Cultural Diversity and Ethnic Minority Psychology

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Objective: The objective of this study was to examine whether experiences of discrimination have increased during the pandemic, particularly among negatively stigmatized racial/ethnic groups, and whether such experiences have exacerbated feelings of social isolation. ***Method:*** Discrimination and social isolation were assessed before and during the pandemic in a sample of 263 Black and White young adults attending a large, predominantly White 4-year research university in the Southeastern region of the United States (52% Black, 48% White, 53% female, mean age = 19.2). ***Results:*** Increases in discrimination were evident among Black but not White participants. Black participants also reported greater increases in social isolation than White participants, and changes in discrimination partially mediated the emergent racial disparity in social isolation. ***Conclusions:*** Findings are consistent with theoretical perspectives on discrimination during times of stress and suggest the need for broader attention to the impact of the pandemic on unfair treatment of stigmatized groups.

Public Significance Statement
The results of this study suggest notable shifts in experiences of discrimination and social isolation during the COVID-19 pandemic. In particular, the findings indicate that Black young adults experienced increases in discrimination, which exacerbated Black–White racial disparities in social isolation. Determining the degree to which the reported changes are enduring, evident in other demographic groups, and of longer term developmental and public health significance will be important next steps to inform a continuing pandemic response, and responses to future societal-level stressful events.

Keywords: COVID-19 pandemic, racial disparities, social isolation, experiences of discrimination, young adults

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Burdens of the COVID-19 pandemic have been enormous (Beaney et al., 2020) and have been disproportionately borne by those who were already disadvantaged (Serkez, 2021). Rates of infection and mortality have been higher among racial/ethnic minority and socio-economically disadvantaged groups (Woolf et al., 2021), as have rates of job, housing, and financial loss (Perry et al., 2021). A burgeoning literature now also addresses the deleterious impact of the early phases of the pandemic on experiences of social isolation and psychological distress (Ernst et al., 2022; Ettman et al., 2020; Peng & Roth, 2022; Pierce et al., 2020; Salari et al., 2020). Few studies, however, have considered the role that unfair treatment and discrimination may play in shaping adverse psychosocial consequences of the pandemic.

Have experiences of discrimination increased? Are such increases happening to a greater degree among marginalized racial/ethnic groups? And if such changes are occurring, what are their consequences for social isolation? These questions are of theoretical and

practical importance in illuminating the impact of the COVID-19 pandemic and advancing understanding of unfolding social inequities, but as yet have been largely unaddressed by empirical research (Rosenfeld et al., 2022; Stok et al., 2021). Two notable exceptions include work documenting adverse treatment of Asian Americans during the pandemic (Chen et al., 2020; Wu et al., 2021), and research showing higher levels of coronavirus-specific discrimination among racial/ethnic minority groups as compared to Whites (Liu et al., 2020). To our knowledge, few, if any, studies have examined whether general perceived discrimination (i.e., unfair treatment due to any cause) has increased during the pandemic from prepandemic levels or its potential consequences for social isolation. The significance of these topics is supported by several established literature.

Foundational theories in social cognitive psychology suggest that stress, fatigue, and related cognitive depletion are associated with increased reliance on stereotypes (Bodenhausen, 1990; Tajfel & Turner, 2001). For example, studies show that as stress and negative emotions increase, so do responses that reflect oversimplified cognitive schema or fixed ideas about social categories such as race (Bodenhausen, 1993; Sherman & Frost, 2000). A related line of research also indicates that under conditions of pathogen threat—the perception of heightened infectious disease risk—authoritarian attitudes and right-wing conservative perspectives increase (Moran et al., 2021; Pazhoohi & Kingstone, 2021). Some evidence also suggests that experimental priming of pathogen threat heightens prejudice toward unfamiliar out groups (Faulkner et al., 2004; Lu et al., 2021), and increases anti-Black bias (O'Shea et al., 2020).

Another related line of research indicates that discrimination may also increase under conditions of resource scarcity, such as during recessions (Anderson et al., 2020; Bianchi et al., 2018; Krosch et al., 2017). Collectively, these literatures suggest that because the pandemic and related changes to daily life may have (a) been experienced as stressful, (b) induced competition for resources, and (c) increased perceptions of disease risk—prejudice and reliance on heuristic processing strategies (i.e., habitual responses based on stereotypes) are likely to have increased. Although experiences of discrimination and unfair treatment may increase among all demographic subgroups under these conditions, increases in experiences of discrimination are likely to be most pronounced among racial/ethnic minority groups who have been historically marginalized and are more likely to be the targets of negative stigmatization (Blessum et al., 1998; Kusche & Barker, 2019).

As noted above, there is substantial evidence that the COVID-19 virus has had a greater impact in minority communities. For example, rates of infection and mortality have been more pronounced in Black communities than among Whites in the United States (Woolf et al., 2021). Reasons for these disparities have been detailed elsewhere (Garcia et al., 2021; Marmot & Allen, 2020; Njoku, 2021) and relate to structural racism and resulting race differences in resources and exposures (e.g., within neighborhood and work contexts) that undermine health within minority communities and increase Black Americans' vulnerability to infection and preexisting conditions that elevate risk of COVID-19 mortality (National Academies of Sciences, Engineering, & Medicine, 2021). Substantial media attention given to race differences in infection early in the pandemic may have heightened negative feelings toward minority communities and led to increased unfair treatment toward those depicted as having high rates of viral infection and mortality (Chen et al., 2020; Su et al., 2020). For example, disturbing increases in violence and hate crimes directed toward Asian Americans were documented (Gover et al., 2020; Pan et al., 2021; Wu et al., 2021). However, the degree to which experiences of discrimination may have increased within other racial/ethnic minority communities has received less attention, despite these communities frequently being depicted in the media as having higher rates of COVID-19 infection.

Social isolation, commonly defined as a lack of available social connections (Leigh-Hunt et al., 2017; Steptoe et al., 2013), is clearly of concern during the pandemic. Social distancing guidelines in the United States were implemented in March 2020, with substantial consequences for everyday patterns of social interaction (Hsiang et al., 2020). As a result, many have experienced increases in social isolation across this period (Ernst et al., 2022; Hamza et al., 2021). Additionally, less advantaged segments of the population are likely to have been more vulnerable to these increases. For example, due to a disproportionate burden of stressful experiences during the pandemic (e.g., family financial strain, job loss, death of a family member) and poorer access to stable internet connections and computer resources, Black Americans may have been less well situated to access and maintain their existing social networks (Fairlie, 2007; Perry et al., 2021). Furthermore, if experiences of discrimination increased more among Black Americans, this may also have led to greater increases in social isolation. By considering changes in social isolation alongside discrimination, the present study directly addresses the role that discrimination might play in shaping changes in social isolation during the pandemic and differences in these changes between Black and White Americans.

Of particular methodological importance is the need for comparative assessments of discrimination and loneliness before and during the pandemic. One such opportunity pertained to a cohort of African American (Black) and European American (White) young adult college students, who were assessed prior to the pandemic (during the 2018–2019 academic year) and again during the early months of the pandemic in the United States. Young adults are an important group in which to address the impact of the pandemic for several reasons: (a) early adulthood is a pivotal time in the life course for negotiating many life challenges and uncertainties, including establishing career and relational identities that may set the course of subsequent development and health (Arnett et al., 2014; Schwartz, 2016); (b) there is evidence that social disruptions and related detrimental effects of the pandemic may have been greater among young adults (O'Connor et al., 2021; Pierce et al., 2020); (c) young adulthood is a particularly salient developmental period for the onset of psychopathology, with studies estimating that nearly three quarters of all mental disorders start before the mid-20s (Kessler et al., 2007; Solmi et al., 2022); and (d) early adulthood is particularly fraught for Black young adults in the United States, who experience more interpersonal racism and discrimination than other groups and must grapple with the significance and meaning of an identity that is often devalued in society (Fuller-Rowell et al., 2011; Hope et al., 2015). Thus, understanding how this age group was impacted by the pandemic is of particular importance to policy discussions and debates surrounding how the adverse economic and health consequences of the pandemic—and inequities in the distribution of these consequences—can be mitigated.

College contexts, though relatively advantaged socioeconomically, are an important stage on which to examine unfolding inequities of

the pandemic among young adults. Black college students are known to experience disproportionate stress exposures, which come with documented mental and physical health burdens (Fuller-Rowell et al., 2017; Priest et al., 2013), and undermine some of the health benefits typically obtained from higher educational attainment (Assari, 2018; Fuller-Rowell et al., 2015). These troubling realities suggest that close monitoring of unfolding inequalities within contexts of higher education are of paramount importance.

Based on the above lines of evidence, we postulate (a) that, for both Black and White students, experiences of discrimination and social isolation will have increased during the early phase of the pandemic from prepandemic levels; (b) that increases in discrimination will have been greater among Black than White students; and (c) that greater increases among Black students will partially mediate the widening of racial disparities in social isolation.

Method

Participants and Design

Participants were 263 first- and second-year undergraduate college students (52% Black; 48% White; 53% female; M_{age} = 19.21 years, SD = 1.01), attending a large selective 4-year research university in the Southeastern region of the United States with a predominantly White student body of more than 20,000. Informed consent was obtained from all participants, and all human subjects' activities were conducted in compliance with an appropriate internal review board. Approximately equal numbers of African American (Black) and European American (White) students were contacted during the academic year, between September 2018 and April 2019 ($T1$), using official university records to identify demographic characteristics of students. This approach allowed for adequate sample sizes to examine differences between Black (N = 137, 58% female) and White (N = 127, 48% female) students. Inclusion criteria were (a) being an undergraduate student aged 18–25 and (b) having a race of Black or White in student records (Fuller-Rowell et al., 2021). White students who were first generation (did not have a parent who had graduated from a 4-year college) were oversampled to reduce potential confounding by socioeconomic status. In total, 468 Black and 608 White students (33% first generation in both groups) were sent information (pamphlet and letter) about the study via mail (to their local and permanent addresses) and emails (to their university email address). The study was described as seeking to understand factors in students' lives that influence their health. The final sample contained 33% first-generation students in both racial/ethnic groups. Median household income was $100,000 ($SD$ = 68,000), 20% grew up in families that did not own their own home for >50% of their childhood, 8% had household incomes less than 150% of the federal poverty line, and 34% had family incomes less than 300% of the poverty line. For reference, 300% of the federal poverty line for a family of four in 2019 was $77,250, and 43% of the Black sample and 24% of the White sample fell below that threshold. Participants were compensated $70 for the initial assessment, during which a variety of psychosocial and health measures were administered. At the baseline assessment, 10% of students lived at home with family and remaining 90% living in on- or off-campus housing.

A follow-up assessment was conducted 1.27 years later (SD = 0.18), between April 27 and June 12, 2020 ($T2$), during the first wave of the COVID-19 pandemic in the United States. At the follow-up, 61% of students had experienced a change in housing, and 98% of those indicated that the change was to have moved back home with family. Participants were emailed a Qualtrics survey and compensated $25 for their participation. Of the 263 participants in the $T1$ sample, 76% (N = 200) participated in the $T2$ survey (56% female, 49% Black). Within each time point, there was less than 1% of missing data at $T1$ and less than 2% at $T2$. Missing data were addressed using full-information maximum likelihood estimation (FIML). Levels of missingness over time, and within each time point, were acceptable for FIML estimation (Enders, 2010). Using FIML estimation, including variables associated with attrition in the models, helps to correct for bias that may be introduced by selective attrition and allows for the full $T1$ sample (N = 263) to be included in all analyses (Acock, 2005; Enders, 2013). There was a statistical trend such that those lost to attrition between $T1$ and $T2$ were slightly more likely to occur among Black (p = .074) and female (p = .058) respondents, respectively. Sensitivity analyses focusing only on the participants with complete data at both time points (i.e., using listwise deletion) yielded no differences in the pattern of findings reported.

Measures

Everyday Discrimination

Perceptions of discrimination were assessed at both time points using the Everyday Discrimination (EVD) Scale (Williams et al., 1997). The scale is a widely used measure to assess perceived discrimination with numerous studies documenting internal consistency (Krieger et al., 2005; Taylor et al., 2004) and associations with health (Williams & Mohammed, 2009). For each of the nine items, participants indicated how often experiences of unfair treatment occurred in their day-day-day life (e.g., "you are treated with less courtesy than other people," "people act as if they are afraid of you," and "people act as if they think you are dishonest"). Items were rated on a 7-point scale (1 = *never* to 7 = *several times a day*) and mean scored at both time points (α_{T1} = .878; α_{T2} = .904). After completing the measure, a follow-up question also asked participants to indicate the main reason for the experiences reported. Descriptive statistics for reasons (attributions) reported at each time point are provided in the online Supplemental Materials.

Social Isolation/Support

At both time points, social isolation/support was assessed using the Interpersonal Support Evaluation List–12 (ISEL-12; Cohen et al., 1985). The measure is widely used in health research, prior studies have documented internal consistency, and items have been shown to load well on a single factor (Merz et al., 2014). Convergent validity with other measures of social support/isolation, and predictive validity with mental and physical health, have also been established (Dinenberg et al., 2014; Payne et al., 2012). The scale is organized into three dimensions with four items assessing each dimension: (a) *appraisal* (having people to turn to when you have a personal problem), for example, "I feel that there is no one I can share my most private worries and fears with" and "If a family crisis arose, it would be difficult to find someone who could give me good advice about how to handle it"; (b) *belonging* (having people to do

recreational things with), for example, "If I wanted to have lunch with someone, I could easily find someone to join me" and "If I wanted to go on a trip for a day (e.g., to the country or mountains), I would have a hard time findings someone to go with me"; and (c) *tangible support* (having people available who are willing to help with practical tasks), for example, "If I were sick, I could easily find someone to help me with my daily chores" and "If I was stranded 10 miles from home, there is someone I could call who could come and get me." For each of the items, respondents indicate how true or false the statement is on a 4-point scale from definitely false to definitely true (coded 0–3). A sum score of all items is taken as an overall index of social isolation/support. For the present study, items were coded such that higher scores indicate greater social isolation or less support ($\alpha_{T1} = .837$; $\alpha_{T2} = .790$), and thus, for simplicity, we refer to the measure as social isolation throughout. Because the majority of items included in the ISEL-12 directly imply social isolation, we contend that it is reasonable to refer to the measure as such. Although some prior research has distinguished social support from social isolation (Gable & Bedrov, 2022), support and isolation are closely linked constructs empirically and conceptually, for this study, we do not distinguish them.

Demographic Covariates

Both race and gender were coded from student records obtained from the university (White = 0, Black = 1; female = 0, male = 1) and confirmed via self-reports. Age was assessed at time $T1$ and coded in years. Parent education and household income were measured as indicators of family socioeconomic status. Participants were asked to report each parent's level of education on an 11-point scale ranging from no school or some grade school (coded as 1) to PhD, EDD, MD, DDS, LLB, LLD, JD, or other professional degree (coded as 11). Parent education levels were averaged to create a single-parent education score. Household income was calculated by summing participant responses of individual parent income in the primary household, measured on a scale with 30 possible categories ($1 ≤ $5,000–$30 ≥ $500,000). Family household income was then divided by the corresponding U.S. Census 2010 poverty line based on family size to calculate a family-adjusted measure of household income using an income-to-needs ratio (Fuller-Rowell et al., 2012).

Analysis Plan

Our analytic approach followed three strps. First, unadjusted mean differences in discrimination and social isolation were plotted for each racial group and compared using t tests. Second, a series of longitudinal structural equation models (SEM) were estimated in Mplus Version 8.4 to examine predictors of change in each measure of interest (Muthen & Muthen, 1998; Newsom et al., 2013). Models were estimated separately for social isolation and everyday discrimination before fitting a combined model. To allow for estimates to be interpreted with respect to change over time in $T1$ SD units, $T2$ measures were standardized by subtracting the $T1$ mean and dividing by the $T1$ SD (Cohen et al., 2003). Model 1 included only one predictor variable, the $T1$ autoregressive control, which was z scored. In these models, the intercept can be interpreted as the mean change in the outcome variable (in $T1$ SD units) for the full sample between the two assessments. To examine race differences in change adjusting for other demographic variables, Model 2 then added race, age, gender, parent education, and household income as predictors. Age, parent education, and household income were z scored for clarity of interpretation.

To account for measurement error in assessment of social isolation and everyday discrimination, single indicator latent variables were used for each scale score and residual variances were fixed using the formula (1 − Reliability) × Sample Variance (Choi et al., 2011; Hayduk, 1987). Cronbach's α was used to estimate reliability at each time point. Using this approach, model parameter estimates are equivalent to lagged regression models, with the only key difference being that measurement error was specified rather than assumed to be zero (Cole & Preacher, 2014; Newsom et al., 2013). Last, a final structural equation model was estimated using the same modeling strategy to examine indirect effects of race on social isolation through everyday discrimination. Indirect effects were estimated using the product of coefficients method with bias-corrected bootstrapped confidence intervals (Hayes & Scharkow, 2013). Two waves of data offer an initial step for mediation analyses and provide important strengths over cross-sectional analyses (Cole & Maxwell, 2003; Roth & MacKinnon, 2011). Additional analyses probed methodological assumptions, considered possible alternative explanations for the findings, and examined possible moderation by race, sex, and socioeconomic status.

Results

Correlations and descriptive statistics for the full sample are shown in Table 1. Participants reported significantly more social isolation and discrimination at $T2$ than at $T1$. In the full sample, social isolation increased between $T1$ and $T2$ by 2.08 units ($SE = 0.63$, $p = .001$; 0.31 SD units) and everyday discrimination increased by 0.20 units ($SE = 0.09$, $p = .024$; 0.23 SD units). Experiences of discrimination were positively correlated with social isolation at both $T1$ ($r = .27$, $p < .001$) and $T2$ ($r = .34$, $p < .001$). Descriptive statistics, shown separately for Black and White participants, are reported in Table 2. Black participants had lower family income than White participants. Black participants reported more experiences of discrimination at $T2$ but not $T1$, and higher levels of social isolation at both time points than White participants. These findings are further elucidated below.

Changes in Everyday Discrimination

Figure 1 shows unadjusted means of everyday discrimination by race at $T1$ and $T2$. The unadjusted race differences in everyday discrimination were not significant at the $T1$ assessment ($p = .187$). However, Black students had substantially higher levels of discrimination than White students at the $T2$ assessment (M difference = 0.61 SD units, $SE = 0.16$, $p < .001$).

Regression models were estimated in Mplus to examine the magnitude of changes in everyday discrimination and to consider race differences in change across the two time points, adjusting for age, gender, and socioeconomic status (parent education and household income). Results from Model 1 indicated that discrimination at $T1$ was a significant predictor of discrimination at $T2$, explaining 38% of the $T2$ variance ($B = 0.73$, $SE = 0.08$, $p < .001$). The Model 1 intercept also indicated that, in the full sample, the average increase in everyday discrimination between $T1$ and $T2$ was 0.23 SD units ($SE = 0.08$, $p = .004$). In Model 2, race was added as a predictor and

Table 1
Correlations and Descriptive Statistics for T1 and T2 Variables

Study variable	1	2	3	4	5	6	7	8
1. Race (Black)	—							
2. Sex (female)	0.10	—						
3. Parent education	0.02	−0.02	—					
4. Income-to-needs ratio	**−0.26**	−0.07	**0.30**	—				
5. *T*1 discrimination	0.08	0.07	0.07	0.03	—			
6. *T*2 discrimination	**0.27**	0.05	0.01	−0.04	**0.56**	—		
7. *T*1 social isolation	**0.13**	0.01	−0.03	−0.07	**0.27**	**0.33**	—	
8. *T*2 social isolation	**0.21**	**−0.17**	−0.01	0.01	0.16	**0.34**	**0.45**	—
M (or %)	(52.1)	(53.6)	7.43	4.54	1.94	2.14	7.46	9.54
SD			2.04	3.03	0.85	0.98	6.68	6.68

Note. T = time. Correlations and descriptive statistics were generated using full-information maximum likelihood in Mplus allowing the full sample to be included ($N = 263$). Statistically significance correlations ($p < .05$) are shown in bold font.

was found to explain an additional 6% of the variance in everyday discrimination at T2 after adjusting for covariates. The magnitude of this effect indicated that Black students experienced a 0.55 *SD* unit ($SE = 0.14$, $p < .001$) greater increase in everyday discrimination scores between T1 and T2 than White students. Specifically, Black students had a 0.52 *SD* unit ($SE = 0.11$, $p < .001$) increase in everyday discrimination from T1 to T2, whereas White students had no significant change in everyday discrimination from T1 to T2 ($B = −0.03$, $SE = 0.10$, $p = .773$).

Changes in Social Isolation

Figure 2 shows mean levels of social isolation by race at T1 and T2. Black students reported significantly higher levels of social isolation than White students at both T1 (M difference = 0.27 *SD* units, $SE = 0.12$, $p = .027$) and T2 (M difference = 0.44 *SD* units, $SE = 0.14$, $p = .002$). The magnitude of the race difference in social isolation at T2 was nearly double that of T1.

Regression models were again estimated in Mplus to examine changes in social isolation and to consider race differences in change across the two time points, adjusting for age, gender, parent education, and household income. Results from Model 1 indicated that social isolation at T1 was a significant predictor of isolation at T2, explaining 32% of the variance after adjusting for demographic covariates ($B = 0.55$, $SE = 0.08$, $p < .001$). The Model 1 intercept indicated that, in the full sample, the average increase in social isolation between T1 and T2 was 0.31 *SD* units ($SE = 0.07$, $p < .001$).

Table 2
Descriptive Statistics for Black and White Participants

	White students	Black students	
Variable	$M \pm SD$ (%)	$M \pm SD$ (%)	p
Sex (female)	48.4%	58.4%	.103
Parent education	7.39 ± 2.06	7.47 ± 2.03	.752
Income-to-needs ratio	5.37 ± 3.66	3.81 ± 2.12	<.001
*T*1 discrimination	1.87 ± 0.85	2.01 ± 0.85	.184
*T*2 discrimination	1.89 ± 0.88	2.40 ± 1.02	<.001
*T*1 social isolation	6.50 ± 5.79	8.33 ± 7.33	.024
*T*2 social isolation	8.10 ± 6.72	11.06 ± 6.36	.002

Note. T = time. Independent samples t tests were used to test differences in means between Black ($n = 137$) and White ($n = 127$) participants.

In Model 2, race was added as a predictor and found to explain an additional 8% of the variance in social isolation at T2 after adjusting for covariates. Black students experienced a 0.38 *SD* unit greater increase in social isolation than White students ($SE = 0.13$, $p = .004$). More specifically, Black students had a 0.53 *SD* unit ($SE = 0.09$, $p < .001$) increase in social isolation from T1 to T2, whereas White students had no significant change ($B = 0.15$, $SE = 0.09$, $p = .096$). Male students experienced a 0.41 *SD* unit greater increase in social isolation than females ($SE = 0.13$, $p = .001$).

Discrimination as a Mediator of Race Differences in Social Isolation Over Time

Structural equation modeling was used to examine whether changes in everyday discrimination mediated race differences in social isolation across the two time points (Figure 3). Adjusting for autoregressive and cross-lagged associations (Cole & Maxwell, 2003), everyday discrimination at T2 was associated with a 0.22 *SD* unit increase in reports of social isolation at T2 ($SE = 0.08$, $p = .010$). As hypothesized, a significant indirect effect of race on T2 social isolation through T2 discrimination was also evident ($B = 0.10$, $SE = 0.05$, $p = .032$) and indicated that 27% of the total race difference in social isolation T2 (adjusting for social isolation at T1) was mediated by everyday discrimination (Figure 3). Autoregressive paths for both discrimination ($B = 0.65$, $SE = 0.09$, $p < .001$) and social isolation ($B = 0.46$, $SE = 0.08$, $p < .001$) were significant and moderate in magnitude. The cross-lagged association between social isolation at T1 and everyday discrimination at T2 ($B = 0.21$, $SE = 0.09$, $p = .013$) was also significant, whereas the association between discrimination at T1 and social isolation at T2 was not significant ($B = −0.13$, $SE = 0.11$, $p = .223$).

Supplemental Analyses

Whether socioeconomic background was associated with heightened experiences of discrimination was also examined. Results indicated that this was not the case, and that socioeconomic measures did not attenuate race effects or interact with race to influence experiences of discrimination. Otherwise put, analyses did not provide evidence that socioeconomic status moderated or mediated the reported race effects.
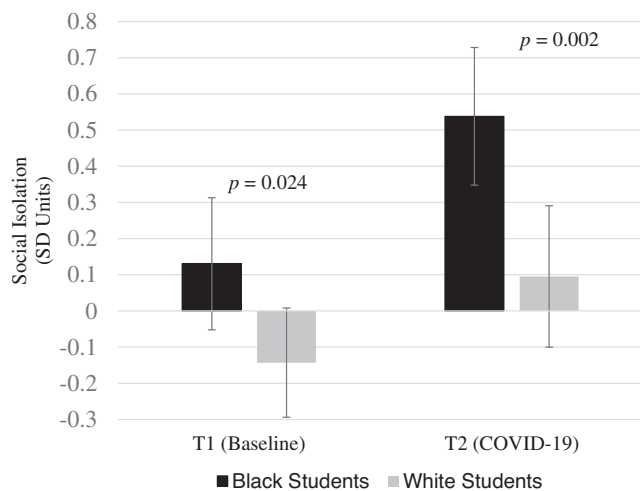
Figure 1

Mean Differences in Everyday Discrimination Between Black and White Students
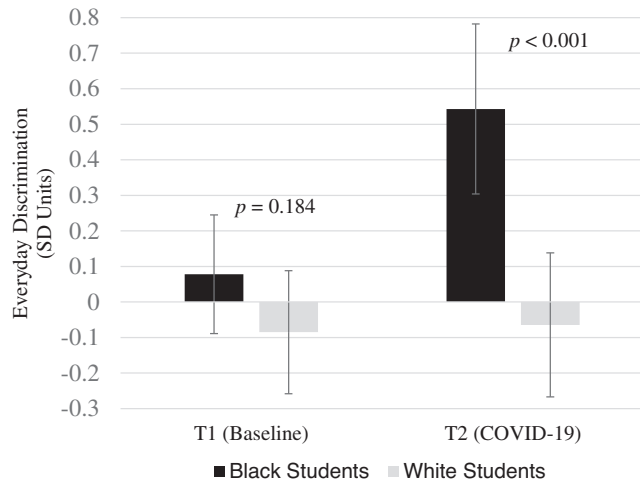
Note. T = time. All scores are standardized (z scored); $T2$ scores were standardized by subtracting the $T1$ mean and dividing by the $T1$ standard deviation to allow for comparison of the two collection periods. Error bars indicate 95% confidence intervals. $N = 263$.

To probe normative developmental change as a potential alternative explanation for the findings, we also considered whether the magnitude of change in social isolation or discrimination was different for first-year college students than for more advanced students. Of the 263 students in the sample, 130 (49.4%) were in their first year at the baseline assessment (2018–2019), and the remaining 133 (50.6%) were more advanced undergraduate

Figure 2

Mean Differences in Social Isolation Between Black and White Students

Note. T = time. All scores are standardized (z scored); $T2$ scores were standardized by subtracting the $T1$ mean and dividing by the $T1$ standard deviation to allow for comparison of the two collection periods. Error bars indicate 95% confidence intervals. $N = 263$.

students. Results showed no differences between first-year students and more advanced students. Moderation analyses were also conducted to consider whether the strength of the association between discrimination and social isolation varied by race or sex. No significant differences were evident by race or sex.

Last, because the murder of George Floyd on May 25, 2020, and subsequent protests occurred near the end of our follow-up data collection period, sensitivity analyses were conducted to consider their possible impact on the results. A small number of participants ($n = 17$) completed the follow-up assessment on or after May 25. The pattern of findings and inference remained equivalent after removing these participants from the analyses.

Discussion

Despite established links between stress and discrimination, few studies have examined levels of discrimination experienced by Black Americans during the pandemic. Focusing on a fortuitous young adult college student sample with a two-wave longitudinal design, the present study examined changes in experiences of discrimination and social isolation from before to several months into the COVID-19 pandemic. Of particular interest were hypothesized differences in these changes between Black and White young adults.

Experiences of discrimination increased significantly for Black but not White young adults. For Black young adults, discrimination increased nearly half of a standard deviation across the two assessments, whereas White young adults showed no significant changes in reports of discrimination. Social isolation increased for both Black and White young adults, but the increase was significantly larger among Black young adults (.54 *SD* units vs. .14 *SD* units). The larger increase in social isolation in the Black sample was partially mediated by the increase in experiences of discrimination, with 27% of the race difference in social isolation being explained by discrimination (Figure 2). That is, increases in discrimination experienced by Black students partially mediated the emergent racial disparity in social isolation.

The findings have several implications for theory and practice. First, the findings add to and are congruent with separate established literature, showing that psychological distress has increased during the pandemic (Ettman et al., 2020; O'Connor et al., 2021), and that distress is linked to increased expressions of bias toward negatively stigmatized minority groups (Anderson et al., 2020; Bianchi et al., 2018). Relatedly, the findings are also consistent with theories of heuristic processing bias under conditions of adversity or cognitive depletion (Blessum et al., 1998; Sherman & Frost, 2000) and extend this work by showing that such processes may operate in the context of a macrolevel societal shock such as a pandemic. Results may also align with the greater prevalence and severity of the COVID-19 virus within Black communities and related media coverage, both possibly contributing to an uptick in discrimination (Chen et al., 2020; Woolf et al., 2021). Additional research will be needed to elucidate the specific reasons for the observed increases in discrimination and the relative contribution of each of these possible mechanisms. Irrespective of the underlying reasons for the reported findings, the results relating to discrimination are consistent with what has been referred to as double jeopardy for Black communities. That is, in addition to the greater physical toll of the virus, these communities have experienced a greater psychosocial toll during the pandemic vis-à-vis increases in discrimination and social isolation.

Figure 3

Structural Equation Model Results Showing Indirect Effects of Race on Social Isolation via Everyday Discrimination (EVD)
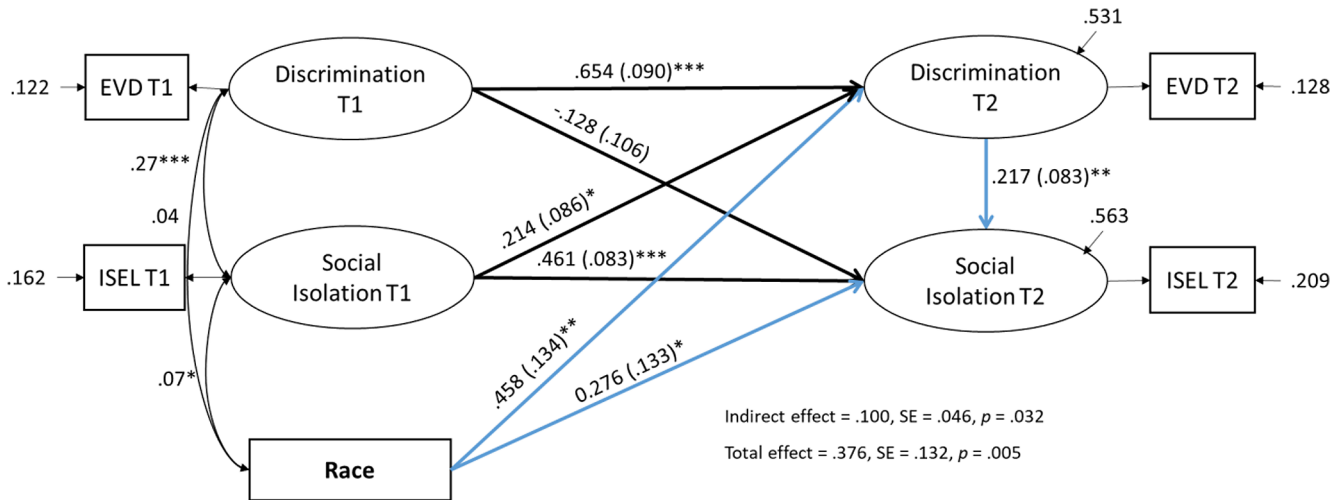
Note. ISEL = Interpersonal Support Evaluation List; *T* = time. Path coefficients are unstandardized. Race is coded as White = 0 and Black = 1. All continuous variables are *z* scored, with *T*2 variables standardized by subtracting the *T*1 mean and dividing by the *T*1 *SD* to allow for parameter estimates to be interpreted with respect to changes over time in T1 *SD* units. Measurement error was specified by fixing the error variances of manifest variables for discrimination (EVD *T*1 and EVD *T*2) and social isolation (ISEL *T*1 and ISEL *T*2) using the formula (1−Reliability) × Sample Variance (Choi et al., 2011; Hayduk, 1987). Model fit: χ^2 (*df* = 4): .804, *p* = .938; standardized root mean square residual (SRMR) = .006. *N* = 263 See the online article for the color version of this figure.
*p < .05. **p < .01. ***p < .001.

More broadly, our results showing increases in social isolation for both Black and White students suggest that the pandemic has taken a toll on social relations. This finding builds on prior research showing greater increases in psychological distress during the pandemic in this age group as compared to middle aged and older adults (Pierce et al., 2020) and suggests that greater disruptions in social relations among young adults may be one potential explanation. The significance of the findings is also underscored by results of recent work showing that stress relating to social isolation during the pandemic is associated with increases in psychological distress among college students (Fruehwirth et al., 2021). The adverse effects of social isolation may also be greater in Black communities, where collectivism and spirituality are key cultural values (Hatter & Ottens, 1998; Neblett et al., 2010). The pandemic may have disrupted many key rituals related to these values (e.g., funerals, rites of passage, celebrations of key life events).

Social isolation has been linked to mental health problems and a wide range of physical health outcomes including prospective associations with inflammation, heart disease, and mortality (Heffner et al., 2011; Smith et al., 2020; Yu et al., 2020). That discrimination was associated with increased disparities in social isolation—and partially mediated greater increases in social isolation among Black young adults—underscores the need for action to mitigate its pernicious consequences. Potential actions to address discrimination and its harmful effects have been discussed in detail elsewhere and include, for example, programs to increase belonging and support among the disproportionately stigmatized, interventions to reduce prejudice by increasing understanding and empathy, and broader efforts to reduce cultural racism and implicit bias (Paluck & Green, 2009; Williams & Cooper, 2019; Williams & Mohammed, 2013).

One unexpected finding was that those who reported higher levels of social isolation at baseline were more likely to experience an increase in discrimination. Although not hypothesized, this finding is not at odds with other hypotheses and results. Rather, it is consistent with notion that those who are part of more negatively stigmatized groups (of any variety, knowingly or knowingly) may be more likely to be socially isolated and also more likely to experience increases in discrimination during the pandemic. Although more data are needed to elucidate the directionality of associations between social isolation and discrimination, this finding suggests that a bidirectional or reciprocal relationship may be likely: Those with higher levels of social isolation may experience greater increases in discrimination in times of national stress, whereas concomitantly, increases in discrimination may in turn be associated with increases in social isolation. The possibility of mutually reinforcing linkages between social isolation and discrimination underscores the significance of our findings and calls for further research to understand the dynamics of a possibly cyclical relationship. Formulating and testing interventions to address such patterns are important directions for future inquiry.

Limitations, Future Directions, and Constraints on Generality

Several limitations and future directions should be considered. Our interpretation of the findings was that observed changes in discrimination and social isolation likely occurred as a result of factors relating to the COVID-19 pandemic. However, a limitation of this study was that specific reasons for observed changes were not explicitly examined. Thus, alternative explanations for the findings are important to consider. One such alternative is that changes could

theoretically have been due to normative developmental changes in perceived discrimination or social isolation that occur in college. The first year of college in particular, for example, is thought to be a transitional time that could lead to such shifts. However, there is little evidence in previous research to suggest that large changes in perceived discrimination or social isolation normatively occur among college students (Fuller-Rowell et al., 2017). In one study that reported increases in perceived discrimination among minority students (Pinedo et al., 2021), effect sizes were small compared to those reported herein (approximately .1 *SD* unit increase across the first 2 years of college as compared to a .54 *SD* unit increase). Furthermore, supplemental analyses examining differences in our results between first-year students (51% of the sample) and more advanced students (49% of the sample) indicated no differences. These factors do not rule out the possibility of developmental change impacting the results, but do suggest that normative developmental change is unlikely to fully account for the reported findings. Additional research will be important to examine specific factors that may account for race differences in observed outcomes during the pandemic.

Another limitation of this study is that only one COVID-19 assessment was considered, relatively early in the pandemic. This early assessment is important for two key reasons: (a) the intensity of the initial lockdown and its psychosocial effects, and (b) because a small percentage of the population had been infected with COVID-19 at this stage, thus allowing for consideration of psychosocial effects with little contamination from direct physiological effects of the virus. However, the degree to which observed changes are enduring remains an open question. Furthermore, more robust mediation analyses can be conducted with additional waves of data (Cole & Maxwell, 2003; Roth & MacKinnon, 2011). A key direction of future research will therefore be to consider the time course of changes in measures of discrimination and social isolation—and related inequities—as the pandemic progressed.

The results of this study are not generalizable beyond the groups examined or methods used. Consideration of other demographic groups and measures will therefore be important next steps. For example, the degree to which similar findings would be evident in a national sample of Black and White adults or among other racial/ethnic minority groups will be an important consideration to define the scope of the social problems implied by our findings. Consideration of variability across contexts (e.g., in more or less diverse residential environments), socioeconomic groups (e.g., among those with and without a college degree), and measures will also provide further insight. Our suspicion is that unfair treatment and discrimination directed toward stigmatized or disadvantaged groups may have increased broadly. Whether or not this is the case can be addressed empirically as more data become available.

Overall, the results of this study suggest notable shifts in experiences of discrimination and social isolation during the COVID-19 pandemic. Consistent with theories of heuristic processing bias in times of stress, the findings indicate that Black young adults experienced sizable increases in discrimination, which exacerbated racial disparities in social isolation. Determining the degree to which the reported changes are enduring and of longer term developmental significance within young adult populations—and whether similar changes are evident in other demographic groups—will be important next steps to inform a continuing pandemic response and responses to future societal-level stressful events.

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