolescents are undergoing a heightened period of identity development and may reap greater benefits from being more adept at integrating their heritage and American group identities and moving fluidly between the two identities as needed while navigating various contexts (Vedder & Phinney, 2014).

In contrast, parental ethnic-racial socialization that conveys messages warning against or discouraging children from interacting with other racial-ethnic groups was associated with more internalizing difficulties among Chinese American adolescents, consistent with previous research revealing negative associations between parental PMERS practices and child adjustment (Atkin et al., 2018). The negative socialization messages conveyed by parental PMERS may impair Chinese American adolescents' mental health through heightening fears of others outside their ethnic-racial groups without effective coping or empowering components (Huynh & Fuligni, 2008) and promoting intergroup hostility (Juang et al., 2017).

The Moderating Roles of BII Dimensions and Ethnic-Racial Socialization

1 Importantly, the main effects of adolescents' experiences of COVID-19-related racial
2 discrimination on internalizing difficulties were further qualified by two- and three-way
3 interactions between BII harmony, BII blendedness, and PMERS. The association between
4 adolescents' COVID-19-related racial discrimination experiences and more internalizing
5 difficulties was buffered by BII harmony and blendedness and exacerbated by PMERS.
6 Specifically, COVID-19-related racial discrimination was associated with more internalizing
7 difficulties among Chinese American adolescents with low levels, but not high levels, of BII
8 blendedness. Further, COVID-19-related racial discrimination was also associated with more
9 internalizing difficulties among Chinese American adolescents who reported receiving high
10 levels of parental socialization messages that convey mistrust of other ethnic-racial groups
11 during the COVID-19 pandemic.

12 However, both two-way interactions were further qualified by significant three-way
13 interactions, where Chinese American adolescents' BII blendedness and BII harmony interacted
14 with their parents' PMERS in moderating the association between their COVID-19-related racial
15 discrimination experiences and internalizing difficulties. Adolescents' perceived COVID-19-
16 related racial discrimination experiences were not significantly associated with their internalizing
17 difficulties when adolescents reported having high levels of BII blendedness, regardless of their
18 level of perceived parental PMERS. Chinese American adolescents who perceive greater overlap
19 between their Chinese and American identities may view themselves as a member of both their
20 own ethnic-racial group and their American identity group, with fewer distinctions between the
21 two aspects of their identities (Crisp & Hewstone, 2007). These adolescents may be less
22 impacted by racial discrimination towards their ethnic-racial group as they can switch their
23 cultural orientations more appropriately when either one of their cultural identities is challenged

(Friedman et al., 2012). The protective function of high levels of BII-blendedness held regardless of the levels of their parents' PMERS.

Surprisingly, for adolescents with more separate Chinese and American identities, their vulnerability to the negative effects of racial discrimination was lessened (although still significant) at high levels of PMERS. For Chinese American adolescents with more separate and compartmentalized Chinese and American identities, socialization messages about the potential harm that other ethnic-racial groups might incur temporarily during the COVID-19 pandemic may lead them to view people from other ethnic-racial groups as outgroup and distant and decrease self- or ingroup blaming, which may be protective against this social rejection.

We also found a three-way interaction among Chinese American adolescents' perceived racial discrimination, BII harmony, and parental PMERS. COVID-19-related racial discrimination was not associated with internalizing difficulties only for adolescents who reported high levels of BII harmony and perceived low levels of parental PMERS. Adolescents who conceived their Chinese and American identities as complementary rather than conflicting may be able to draw from resources and supports from both social identities through greater cognitive flexibility (Cheng & Lee, 2013) and respond to the challenges in more culturally appropriate and congruent ways (Cheng et al., 2006). This protective function of a harmonious BII was further supported by parents' *low* engagement in practices that socialize messages of mistrust in other ethnic-racial groups, which did not pressure them to choose between their two identities.

Unlike Chinese American adolescents with high levels of BII blendedness, however, adolescents with high levels of BII harmony were still susceptible to the adverse effects of racial discrimination when their parents used high levels of PMERS. When receiving acute negative

cues from the mainstream society (i.e., COVID-19-related xenophobia against their ethnic-racial group) along with parental socialization that distances them from one of their social identities, Chinese American adolescents with highly harmonious bicultural identities may be more susceptible to internalizing difficulties because they feel that they have to choose between their identities and reject one or both valued aspect(s) of themselves. Furthermore, adolescents may perceive their parents' rejection of the outgroup as contradictory to their own orientation, which can also lead to parent-child misunderstandings (Wang et al., 2012), intergenerational conflicts, and internalizing difficulties (Liu & Lau, 2013).

Limitations and Future Research

The present study has several limitations that should be noted. The cross-sectional design of the present study prevents us from drawing causal conclusions on the associations among COVID-19-related racial discrimination, BII, parental PMERS, and internalizing difficulties in Chinese American adolescents. For example, stronger ethnic-racial identification may lead ethnic-racial minority individuals to notice and perceive greater incidences of discrimination targeted towards their group (Yip, 2018), although there appears to be stronger theoretical and empirical evidence for the directions of relations that we proposed (Yip et al., 2019). Future research using longitudinal designs are needed to examine the directionality of the effects. In addition, the long-term effects of these experiences during COVID-19 may have a context- and chronologically-specific function, meaning, and implication (Bornstein, 2017; Seaton et al., 2018).

Most of the constructs in this study were self-reported by adolescents, which may lead to problems associated with common method variance and social desirability bias (Podsakoff et al., 2012). Although we combined both parent- and child-reports in assessing the outcome of

1 adolescents' internalizing difficulties, future research using multiple reporters and multiple
2 methods (e.g., interviews) are warranted to further validate these findings. Another limitation in
3 this study stems from the sample, which mainly comprised second-generation Chinese American
4 adolescents from intact, middle-class families. Our findings may not be generalizable to the
5 experiences of Chinese American families of different generational and composition status, as
6 well as socioeconomic statuses, for whom these experiences of racial discrimination, bicultural
7 identity integration, and ethnic-racial socialization strategies, and their interactions may vary.
8 Our sample size was also small, and power analyses for the two latent regression models via
9 using *Mplus* 8.6 Monte Carlo simulation indicated that a sample size of 400 to 500 is
10 recommended for future research to replicated the main and interaction effects of racial
11 discrimination, BII, and PMRES found here.

12 In the present study, we focused on BII because this process is less studied and
13 understood than ethnic identity development. However, future research that examines both ethnic
14 identity and BII is needed, especially during adolescence when the process of identity integration
15 can be particularly challenging (Schwartz et al., 2015). Such work can explore the unique
16 benefits of identity integration over that of ethnic identity private regard and reveal complex
17 ways in which these processes complement and/or contradict each other to provide a more
18 comprehensive understanding of the social identity development of ethnic-racial minority youth.

19 Moreover, we controlled for adolescent gender due to the limited sample size. However,
20 Chinese American adolescent boys and girls may experience racial discrimination, socialization,
21 and their impact in unique ways due to their distinct identities and social positions. The
22 intersectional perspective posits that the experiences of ethnic minority individuals are shaped by
23 their intersecting social identities (Santos & Toomey, 2018), including race-ethnicity and gender.

Parents may also engage in different racial-ethnic socialization practices due to different gender role expectations (Suárez-Orozco & Qin, 2006). Therefore, future research should directly investigate the role of gender to gain a more nuanced understanding of Chinese American adolescents' experiences of COVID-19 racial discrimination and risk and protective factors.

Finally, we focused on Chinese American adolescents' direct experiences of racial discrimination during the COVID-19 pandemic because they seemed to be the most salient. However, racism occurs in various interpersonal, institutional, and cultural contexts, and discrimination based on race is manifested in various forms and levels, including through systems and structures (Seaton et al., 2018). These various forms and levels of discrimination and how they might uniquely affect Chinese American adolescents during COVID-19 and beyond require further attention as the pandemic itself continues to evolve.

Implications and Conclusions

The racialization of disease is not a new phenomenon. The first Severe Acute Respiratory Syndrome also led to increased racism targeting Chinese and other Asian individuals (Person et al., 2004). There is clear historical evidence of systemic and interpersonal racism experienced by Asian Americans (Goto et al., 2002) and Chinese communities have often been perceived as public health problems in Western societies (Gee et al., 2020). Thus, racial discrimination and the ethnic-racial socialization experienced by Chinese American adolescents during the current COVID-19 pandemic, and potential protective and risk factors must be understood within this broader historical context (Chen et al., 2020).

The present study was the first to examine the interactive effects of COVID-19-related racial discrimination, Chinese American adolescents' BII, and their perceptions of parents' engagement in PMERS in predicting their mental health during this stressful period. We focused

on Chinese American adolescents' ability to integrate their Chinese and American social identities in harmonious and blended ways because of its significance for bicultural minority youth, although bicultural integration has generally been understudied in developmental sciences. Moreover, in support of García Coll et al.'s (1996) model, adolescents' identity processes and their parents' ethnic-racial socialization with regard to other racial-ethnic groups both independently and interactively impact Chinese American adolescents' psychosocial adaptation under conditions of social stratification during this public health crisis. As all families are challenged by the numerous uncertainties and changes to their daily lives cause by this pandemic, Chinese American adolescents must also navigate increased Sinophobia in person and online (Cheah et al., 2020).

Our findings provided insights into the impact of the crisis in Chinese American and other Asian American communities, which have also been targeted by anti-Asian sentiments (Chen et al., 2020), and have implications for more immediate strategies during the COVID-19 pandemic, which is for mental health professionals to attend to the racism-related experiences and mental health needs of Asian American adolescents throughout the COVID-19 pandemic (Cheah et al., 2020). Efforts need to be made to develop effective public health and educational strategies to decrease the stigmatization of and discrimination against Chinese and other Asian Americans (Chen et al., 2020; Wakabayashi et al., 2020), and facilitate adolescents' integration of their bicultural identities while enhancing parents' capacity and ability to support their children during this period of increased stress. Furthermore, our findings indicate that parents play a critical role in socializing youths' ethnic-racial and/or cultural identities, but the process of ethnic-racial socialization is interactive (Umaña-Taylor et al., 2013); thus, both adolescents' and

- 1 parents' contributions should be considered simultaneously in promoting resilience in Chinese
- 2 American families.

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Table 1

Descriptive Statistics and Correlations Among Study Variables

Variable	1	2	3	4	5	6	7	8
1. Gender ^a	—							
2. Age	.02	—						
3. Family SES ^b	.14*	.11	—					
4. Racial discrimination	-.01	.15	-.08	—				
5. BII-B	.13	.09	.28***	-.01	—			
6. BII-H	.06	-.12	.15*	-.38***	.29***	—		
7. PMERS	-.14*	.12	-.21**	.31***	-.03	-.32***	—	
8. Internalizing difficulties (latent)	-.17*	.03	-.37***	.44***	-.27***	-.55***	.41***	—
<i>M</i>	—	13.92	56.12	1.46	3.6	3.7	1.5	0
<i>SD</i>	—	2.33	12.90	0.70	0.6	0.7	0.8	1.07

Note. BII-B = Bicultural Identity Integration Blendedness; BII-H = Bicultural Identity Integration Harmony; PMERS = Promotion of Mistrust Racial-Ethnic Socialization. The mean for the latent variable (internalization difficulties) is fixed at zero in Mplus.

^a 0 = boys, 1 = girls. ^b Family SES scores range from 8 to 66, with higher scores indicating higher SES.

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 2

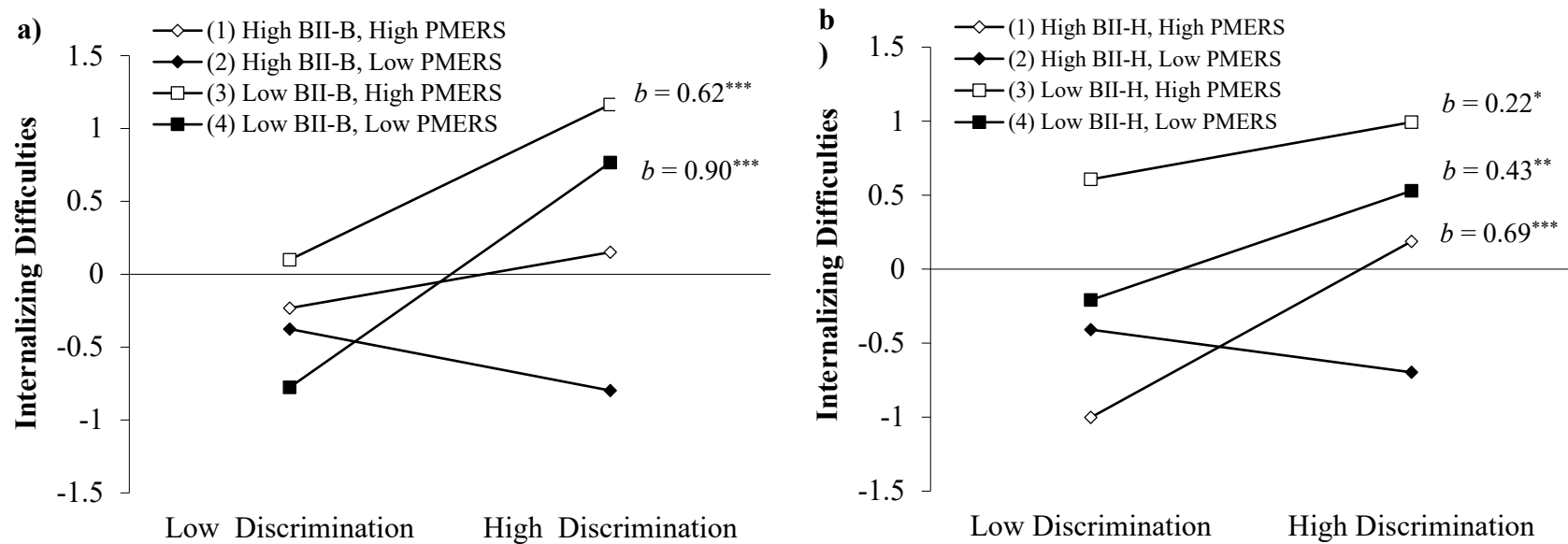
Main and Interactive Effects of COVID-19-Related Racial Discrimination, Bicultural Identity Integration Blendedness (BII-B), Bicultural Identity Integration Harmony (BII-H), and Promotion of Mistrust Ethnic-Racial socialization (PMERS) on Adolescent Internalizing difficulties

BII-B and PMERS as moderators					BII-H and PMERS as moderators				
Predictor	<i>B</i>	<i>SE</i>	β	<i>p</i>	Predictor	<i>B</i>	<i>SE</i>	β	<i>p</i>
Covariates					Covariates				
Gender ^a	-0.11	0.18	-.05	.516	Gender ^a	-0.15	0.18	-.06	.408
Age	0.00	0.04	.00	.987	Age	-0.01	0.04	-.02	.756
Family SES	-0.02	0.01	-.21	.002	Family SES	-0.02	0.01	-.27	< .001
Main effects					Main effects				
Racial discrimination	0.37	0.12	.29	.001	Racial discrimination	0.29	0.15	.22	.045
BII-B	-0.52	0.15	-.28	.001	BII-H	-0.71	0.14	-.42	< .001
PMERS	0.36	0.14	.27	.011	PMERS	0.24	0.10	.17	.015
Two-way interaction					Two-way interaction				
Racial discrimination x BII-B	-0.64	0.22	-.24	.003	Racial discrimination x BII-H	-0.05	0.13	-.03	.720
Racial discrimination x PMERS	0.06	0.08	.06	.478	Racial discrimination x PMERS	0.20	0.09	.20	.029
BII-B x P PMERS	-0.05	0.15	-.02	.763	BII-H x PMERS	-0.22	0.16	-.12	.169
Three-way interaction					Three-way interaction				
Racial discrimination x BII-B x PMERS	0.38	0.16	.21	.019	Racial discrimination x BII-H x PMERS	0.48	0.15	.35	.001

Note. BII-B = Bicultural Identity Integration Blendedness; BII-H = Bicultural Identity Integration Harmony; PMERS = Promotion of Mistrust Racial-Ethnic Socialization. For BII-B model, $R^2 = .45$. $S-B\chi^2(9, N = 211) = 9.60, p = .384$, CFI = 1.00, SRMR = .02, RMSEA = .02, 90% CI [.00, .08]. For BII-H model, $R^2 = .53$. $S-B\chi^2(9, N = 211) = 16.61, p = .055$, CFI = .95, SRMR = .02, RMSEA = .06, 90% CI [.00, .11]. ^a 0 = boys, 1 = girls.

Figure 1

Three-Way Interactions Among Racial Discrimination, Ethnic-Racial Socialization, and (a) Bicultural Identity Integration Blendedness (BII-B) and (b) Bicultural Identity Integration Harmony (BII-H)



Note. BII-B = Bicultural Identity Integration Blendedness; BII-H = Bicultural Identity Integration Harmony; PMERS = Promotion of Mistrust Ethnic-Racial Socialization. * $p < .05$. ** $p < .01$. *** $p < .001$.