

A daily examination of African American adolescents' racial discrimination, parental racial socialization, and psychological affect

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Abstract:

This study examined 164 African American adolescents' (Mage = 15) daily reports of racial discrimination and parental racial socialization over 21 days. The study examined same-day and previous-day associations of adolescents' discrimination and socialization experiences with their positive and negative psychological affect. It further explored whether racial socialization messages buffered discrimination's effects on affect when messages were received during the same day and on the day prior to discrimination. Findings indicated the deleterious effect of racial discrimination (associated with more negative affect) and highlighted the importance of examining youth's short-term coping in critical developmental years. Findings also showed how messages promote positive youth emotions. However, daily moderating associations differed from prior survey studies, suggesting the importance of examining short-term processes.

A substantial body of research examines African American adolescents' experiences with racial discrimination and the race-related strategies parents use to combat its negative effects and promote positive youth development (e.g., Grills et al., 2016). One important racial strategy is racial socialization, a process of intergenerational communication that instills beliefs and meanings regarding the role of race in youth's lives (Hughes et al., 2006). However, one limitation in extant research literature is the overreliance on long-term, retrospective reports of racial discrimination and racial socialization which limits what we know about these experiences' short-term effects (Coard & Sellers, 2005; Hughes et al., 2008). The current study addresses this limitation by employing a daily diary method to 1) examine whether racial discrimination and racial socialization messages relate to adolescents' psychological affect on the same day and next day and 2) examine whether racial socialization messages moderate the associations between racial discrimination and psychological affect in the short-term.

Racial Discrimination Experiences among African American Adolescents

Racial discrimination is the negative and unfair treatment of a group of people or individuals based on phenotypical characteristics such as skin color (Kessler, Mickelson, & Williams, 1999). Research highlights that it is not uncommon for African American youth to experience racial discrimination in schools and other public spaces (e.g., Banerjee, Byrd, & Rowley, 2018; Butler-Barnes, Richardson, Chavous, & Zhu, 2018; Seaton & Douglass, 2014). Racial discrimination can emerge in various forms, from blatant acts (e.g., being called a racist

name, being falsely accused because of being Black) to acts that are subtle and ambiguous in nature (e.g., being slighted and ignored). These incidences of racial discrimination are ubiquitous in both the nature of the event as well as the perpetrators of the discriminatory behavior (Benner et al., 2018; Fisher, Wallace, & Fenton, 2000).

Racial Discrimination as a Risk Factor for Negative Psychological Outcomes

Adolescence is an important developmental stage in which to examine the psychological consequences of racial discrimination among African Americans (Seaton, Gee, Neblett, & Spanierman, 2018; Smith, Sun, & Gordon, 2019). In the Phenomenological Variant of Ecological Systems Theory (PVEST), Spencer, Dupree, and Hartmann (1997) argue that experiences of racial discrimination are risk factors that produce chronic stress in African American youth's lives and that this race-relevant chronic stress and the way that African American youth cope with it is implicated in their healthy development. There is consistent evidence in the research literature of a link between racial discrimination experiences and psychological outcomes among adolescents (Benner et al., 2018; Priest et al., 2013). Among African American youth specifically, substantial research links racial discrimination to poorer psychological adjustment, including depressive symptoms, anxiety, anger, perceived stress, and suicide ideation (e.g., English, Lambert, & Ialongo, 2014; Neblett et al., 2008; Seaton, Neblett, Upton, & Hammond, 2011; Smith et al., 2019; Walker et al., 2017).

Psychological states tied to emotions are particularly important factors to consider in the context of racial discrimination because emotions have long been recognized as integral elements in adolescent development (DeHart, Sroufe, & Cooper, 2004). One way racial discrimination may affect youth's positive development is through emotional distress and reactivity (Borders & Liang, 2011). Continual emotional distress during adolescence can have further negative consequences on overall well-being (Benner et al., 2018), physical health (Priest et al., 2013), sleep quality (Goosby, Cheadle, Strong-Bak, Roth, & Nelson, 2018; Yip et al., 2019), and psychological health implications into adulthood (Hoggard, Byrd, & Sellers, 2015).

Less is currently known about the impact of racial discrimination on youth's positive emotions (Santiago et al., 2016). Attending to the positive emotional development of youth is important because it can have long-term implications for mental and physical health, academic achievement, and relationship quality with others into their futures. Benner et al. (2018) observed negative correlations between perceived racial and ethnic discrimination and positive well-being

and self-esteem among adolescents in a meta-analysis. Priest et al. (2013) found that racial discrimination was negatively associated with resilience, self-worth, self-esteem, and psychological adaptation across studies. Youth who are able to maintain positive emotions in the short-term context as having experienced racial discrimination may have important supportive and coping resources in their environments that would be beneficial information for researchers, parents, and others supporting positive youth development to learn about.

Parental Racial Socialization among African Americans

The roles of African American parents as contextual supports are particularly important to adolescents' normative and positive development. In addition to the socialization practices that are common in all families, the socialization process within African American families typically considers their marginalized social position within U.S. society and the historical and present-day consequences of this marginalization. Racial socialization is a complex and multidimensional construct describing the process of intergenerational racial communication and also the content of race-related messages (Hughes et al., 2006; Lesane-Brown, 2006). Over the past 30 years, there has been extensive theoretical work that articulates the diverse aspects of racial socialization (Boykin, 1986; Coard & Sellers, 2005; Hughes et al., 2006). Scholars have provided various conceptualizations and operationalizations of racial socialization within African American families that has allowed research to theorize the functionality of racial socialization and also measure its frequency and content (e.g., Lesane-Brown, Brown, Caldwell, & Sellers, 2005). Parents' transmission of racial socialization is influenced by a variety of contextual factors. For instance, parents increase and decrease their frequencies of racial socialization messages as they perceive that their child may be at risk of encountering racial discrimination (e.g., Thomas & Blackmon, 2015). Studies also suggest parents' messages may vary based on adolescents' gender (e.g., McHale et al., 2006), age (e.g., McHale et al., 2006), and parents' educational levels (e.g., White-Johnson, Ford, & Sellers, 2010).

Boykin (1986) describes a conceptual framework for understanding the multidimensional nature of racial socialization messages African American parents use. African Americans must simultaneously negotiate three realms of experience or the triple quandary (Boykin, 1986). Parents often teach youth to successfully navigate these three realms of experience by providing cultural messages, minority experience messages, and mainstream experience messages. Although messages are given different labels by researchers, substantial research shows that the

content of racial socialization within African American families can be captured in at least one of the three major realms of experience that Boykin (1986) described (Lesane-Brown et al., 2005).

African American parents attempt to instill racial pride in their adolescents by emphasizing the accomplishments and successes of African Americans, providing Black cultural socialization (Boykin, 1986; Hughes et al., 2006). Parents give racial barrier messages by teaching adolescents about historical and present-day racial discrimination and biases against African Americans in U.S. society. Racial barrier messages provide preparation for racial bias socialization (Hughes et al., 2006) or knowledge about the minority realm of experience (Boykin, 1986). Self-worth messages help to maintain or heighten youth's confidence by complimenting their personal attributes, assuring youth that they are of value in a society that may devalue them. Although self-worth messages do not include explicit racial content, it is included as part of African American parents' racial socialization practices because these messages can provide adolescents with confidence to navigate the mainstream realm of experience (Boykin, 1986; Lesane-Brown et al., 2005; Neblett et al., 2008). While the messages themselves may not be explicitly racial, African American parents often convey self-worth messages to combat negative messages society often conveys to African American youth about their value as members of their race.

Parental Racial Socialization as a Resilience Factor for African American Adolescents

Although there is substantial evidence that racial discrimination is a risk factor to African American adolescents' psychological health, not all adolescents who are exposed to racial discrimination experience the same outcomes following exposure (Neblett et al., 2008). Some African American youth have support systems and coping strategies that allow them to be resilient in the face of exposure to racial discrimination (Spencer et al., 1997). The concepts of risk and resilience have been effectively used to explain why exposure to experiences of racial discrimination may have differential impacts on African American youth (Spencer et al., 1997). Several models of risk and resilience have been proposed (e.g., Fergus & Zimmerman, 2005), the compensatory model and the protective factor model are two of the most utilized models for understanding racial discrimination as a risk factor for African American youth. The compensatory (or promotive) model focuses on properties or experiences of individuals that are associated with more positive outcomes for youth across all levels of exposure to the risk factors (Fergus & Zimmerman, 2005). From an analytic perspective, compensatory factors have an

independent direct association with positive (or less negative) outcomes after accounting for the effect of exposure to risks. In contrast, protective factors buffer or reduce the negative impact of greater exposure to the risk on the outcome of interest. From an analytic perspective, protective factors moderate the association between the risk factor and the outcome.

Receiving certain racial socialization messages may act as both compensatory and protective factors of resilience against the negative impact of racial discrimination on the psychological well-being of African American youth. In general, messages that teach youth to value the positive qualities of members of their race (racial pride) and also to value their personal attributes (self-worth) have been associated with positive psychological youth outcomes, such as higher levels of anger control, fewer externalizing and internalizing behaviors, and higher self-esteem (e.g., Hughes et al., 2006). Research examining the direct association between socialization messages that emphasize the existence of racial barriers and youth outcomes is less clear with some evidence showing a relation to positive outcomes (e.g., Smalls, 2009), while other studies providing evidence of an association with more negative outcomes (e.g., Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009), and still others finding no association at all (e.g., Neblett, Philip, Cogburn, & Sellers, 2006).

In assessing whether racial socialization messages serve to protect or buffer the impact of experiencing racial discrimination on youth's psycho-social outcomes, several studies have looked at some combination of racial socialization messages and have consistently found that African American youth who report receiving more frequent racial socialization messages seem to be buffered against the negative impact of racial discrimination on a variety of outcomes as compared to youth who report receiving fewer messages (Brown & Tylka, 2011; Neblett et al., 2008). For instance, Neblett and colleagues (2008) used a cluster analytic approach to create four profiles of adolescents based on the racial socialization messages that they received. They found that the association between racial discrimination and perceived stress to be the most attenuated for the profile characterized by higher levels of racial pride, racial barrier, self-worth, and egalitarian socialization messages.

Messages that emphasize themes such as racial pride and the worth of the individual as a member of their racial group have also been found to serve a protective function to mitigate the impact of exposure to racial discrimination (Dotterer & James, 2018; Hughes et al. 2006; Saleem & Lambert, 2016). For instance, Saleem and Lambert (2016) found that cultural pride messages

attenuated the link between African American youth's personal experiences with racial discrimination and anger. Racial pride and self-worth messages may protect African American youth from the deleterious impact of experiencing racial discrimination by reinforcing other sources of resilience that youth may possess such as self-esteem, self-efficacy, and the ability to meaning make. These types of messages may also facilitate the development of specific adaptive coping strategies and behaviors.

The role of racial barrier messages playing a protective role in mitigating the impact of racial discrimination on youth outcomes is much less clear. Preparation for racial bias messages (e.g., racial barriers) may enable youth to cope with racial discrimination through their increased knowledge of history and ability to attribute a racist encounter to an external source instead of internalizing that racism (Hughes et al., 2006). However, contrary to their predictions, Dotterer and James (2018) found that preparation for racial bias exacerbated the effect of racial discrimination on African American adolescents' depressive symptoms. Greater awareness of the existence of racial bias in society could influence youth's expectations of persistent racial discrimination and unfair treatment. If youth feel threatened or frightened without other messages and supports to enhance their positive views of their racial group, more negative emotions may be expected (Hughes et al., 2006). It is also important to distinguish messages about the existence of racial bias which may provide youth with a worldview that protects youth from internalizing the discriminatory event and cultural mistrust which may provide a worldview that may lead to hypervigilance and increased anticipatory anxiety (Saleem & Lambert, 2016).

A Daily Diary Approach to Studying Racial Discrimination and Racial Socialization

Much of the previous research on racial discrimination and racial socialization has relied on long-term assessments, asking participants to estimate the frequency with which they have experienced events over the past year or over their lifetimes. While studies have been informative and represent much of what we know empirically about the prevalence, antecedents and consequences of racial discrimination and racial socialization processes, this approach to assessing discrimination and socialization has major limitations. One limitation is that this approach raises concerns regarding the ecological validity of the research (Hoggard et al., 2015; Iida, Shrout, Laurenceau, & Bolger, 2012). Both racial discrimination and racial socialization have been conceptualized as dynamic events that occur in an episodic manner that can occur across several days (Coard & Sellers, 2005; Stevenson, Cameron, Herrero-Taylor, & Davis,

2002; Sue et al., 2008). Long-term aggregate assessments of discrimination and socialization risk obscuring the ordering of when the discrimination or socialization event occurred which is a severe threat to our ability to assess causation (Smith-Bynum, Anderson, Davis, Franco, & English, 2016). Additionally, long-term retrospective reports introduce potential for increased respondent bias due to errors in memory and current psychological states (Bolger, Davis, & Rafaeli, 2003). The employment of methods that measure experiences closer in time to the event occurring is likely to decrease memory burden of participants and allow them to provide more accurate reports (Iida et al., 2012).

Daily diary methods involve repeated self-reports that aim to capture experiences that may be contextually dependent, such as events, interactions, and moods. Repeated self-reports assessed close in time to when experiences occurred can provide high-resolution information about dynamic psychological processes and also reduce respondent recall bias (Iida et al., 2012). Increasingly, use of these methods are becoming important to research seeking understanding of within-individual and group variation and in capturing context-dependent experiences among diverse adolescents (e.g., Santiago et al., 2016; Seaton & Douglass, 2014; Wang, Cham, Aladin, & Yip, 2019). Recently, researchers have begun to utilize daily diary methods to assess adolescents' experiences with racial discrimination (Douglass, Mirpuri, English, & Yip, 2016; Huynh & Fuligni, 2010; Seaton & Douglas, 2014; Yip et al., 2019). Among a racially diverse sample of adolescents, Douglass et al. (2016) found that when adolescents were targeted for ethnic or racial teasing, those who were already anxious experienced increased daily anxiety, and increases in social anxiety persisted across days. In a recent study, Yip et al. (2019) found that on days in which adolescents experienced discrimination, they fell asleep faster (indicating exhaustion), reported more disturbed sleep, experienced more next-day dysfunction, and reported feeling sleepier the following day, suggesting discrimination's short-term impacts on aspects of adolescent health and development.

To date, there are relatively few studies examining adolescents' daily perceptions of parental racial socialization and the impact of messages within the context of racial discrimination on the same day and following day. Kiang and Witkow (2017) highlighted the importance of family daily interactions and processes when Asian American youth encounter race-related experiences. They found that on days when adolescents reported something bad happening due to their race or ethnicity (e.g., teased, called names), adolescents also reported

spending significantly more time with their families. Huynh and Fuligni (2010) examined daily racial and ethnic discrimination among 12th graders from Latin American, Asian, and European backgrounds and found that reports only occurred on less than 1% of the days in a 2-week time period. Although daily discrimination was reported infrequently by these youth, it predicted youths' depressive symptoms and distress (Huynh & Fuligni, 2010). However, neither ethnic identity nor positive ethnic socialization buffered the impact of daily discrimination on outcomes. We are unaware of any studies that have utilized a daily diary methodology to examine racial discrimination, racial socialization processes with African American youth.

The Current Study

The present study uses a daily diary method to examine African American youth's experiences with racial discrimination and racial socialization messages at a daily level. The present study examines the relations among African American adolescents' daily reports of experiences with discrimination, receiving racial socialization messages (racial pride, self-worth, and racial barrier), and daily positive and negative affect. Specifically, the study examines whether experiencing racial discrimination is associated with adolescents' affect on both the day of the event and the following day. Next, we examine whether racial pride, self-worth, and racial barrier messages act as compensatory (promotive) resilience factors and are directly associated with positive and negative affect on both the current day and one day later. Finally, the study examines whether the presence of specific racial socialization messages experienced on the same day and day following racial discrimination moderates the association between racial discrimination and daily affect.

Hypotheses

Consistent with prior research linking racial discrimination to poorer outcomes (e.g., Seaton & Douglass, 2014), we expected that daily racial discrimination will function as a risk factor and will be associated with less positive daily affect and more negative daily affect. Consistent with prior scholarship (Grills et al., 2016), we view positive racial socialization messages that instill self-worth and racial pride in adolescents as serving as both compensatory (promotive) and protective resilience factors. As a result, we expected that when adolescents reported receiving self-worth and racial pride messages, they will report more positive affect and less negative affect on the same day and following day. Additionally, we expected racial pride and self-worth messages to moderate associations between racial discrimination and

psychological affect, such that adolescents who report receiving these messages will be buffered from discrimination's impacts on positive and negative affect.

We propose a more complicated hypothesis regarding the role that racial barrier messages may be related to youth's affect. In the short term, racial barrier messages draw youth's attention to racial bias against Black people in society which may be in and of itself distressing to youth (Hughes et al., 2006). As such, we predict a direct negative association between racial barrier messages and daily positive affect and a direct positive association between barrier messages and daily negative affect. Thus, experiencing more negative affect and less positive affect on days they receive racial barrier messages. On the other hand, increased awareness and knowledge of race-relations in the U.S. may provide adolescents with psychological benefits by providing them with a mental framework for understanding racial discrimination in society. Thus, we predict that racial barrier messages will also act as a protective resilience factor on days when racial discrimination is experienced and attenuate the impact of experiencing racial discrimination on the adolescents' psychological affect states.

Method

Participants

The study sample included 164 self-identified African American-Black adolescents (n = 94 girls, 57.30%) from a larger, multi-method longitudinal study that examined the resources Black youth draw on to support their positive development. The current study's sample was a part of a randomly selected group of youth selected to participate in a 21-day diary study. Youth ranged in age from 12 to 18 years old and averaged approximately 15 years old (SD = 1.38) and were distributed across 7th through 12th grades. Adolescents attended schools in three school districts in the Midwestern part of the United States that were selected due to their differences in racial, ethnic, and socioeconomic diversity. Thirty-three adolescents (20%) attended schools in District A, which was racially and ethnically diverse, but had the lowest percentage of African American students. Sixty-three youth (38%) attended schools in District B, which was almost 95% Black during the years of the study and was in a working-class community. Sixty-eight adolescents (42%) attended schools in District C, which was in a historically White, upper-middle class township. Educational levels of the parents of adolescents ranged from "some high school" (2.4%) to "PhD/ M.D./J.D." (1%) with the majority of parents reporting "some college"

($n = 44$, 27%). The data presented here were collected in two cohorts (Cohort 1: $n = 84$, Cohort 2: $n = 80$) from 2013 to 2014.

Procedure

Adolescents were recruited through schools with the permission of district officials and school administrators. A mailing list of all African American-Black students was given to the research staff and information packets were mailed to parents. Adolescents who participated received parental consent and gave their assent. Participants completed the 10-15-minute web-based survey using Qualtrics every day for a 21-day period between 5pm and 5am through an individualized link emailed to them. The survey questions covered topics of racial discrimination and racial socialization experiences, daily emotions experienced, among other measures. To encourage daily participation, adolescents received compensation based on the number of surveys they completed (\$1 for each survey completed in the first week, \$2 for each survey completed in the second week, and \$3 for each survey completed in the final week) and received an \$18 bonus if they completed at least 17 of the 21 surveys. Ultimately, adolescents could earn up to \$60 (range compensation given was \$10-\$60; $M =$ approximately \$48). The current study was conducted in compliance with the host institution's internal review board.

Adolescent Variation in Daily Diary Study Reporting

Daily diary completion compliance was adequate among the study sample ($M = 15.52$ completed surveys, $SD = 5.48$) The modal number of completed surveys was 21 ($n = 22$) and adolescents ranged in their completion from 1 survey day ($n = 7$) to all 21 surveys. Overall, there were 3,444 potential data points in the study (164 adolescents X 21 days). Youth had daily racial discrimination responses during approximately 71% of the study days (29% missing).

Adolescents reported responses to the racial barrier, racial pride, and self-worth questions approximately 73% of the study days.

Measures

Racial Discrimination. Daily racial discrimination in the current study is operationalized as adolescent perceived daily racial hassles. A self-report measure assessing the occurrence of everyday racial hassles, the Racism and Life Experiences Scale (Harrell, 1997), was adapted for daily use as others have done (Goosby et al., 2018; Yip et al., 2019). Adolescents responded to seven items every day that assessed whether or not they experienced a racial discriminatory event. For instance, "Were you accused of something you did not do today because you were

Black?” Participants responded by 1 (Yes) or 0 (No) to each of the seven racial hassles each day. The frequency of events were summed each day (range = 0-7). Consistent with other research employing daily diary methods, daily racial discrimination was a low-frequency event ($M = 0.02$, $SD = 0.07$; Yip et al., 2019). Due to this and our study’s focus on days in which racial discrimination was experienced versus days in which racial discrimination was not experienced, we included a dichotomous variable in analyses that represented whether adolescents experienced any of the seven racial hassles or not each day (0 = no racial discrimination, 1 = racial discrimination). The proportion of racial discrimination events across 21 days and adolescents was 0.07 (95% CI: 0.06-0.08).

Racial Socialization. Adolescents responded daily over a 21-day period to summative questions that represented three overarching themes of the racial socialization dimensions from the Racial Socialization Questionnaire—Teen Version (RSQ-T: Lesane-Brown, Scottham, Nguyễn, & Sellers 2006): racial pride, self-worth, and racial barrier messages. This measure and these dimensions of racial socialization have been used in previous published work with African American adolescents (e.g., Neblett et al., 2008). One parent per adolescent also participated in the daily study. Adolescents reported their perceived racial socialization from the participating parent, the target parent. Questions were auto filled with each adolescents’ target parent’s name in efforts of increasing the likelihood that adolescents would be thinking of the racial messages that particular parent gave them. Youth were asked whether the target parent or another adult told them each statement that day. One summative question was asked each day per racial socialization message type. Racial pride messages emphasize the positive accomplishments and attributes of African Americans. To measure a racial pride message, adolescents were asked, “Today, did [parent’s name] or another adult tell you that you should be proud to be Black?” Self-worth messages emphasize the worth and positive attributes of the adolescent. Adolescents were asked, “Did [parent’s name] or another adult tell you that you are somebody special today?” Racial barrier messages draw adolescents’ attention to racial discrimination towards Black people. To measure a racial barrier message, adolescents were asked, “Today, did [parent’s name] or another adult tell you that racism against Black people still exists?” Adolescents responded whether they received each message every day by responding: 1 (Yes, [parent’s name]), 2 (Yes, another adult), 3 (Yes, [parent’s name] and another adult), or 4 (No). The racial socialization variables were transformed into binary variables, such that if adolescents

responded “yes, [parent’s name]” or “yes, [parent’s name] and another adult” their responses were recoded as 1 (Yes). If adolescents responded “Yes, another adult” or “No” their responses were recoded as 0 (No). This was done in order to capture all messages given by the target parent each day. Adolescents received self-worth messages most frequently across the 21 days (proportion = 0.34, 95% CI: 0.33-0.36), followed by racial pride messages (proportion = 0.22, 95% CI: 0.20-0.24), and racial barrier messages (proportion = 0.13, 95% CI: 0.12-0.15).

Positive and Negative Psychological Affect. Daily psychological affect was assessed by selected items from the Positive and Negative Affect Schedule (PANAS: Watson, Clark, & Tellegen, 1988). Adolescents were asked to rate themselves on 17 emotions taken from the General Dimensions scales (positive affect and negative affect). For each emotion, participants were asked to rate the extent they have felt this way today on a 5-point Likert-type scale ranging from 1 (very slightly or not at all) to 5 (extremely). Daily positive affect scores were created by the mean of eight positive emotions reported daily (interested, excited, strong, proud, alert, determined, inspired, and active) ($M = 3.04$, $SD = 1.13$). The mean of nine negative emotions (distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, and afraid) comprised daily negative affect scores ($M = 1.48$, $SD = 0.64$). Daily mean scores for positive and negative affect were only calculated for youth who responded to at least 5 items for both measures. Higher daily scores on each dimension indicated feeling more positive or negative emotions on that day. Cronbach’s alpha for the full sample of days for positive affect was .90. Reliability across the sample of days for negative affect was .87. The intraclass correlation coefficients (ICC) for positive and negative affect were .62 and .55, respectively.

Demographic variables. Demographic variables were assessed in a longer survey adolescents completed prior to the daily diary study. We included adolescents’ self-reported gender and age closest in time to their diary study administration. We used parent-reported highest level of educational attainment.

Hierarchical Linear Modeling Approach

Hierarchical Linear Models implemented in the Hierarchical Linear and Nonlinear Modeling software package (HLM version 7; Raudenbush, Bryk, & Congdon, 2010) was the primary analysis technique used in this study. HLM is an appropriate modeling technique to accommodate repeated measures per participant, as is the case in the current study. HLM can only handle missing data at level-1 and removes individuals with missing data at level-2. Thus,

six adolescents in the larger sample who attended schools outside of the three primary districts were excluded from analysis resulting in a sample of 164 youth. We specified in models that there was missing data at level-1. Final models included those with HLM performing pairwise deletion so that the number of cases for each analysis was maximized, increasing the power in analyses (Woltman, Feldstain, MacKay, & Rocchi, 2012).

We examined a series of parallel models to test whether adolescents' daily racial discrimination and racial socialization experiences predicted their positive and negative affect. In separate models, we entered the continuous daily outcomes (positive affect and negative affect) and the day of the study (1-21) as level-1 variables. For models examining racial discrimination (0 = not experienced, 1 = experienced), we included daily racial discrimination as a level-1 variable. For models examining racial socialization (0 = not experienced, 1 = experienced), we included all three messages in the same models as level-1 variables. We included participants' outcome score on the day prior to the racial discrimination or socialization as a level-1 control variable and we also covaried positive affect when exploring negative affect as an outcome (and vice versa). Additionally, adolescents' age, gender (0 = boys, 1 = girls), cohort (0 = cohort 1, 1 = cohort 2), and parents' educational level were entered as level-2 person variables in all models. Two dummy variables were included (District A and B) to represent the three school districts adolescents attended with District C as the reference category.

Results

Same-day Analysis

Racial Discrimination Predicting Positive and Negative Affect on the Same Day

We first tested whether racial discrimination related to positive affect and negative affect on the same day in separate models. Racial discrimination did not significantly predict daily positive affect (Table 1). Racial discrimination significantly predicted daily negative affect ($b = .18$, $SE = .06$, $p < .01$), such that on days adolescents reported experiencing discrimination, they also reported more negative emotions during the same day (Table 1).

[Table 1 goes here]

Racial Socialization Predicting Positive and Negative Affect on the Same Day

Next, we examined whether daily racial pride, self-worth, and racial barrier messages related to daily outcomes. Results showed significant effects of daily self-worth messages ($b = .32$, $SE = .06$, $p < .001$) predicting positive affect, see Table 2. On days adolescents reported

receiving a self-worth message from parents, they reported more positive emotions on the same day. Racial pride and barrier messages did not significantly predict positive affect on the same day (Table 2). Daily racial pride and racial barrier messages did not significantly predict negative affect. However, daily self-worth messages significantly predicted negative affect ($b = -.13$, $SE = .03$, $p < .001$), such that on days adolescents reported receiving a self-worth message, they reported fewer negative emotions on the same day (Table 2).

[Table 2 goes here]

Racial Discrimination Predicting Positive and Negative Affect, Moderated by Racial Socialization Messages on the Same Day

Next, we tested whether racial socialization impacted same day associations between racial discrimination and outcomes. Racial pride and barrier messages did not moderate the association between racial discrimination and positive affect. However, self-worth messages significantly moderated the association between racial discrimination and positive affect on the same day ($b = -0.36$, $SE = .18$, $p = .04$), see Table 3. Simple slopes analysis indicated a significant effect of self-worth messages when adolescents did not report experiencing racial discrimination. On days when adolescents did not report experiencing discrimination but received a self-worth message, they reported significantly higher positive affect than when they did not receive a self-worth message ($b = 0.32$, $SE = 0.06$, $t = 5.07$, $p < .001$). However, on days adolescents reported experiencing discrimination, there was no difference in same day positive affect based on if they received a self-worth message or not ($b = -0.04$, $SE = 0.16$, $t = -0.25$, $p = .80$), see Figure 1. There was also a significant interaction between self-worth messages and racial discrimination predicting same-day negative affect ($b = .49$, $SE = .20$, $p = .01$), see Table 3). Simple slopes analysis indicated a significant effect of self-worth message when adolescents did not experience racial discrimination. On days adolescents did not report experiencing discrimination, those who received a self-worth message reported significantly lower negative affect compared to adolescents who did not receive a self-worth message ($b = -0.17$, $SE = 0.04$, $t = -4.86$, $p < .001$). On days when adolescents reported discrimination, there was not a significant difference in negative affect based on whether youth received a self-worth message or not ($b = 0.32$, $SE = 0.19$, $t = 1.65$, $p = .10$). However, approaching the trend level, it appears adolescents had higher negative affect when they experienced discrimination and received a self-worth message compared to when discrimination was experienced and they did not receive a self-worth

message, see Figure 2. Racial pride and racial barrier messages did not moderate associations between racial discrimination and negative affect on the same day, see Table 3.

[Table 3 goes here]

[Figure 1 goes here] [Figure 2 goes here]

Time Lag Analyses

We examined time lag analyses to determine whether racial discrimination and racial socialization influenced the following day's positive and negative affect as well as whether racial socialization moderated associations when messages were experienced prior to a discrimination event. We included all of the same control variables as in earlier models.

Previous-day Racial Discrimination and Socialization Predicting Positive and Negative Affect on the Following Day

Previous-day racial discrimination did not significantly predict the following day's positive or negative affect, see Supporting Information Table 1A. Previous-day racial pride and self-worth messages did not significantly predict the following day's positive affect. Previous-day racial barrier messages marginally predicted the following day's positive affect ($b = -0.11$, $SE = 0.06$, $p < .10$). Previous-day messages did not significantly predict the following day's negative affect, see Supporting Information Table 2A.

Racial Discrimination Predicting Positive and Negative Affect on the Same day, Moderated by Previous-day Racial Socialization Messages

Finally, we examined whether previous-day racial socialization moderated the association between racial discrimination and affect reported on the day following the socialization. Previous-day racial socialization messages did not moderate relations between the following day's racial discrimination and positive affect (Table 4). However, racial pride ($b = .35$, $SE = 0.16$, $p < .05$) and barrier messages ($b = -.40$, $SE = 0.17$, $p < .05$) significantly moderated associations between the following day's racial discrimination and negative affect and self-worth messages marginally moderated this association ($b = .27$, $SE = 0.15$, $p < .10$), see Table 4. On days adolescents did not report experiencing discrimination, there was no difference in negative affect based on whether adolescents received a racial pride message on the previous day ($b = 0.03$, $SE = 0.03$, $t = 0.85$, $p = .40$). However, negative affect was significantly higher on days adolescents experienced discrimination if they received a racial pride message on the previous day compared to if they did not receive a pride message on the previous day ($b = 0.38$, $SE =$

0.16, $t = 2.44$, $p = .01$), see Figure 3. On days adolescents did not experience racial discrimination, there was no difference in same-day negative affect based on whether adolescents received a racial barrier message on the previous day ($b = 0.04$, $SE = 0.04$, $t = 0.81$, $p = .42$). However, negative affect was significantly lower on days adolescents experienced racial discrimination when they received a racial barrier message on the previous day compared to when they did not receive a previous-day barrier message ($b = -0.37$, $SE = 0.16$, $t = -2.30$, $p = .02$), see Figure 4.

[Table 4 goes here]

[Figure 3 goes here] [Figure 4 goes here]

Discussion

For many African American adolescents, the experience of racial discrimination is an unfortunate reality in their daily contexts that can have damaging effects on their healthy emotional development (e.g., Borders & Liang, 2011). The emotional distress and reactivity adolescents experience when encountering stressful events such as racial discrimination has negative implications for adolescents' psychological outcomes (Benner et al., 2018). Nevertheless, scholars highlight ways adolescents may be resilient, in spite of the reality of racial discrimination, through the racial and cultural resources they have in their environments, such as parental racial socialization (e.g., Grills et al., 2016). However, the ways that racial discrimination and racial socialization impact important adjustment outcomes in the short-term, in youths' day to day lives, are not well understood in extant research literatures due to overreliance on long-term retrospective assessments. The current study aimed to address this limitation by using a daily diary approach, an approach that does not require adolescents to recollect temporally distant experiences. This approach allowed us to examine how racial experiences influence daily and next-day psychological affect.

Racial Discrimination and Positive and Negative Affect

We first tested whether racial discrimination related to positive and negative affect on the same day. Our hypothesis was partially supported - on days adolescents reported experiencing racial discrimination they also reported more negative affect, but racial discrimination was unrelated to positive affect on the same day. This finding is consistent with other daily diary and cross-sectional work finding racial discrimination to be a risk factor for negative psychological outcomes (e.g., Seaton & Douglass, 2014). Although counter to our hypothesis, the lack of

association with positive affect is consistent with some previous findings suggesting the absence of racial discrimination is not necessarily indicative of positive affect (Santiago et al., 2016). Furthermore, most studies have not examined daily discrimination's effect on positive emotions (Benner et al., 2018). Our study's finding contributes to the burgeoning area of research examining the emotional effects of daily racial discrimination, suggesting its unique effects on African American adolescents' negative emotions during the same day. Our study also suggests the need for future emotion research to explicitly examine both negative and positive affective processes.

We did not find racial discrimination to impact the following day's psychological affect. This finding is discrepant with research by Seaton and Douglass (2014), who found that racial discrimination was linked to increased depressive symptoms the following day. In their study, 97% of the 75 Black adolescents reported experiencing at least one discriminatory experience over a 2-week period. While the current study sample included a similar number of adolescents who reported at least one racial discrimination event over the 21 days ($n = 64$), this was only 39% of our study's full sample. A greater proportion of youth reported no racial discrimination, which might have masked our time lag findings. Also, Seaton and Douglass (2014) assessed a greater range of racial discrimination experiences with the 18-item Daily Life Experiences subscale of the Racism and Life Experiences Scale, whereas the current study included 7 items from this scale. Thus, the lower proportion of adolescents reporting daily racial discrimination in the current study could be due to assessing a more restricted range of discrimination experiences.

Racial Socialization and Positive and Negative Affect

Little is currently known in the research literature about adolescents' daily experiences with parental racial socialization. Although scholars conceptualize racial socialization as a dynamic and daily process, research on its frequency, content, and relation to short-term outcomes using daily diary techniques are not common (Coard & Sellers, 2005). The current study showed that adolescents are receiving diverse messages from parents about race. In particular adolescents in our sample reported receiving a range of messages from parents reflecting the triple quandary (Boykin, 1986), including efforts to instill racial pride, emphasize personal attributes, and that make adolescents aware of racial discrimination towards Black people in U.S. society. We found racial socialization variation consistent with what has been

found with longer-term retrospective assessments—with messages emphasizing self-worth and pride being reported more frequently than barrier messages (Hughes et al., 2008).

We examined whether racial pride, self-worth, and racial barrier messages related to daily positive and negative affect. In terms of same day associations, only our hypothesis that self-worth messages would function as a promotive factor was supported. As expected, on days adolescents reported receiving messages from parents suggesting that they are someone special (self-worth) they also reported more positive emotions and fewer negative emotions on the same day. This link between messages of worth and African American youth's positive emotional state is consistent with previous research (e.g., Reynolds & Gonzales-Backen, 2017). However, the lack of relation between racial pride and positive affect is counter to previous research using traditionally long-retrospective reports. For instance, Neblett and colleagues (2008) report significant bivariate correlations linking more pride messages with less perceived stress and greater wellbeing. Racial barrier messages also did not predict same-day positive or negative affect. These differences from prior research may lie in methodological differences that reflect different processes. That is, there may be differences in how the cumulative nature of parents' racial pride messages (assessed in longer-term retrospective recollection studies) may impact psychological outcomes when measured over time (e.g., over the past year) compared to when the effect of pride is studied in much shorter time periods.

Racial socialization messages did not have direct lasting impacts on the following day's positive and negative affect, although racial barrier messages were marginally related to lower positive affect on the following day. This pattern supports our position that knowledge of racial injustices of African Americans could elicit fewer positive emotions among youth in a short-term context. Scholars have cautioned that parents' over-emphasis of racial barriers, especially to younger adolescents, may have some negative psychosocial impacts (e.g., Hughes et al., 2009).

Racial Discrimination and Affect Moderated by Racial Socialization Messages

We examined whether racial socialization messages functioned as protective factors in the context of racial discrimination experiences during the same day and the day before discrimination was experienced. In same-day associations, we found support for a compensatory model, such that self-worth messages were promotive of higher positive affect and lower negative affect when racial discrimination was not experienced. However, counter to predictions, the presence of messages did not buffer racial discrimination's impact on psychological affect on

the same day. Although this study demonstrates the positive impacts of parents providing self-worth messages to youth to support daily emotional adjustment, none of the individual socialization message types were protective when youth experienced racial discrimination in this short-term examination. It is of note that previous research demonstrating racial socialization as buffering discrimination impacts on psychological adjustment (Neblett et al., 2008) examined cluster profiles of socialization messages (i.e., patterns across socialization message types, such as groups of youth receiving higher frequencies of racial pride, self-worth, along with barrier messages). We examined single message types accounting for frequencies of other types. Also, differences in methodology and the time-period assessed between the current study and prior work likely influenced differences in findings. For instance, racial socialization messages may not buffer the daily emotional impacts of discrimination; instead, it may take youth experiencing particular socialization messages over time to counteract racial discrimination's effects. Further, the promotive and buffering effects of racial socialization messages on psychological adjustment may be strongest if youth receive a combination of socialization messages over time.

With our time-lag analyses, we were also able to examine situations where racial socialization was received prior to a racial discrimination event. This may reflect parents' proactive attempts to prepare youth for racial discrimination and provide some inoculating preparation for discrimination (Hughes, Watford, & Del Toro, 2016). Interestingly, when adolescents experienced racial discrimination, they reported more negative affect when they received a racial pride message on the previous day compared to when no message was received. While counter to our predictions, we speculate that parents' pride messages likely influences or makes more salient youths' positive feelings about their racial group (private regard). As such, among youth for whom positive racial group affiliation was made more salient, experiencing devaluation based on that group membership (racial discrimination) might relate to greater negative emotion in the short-term context.

On the other hand, previous-day racial barrier messages did buffer relations between racial discrimination and negative affect – when youth experienced discrimination, those who received a racial barrier message on the day prior reported lower negative affect than youth who did not receive a barrier message. This finding supports the proposition that racial barrier messages help to provide youth with an understanding of racial discrimination such that they are less shocked by the experience and better prepared to effectively cope (Spencer et al., 1997). In a

recent study, Dotterer and James (2018) found that cultural socialization buffered racial discrimination's effect on African American adolescents' depressive symptoms and contrary to predictions, preparation for racial bias exacerbated the effect of racial discrimination on depressive symptoms. In addition to measuring racial socialization in general, with no defined period of time (i.e., never to very often), Dotterer and James (2018) used parents' reports of given messages to predict adolescent-reported depressive symptoms "over the past week." In that study, adolescents may have interpreted messages and behaviors differently than how parents intended, and we can only conclude how parents' general racial socialization related to adolescents' more recent feelings. The current study helps to extend current racial socialization research by examining youth outcomes much closer in time to when youth perceived the racial socialization. It is especially noteworthy that racial pride and racial barrier messages did not moderate same-day associations, but they did function in moderating roles in next day lagged effects. This points to the importance of considering the temporal sequencing of experiences. Retrospective recall studies suggest that youth receiving pride messages is beneficial for their positive racial identity and adjustment over longer periods of time. Our study suggests shorter-term mechanisms - for instance suggesting that when adolescents experience racial discrimination shortly after receiving positive socialization about their race, the conflicting messages of the socialization and discrimination experiences could lead to negative emotions. However, experiencing socialization messages emphasizing potential racial barriers knowledge just prior to discrimination experiences may serve to prepare youth for the discrimination, such that it helps mitigate negative emotional impacts within the short time period.

Limitations and Considerations

The current study findings provide important insights into daily experiences among African American adolescents, but we highlight a few limitations and considerations. First, in order to capture how experiencing racial discrimination at all at the level of the specific day influenced same day outcomes, we dichotomized the racial discrimination variable. Thus, we could not examine effects of multiple discrimination events experienced in a day. However, mean frequencies of daily racial discrimination were low. Second, results from same-day models do not allow us to infer causation. However, we did examine whether positive and negative affect predicted racial discrimination reports on the same day and following day, and they did not. This increases our confidence in the finding that racial discrimination predicts more negative

affect on the same day and that it is not negative affect influencing discrimination perceptions (which is also consistent with extant longitudinal and repeated measures research, e.g., Seaton et al., 2011). Also, although we found significant interactions on same day and following day, the range of adolescent daily positive and negative affect in this sample was small. Thus, effects reflect potentially small differences, and findings might be replicated among samples with greater daily affect variation. Finally, daily measures were self-reported by adolescents, raising likelihood of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, the scales having different response options helps to control for this potential bias (Podsakoff et al., 2003). Additionally, our focus on adolescents' perceptions of their racial experiences draws from a phenomenological perspective (Spencer et al., 1997), emphasizing that youth's own understandings of their experiences are uniquely impactful to their psychological states.

Implications, Future Directions, and Conclusion

Our study has implications for research and action. A particularly striking finding was that previous-day pride messages exacerbated racial discrimination's effects on negative affect and previous-day barrier messages buffered discrimination's effects. The findings suggest a need for more examination of how different types of racial socialization impact adolescents' day to day experiences and adjustment in relation to racial discrimination. The current study focused on messages received by parents. Other adults in youth's lives provide important socialization around race as well. Researchers should also seek to understand how other socializing agents in youths' daily ecological contexts influence youth's emotional development.

Additionally, attention should be given to negative race-related experiences not captured in the current study. The daily discrimination experiences assessed largely concerned interpersonal experiences. However, as social interaction and communication continues to expand via digital media and platforms, adolescents may be exposed more frequently to forms of racial discrimination in virtual spaces (Tynes et al., 2014). Our study's assessment of racial discrimination did not capture experiences of vicarious racial discrimination, such as those experienced on internet and social media sites, which has increased in recent years. For instance, reading racial insults, stereotypes, and hateful rhetoric or watching video clips of someone else being racially discriminated against likely elicits negative emotions in youth. It would be important for researchers and parents to better understand ways of intervening and helping adolescents understand, cope with, and resist negative online interactions and images.

Increasingly, empirical research has documented deleterious effects of racial discrimination on African American youth's outcomes. The current study examined how racial discrimination and racial socialization related to psychological affect during short time periods, increasing ecological validity. Research that can use innovative methods to understand how adolescents maintain healthy emotions in the immediate context of racial discrimination will be useful in applied settings. For instance, parenting programs, youth development programs, and interventions designed to enhance the coping and positive adjustment of adolescents who experience racial discrimination would benefit from this knowledge.

In addition to helping youth cope with racial discrimination experiences, our findings suggest the need for research that considers how socialization messages may help youth develop understandings of racism in ways that may enhance their critical consciousness and critical engagement efforts to resist racism at the daily level. As importantly, our research builds the knowledge base on youths' day to day discrimination and its deleterious emotional impacts, showing the need to address counter efforts, and decrease the racism experienced by youth within their societal institutions and at the interpersonal level. These efforts should focus on the everyday public spaces through which adolescents move and operate - from peers and adults within public service institutions (teachers and police officers) to employees in customer service industries (stores, businesses, organizations). These efforts should include education and training as well as practices and policies around historical and contemporary oppression and inequality, white privilege, implicit and explicit racial biases, and racial stereotypes, and how they influence behaviors and treatment of African American youth. Anti-racism education and programs that are grounded in historical knowledge, empirical research, and that expose youth to racial and ethnic diversity would be helpful in teaching cultural competence and promoting social equality attitudes in white youth. Across such efforts, there should be specific objectives and metrics of success along with real accountability for perpetrating bias and racial discrimination, at interpersonal and institutional levels.

References

- Banerjee, M., Byrd, C., & Rowley, S. (2018). The relationships of school-based discrimination and ethnic-racial socialization to African American adolescents' achievement outcomes. *Social Sciences*, 7, 208. doi: 10.3390/socsci7100208
- Benner, A. D., Wang, Y., Shen, Y., Boyle, A. E., Polk, R., & Cheng, Y. P. (2018). Racial/ethnic discrimination and well-being during adolescence: A meta-analytic review. *American Psychologist*, 73, 855–883. doi: 10.1037/amp0000204
- Bolger, N., Davis, A., Rafaeli, E. (2003). Diary methods: Capturing life as it is lived. *Annual Review of Psychology*, 54, 579–616. doi: 10.1146/annurev.psych.54.101601.145030
- Borders, A., & Liang, C. T. H. (2011). Rumination partially mediates the associations between perceived ethnic discrimination, emotional distress, and aggression. *Cultural Diversity and Ethnic Minority Psychology*, 17, 125–133. doi: 10.1037/a0023357
- Boykin, A. W. (1986). The triple quandary and the schooling of Afro-American children. In U. Neisser (Ed.), *The school achievement of minority children: New perspectives* (pp. 57–92). New York, NY: Routledge.
- Brown, D. L., & Tylka, T. L. (2011). Racial discrimination and resilience in African American young adults: Examining racial socialization as a moderator. *Journal of Black Psychology*, 37, 259–285. doi: 10.1177/0095798410390689

- Butler-Barnes, S. T., Richardson, B. L., Chavous, T. M., & Zhu, J. (2018). The importance of racial socialization: school-based racial discrimination and racial identity among African American adolescent boys and girls. *Journal of Research on Adolescence*, 29, 432–448. doi: 10.1111/jora.12383
- Coard, S. I., & Sellers, R. M. (2005). African American families as a context for racial socialization. In V. C. McLoyd, N. E. Hill, & K. A. Dodge (Eds.), *African American family life: Ecological and cultural diversity* (pp. 264–284). New York, NY: Guilford Press.
- DeHart, G. B., Sroufe, L. A., & Cooper, R. G. (2004). *Child development: Its nature and course* (5th ed.). New York, NY: McGraw-Hill.
- Dotterer, A. M., & James, A. (2018). Can parenting microprotections buffer against adolescents' experiences of racial discrimination? *Journal of Youth and Adolescence*, 47, 38–50. doi: 10.1007/s10964-017-0773-6
- Douglass, S., Mirpuri, S., English, D., & Yip, T. (2016). “They were just making jokes”: Ethnic/racial teasing and discrimination among adolescents. *Cultural Diversity and Ethnic Minority Psychology*, 22, 69–82. doi: 10.1037/cdp0000041
- English, D., Lambert, S. F., & Ialongo, N. S. (2014). Longitudinal associations between experienced racial discrimination and depressive symptoms in African American adolescents. *Developmental Psychology*, 50, 1190–1196. doi: 10.1037/a0034703
- Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, 26, 399–419. doi: 10.1146/annurev.publhealth.26.021304.144357
- Fisher, C. B., Wallace, S. A., & Fenton, R. E. (2000). Discrimination distress during adolescence. *Journal of Youth and Adolescence*, 29, 679–695. doi: 10.1023/A:1026455906512
- Goosby, B. J., Cheadle, J. E., Strong-Bak, W., Roth, T. C., & Nelson, T. D. (2018). Perceived discrimination and adolescent sleep in a community sample. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 4, 43–61. doi: 10.7758/rsf.2018.4.4.03.
- Grills, C., Cooke, D., Douglas, J., Subica, A., Villanueva, S., & Hudson, B. (2016). Culture, racial socialization, and positive African American youth development. *Journal of Black Psychology*, 42, 343–373. doi: 10.1177/0095798415578004

- Harrell, S. P. (1997). The Racism and Life Experience Scales (Unpublished instrument).
Graduate School of Education and Psychology, Pepperdine University, Los Angeles, CA.
- Hoggard, L. S., Byrd, C. M., & Sellers, R. M. (2015). The lagged effects of racial discrimination on depressive symptomology and interactions with racial identity. *Journal of Counseling Psychology*, 62, 216–225. doi: 10.1037/cou0000069
- Hughes, D., Rivas, D., Foust, M., Hagelskamp, C., Gersick, S., & Way, N. (2008). How to catch a moonbeam: A mixed-methods approach to understanding ethnic socialization processes in ethnically diverse families. In S. M. Quintana & C. McKown, (Eds.), *Handbook of race, racism, and the developing child* (pp. 226–277). Hoboken, NJ: John Wiley & Sons Inc.
- Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D. J., Stevenson, H. C., & Spicer, P. (2006). Parents' ethnic-racial socialization practices: A review of research and directions for future study. *Developmental Psychology*, 42, 747–770. doi: 10.1037/0012-1649.42.5.747
- Hughes, D. L., Watford, J. A., & Del Toro, J. (2016). A transactional/ecological perspective on ethnic-racial identity, socialization, and discrimination. *Advances in Child Development and Behavior*, 51, 1–41. doi: 10.1016/bs.acdb.2016.05.001
- Hughes, D., Witherspoon, D., Rivas-Drake, D., & West-Bey, N. (2009). Received ethnic-racial socialization messages and youths' academic and behavioral outcomes: Examining the mediating role of ethnic identity and self-esteem. *Cultural Diversity and Ethnic Minority Psychology*, 15, 112–124. doi: 10.1037/a0015509
- Huynh, V. W., & Fuligni, A. J. (2010). Discrimination hurts: The academic, psychological, and physical well-being of adolescents. *Journal of Research on Adolescence*, 20, 916–941. doi: 10.1111/j.1532-7795.2010.00670.x
- Iida, M., Shrout, P. E., Laurenceau, J., & Bolger, N. (2012). Using diary methods in psychological research. In H. Copper et al., (Eds.) *APA handbook of research methods in psychology: Vol 1. Foundations, planning, measures, and psychometrics* (pp. 277–305). Washington, DC: American Psychological Association. doi: 10.1037/13619-016
- Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, 40, 208–230. doi: 10.2307/2676349

- Kiang, L. & Witkow, M.R. (2017). Daily associations between adolescents' race-related experiences and family processes. In Choi Y. & Hahm H. (Eds.), *Asian American Parenting*. (pp. 117–141). Springer, Cham.
- Lesane-Brown, C. L. (2006). A review of race socialization within Black families. *Developmental Review*, 26, 400–426. doi: 10.1016/j.dr.2006.02.001
- Lesane-Brown, C. L., Brown, T. N., Caldwell, C. H., & Sellers, R. M. (2005). The comprehensive race socialization inventory. *Journal of Black Studies*, 36, 163–190. doi:10.1177/0021934704273457
- Lesane-Brown, C. L., Scottham, K. M., Nguyễn, H. X., & Sellers, R. M. (2006). The racial socialization questionnaire—teen (RSQ-t): A new measure for use with African American adolescents. (Unpublished manuscript).
- McHale, S. M., Crouter, A. C., Kim, J., Burton, L. M., Davis, K. D., Dotterer, A. M., & Swanson, D. P. (2006). Mothers' and fathers' racial socialization in African American families: Implications for youth. *Child development*, 77, 1387–1402. doi: 10.1111/j.1467-8624.2006.00942.x
- Neblett, E. W. Jr., Philip, C., Cogburn, C., & Sellers, R. M. (2006). African American adolescents' discrimination experiences and academic achievement: Racial socialization as a cultural compensatory and protective factor. *Journal of Black Psychology*, 32, 199–218. doi: 10.1177/0095798406287072
- Neblett, E. W. Jr., White, R. L., Ford, K. R., Philip, C. L., Nguyễn, H. X., & Sellers, R. M. (2008). Patterns of racial socialization and psychological adjustment: Can parental communications about race reduce the impact of racial discrimination? *Journal of Research on Adolescence*, 18, 477–515. doi: 10.1111/j.1750-8606.2012.00239.x
- Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. doi: 10.1037/0021-9010.88.5.879
- Priest, N., Paradies, Y., Trenerry, B., Truong, M., Karlsen, S., & Kelly, Y. (2013). A systematic review of studies examining the relationship between reported racism and health and wellbeing for children and young people. *Social Science & Medicine*, 95, 115–127. doi: 10.1016/j.socscimed.2012.11.031
- Raudenbush, S. W., Bryk, A. S., & Congdon, R. (2010). *HLM 7.00 for Windows*. Scientific

Software International Inc., Lincolnwood.

- Reynolds, J. E., & Gonzales-Backen, M. A. (2017). Ethnic-racial socialization and the mental health of African Americans: A critical review. *Journal of Family Theory and Review*, 9, 182–200. doi: 10.1111/jftr.12192
- Saleem, F. T., & Lambert, S. F. (2016). Differential effects of racial socialization messages for African American adolescents: Personal versus institutional racial discrimination. *Journal of Child and Family Studies*, 25, 1385–1396. doi: 10.1007/s10826-015-0326-0
- Santiago, C. D., Brewer, S. K., Fuller, A. K., Torres, S. A., Papadakis, J. L., & Ros, A. M. (2016). Stress, coping, and mood among Latino adolescents: A daily diary study. *Journal of Research on Adolescence*, 27, 566–580. doi: 10.1111/jora.12294
- Seaton, E. K., & Douglass, S. (2014). School diversity and racial discrimination among African-American adolescents. *Cultural Diversity and Ethnic Minority Psychology*, 20, 156–165. doi: 10.1037/a0035322
- Seaton, E. K., Gee, G. C., Neblett, E., & Spanierman, L. (2018). New directions for racial discrimination research as inspired by the integrative model. *American Psychologist*, 73, 768–780. doi: 10.1037/amp0000315
- Seaton, E. K., Neblett, E. W. Jr., Upton, R. D., & Hammond, W. P. (2011). The moderating capacity of racial identity between perceived discrimination and psychological well-being over time among African American youth. *Child Development*, 82, 1850–1867. doi: 10.1111/j.1467-8624.2011.01651.x
- Smalls, C. (2009). African American adolescent engagement in the classroom and beyond: The roles of mother's racial socialization and democratic-involved parenting. *Journal of Youth and Adolescence*, 38, 204–213. doi: 10.1007/s10964-008-9316-5
- Smith, S. M. N., Sun, R., & Gordon, M. S. (2019). Racial discrimination and psychological distress among African American adolescents: investigating the social support deterioration model. *Journal of Child and Family Studies*, 28, 1613–1622. doi: 10.1007/s10826-019-01397-6
- Smith-Bynum, M. A., Anderson, R. E., Davis, B. L., Franco, M. G., & English, D. (2016). Observed racial socialization and maternal positive emotions in African American mother-adolescent discussions about racial discrimination. *Child development*, 87, 1926–1939. doi: 10.1111/cdev.12562

- Spencer, M. B., Dupree, D., & Hartmann, T. (1997). A phenomenological variant of ecological systems theory (PVEST): A self-organization perspective in context. *Development and Psychopathology*, 9, 817–833. doi: 10.1017/S0954579497001454
- Stevenson, H. C., Cameron, R., Herrero-Taylor, T., & Davis, G. Y. (2002). Development of the Teenager Experience of Racial Socialization Scale: Correlates of race-related socialization frequency from the perspective of Black youth. *Journal of Black Psychology*, 28, 84–106. doi: 10.1177/0095798402028002002
- Sue, D. W., Nadal, K. L., Capodilupo, C. M., Lin, A. I., Torino, G. C., & Rivera, D. P. (2008). Racial microaggressions against Black Americans: Implications for counseling. *Journal of Counseling and Development*, 86, 330–338. doi: 10.1002/j.1556-6678.2008.tb00517.x
- Thomas, A. J., & Blackmon, S. M. (2015). The influence of the Trayvon Martin shooting on racial socialization practices of African American parents. *Journal of Black Psychology*, 41, 75–89. doi: 10.1177/0095798414563610
- Tynes, B. M., Rose, C. A., Hiss, S., Umaña-Taylor, A. J., Mitchell, K., & Williams, D. (2014). Virtual environments, online racial discrimination, and adjustment among a diverse, school-based sample of adolescents. *International Journal of Gaming and Computer-Mediated Simulations*, 6, 1–16. doi: 10.4018/ijgcms.2014070101
- Walker, R., Francis, D., Brody, G., Simons, R., Cutrona, C., & Gibbons, F. (2017). A longitudinal study of racial discrimination and risk for death ideation in African American youth. *Suicide and Life-Threatening Behavior*, 47, 86–102. doi: 10.1111/sltb.12251
- Wang, Y., Cham, H., Aladin, M., & Yip, T. (2019). Parental cultural socialization and adolescent private regard: Exploring mediating pathways through daily experiences. *Child development*, 90, e19–e36. doi: 10.1111/cdev.12911
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070. doi: 10.1037/0022-3514.54.6.1063
- White-Johnson, R. L., Ford, K. R., & Sellers, R. M. (2010). Parental racial socialization profiles: Association with demographic factors, racial discrimination, childhood socialization, and racial identity. *Cultural Diversity and Ethnic Minority Psychology*, 16, 237–247. doi:

10.1037/a0016111

Woltman, H., Feldstain, A., MacKay, J. C., & Rocchi, M. (2012). An introduction to hierarchical linear modeling. *Tutorials in quantitative methods for psychology*, 8, 52–69.

Yip, T., Cheon, Y. M., Wang, Y., Cham, H., Tryon, W., & El-Sheikh, M. (2019). Racial disparities in sleep: Associations with discrimination among ethnic/racial minority adolescents. *Child Development*. doi: 10.1111/cdev.13234

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Table 1

HLM Estimate of Same-Day Relations Between Racial Discrimination and Affect

Positive Affect		Negative Affect	
Fixed Effects	Coefficients(SE)	Fixed Effects	Coefficients(SE)
Intercept	3.27(0.17)***	Intercept	1.35(0.10)***
Level-2 Person Variables		Level-2 Person Variables	
Adolescent Gender	-0.31(0.14)*	Adolescent Gender	0.06(0.08)
Adolescent Age	0.03(0.05)	Adolescent Age	0.03(0.03)
Cohort	0.10(0.16)	Cohort	0.12(0.09)
Parent Education	0.01(0.05)	Parent Education	0.06(0.03)*
District A	-0.14(0.20)	District A	0.27(0.11)*
District B	0.04(0.19)	District B	-0.09(0.10)
Level-1 Daily Variables		Level-1 Daily Variables	
Day	-0.01(0.00)**	Day	0.01(0.00)
Previous-day Positive Affect	0.18(0.03)***	Previous-day Negative Affect	0.06(0.03)†
Daily Negative Affect	-0.03(0.06)	Daily Positive Affect	0.01(0.02)
Racial Discrimination	0.02(0.08)	Racial Discrimination	0.18(0.06)**

†p < .10. *p < .05. **p < .01. ***p < .001.

Table 2

HLM Estimate of Same-Day Relations Between Racial Socialization Messages and Affect

Positive Affect		Negative Affect	
Fixed Effects	Coefficients(SE)	Fixed Effects	Coefficients(SE)
Intercept	3.14(0.17)***	Intercept	1.42(0.10)***
Level-2 Person Variables		Level-2 Person Variables	
Adolescent Gender	-0.34(0.13)*	Adolescent Gender	0.08(0.08)
Adolescent Age	0.03(0.04)	Adolescent Age	0.04(0.03)
Cohort	0.10(0.15)	Cohort	0.05(0.09)
Parent Education	0.02(0.05)	Parent Education	0.05(0.02)†
District A	-0.12(0.19)	District A	0.20(0.11)†
District B	-0.01(0.18)	District B	-0.08(0.10)
Level-1 Daily Variables		Level-1 Daily Variables	
Day	-0.01(0.00)*	Day	0.01(0.00)
Previous-day Positive Affect	0.18(0.03)***	Previous-day Negative Affect	0.06(0.03)*
Daily Negative Affect	-0.01(0.06)	Daily Positive Affect	0.03(0.02)
Racial Pride	0.07(0.05)	Racial Pride	0.01(0.05)
Racial Barrier	0.01(0.06)	Racial Barrier	0.06(0.05)

Self-worth

0.32(0.06)***

Self-worth

-0.13(0.03)***

< .01. ***p < .001.

†p < .10. *p < .05. **p

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Table 3

HLM Estimate of Same-Day Relations Between Racial Discrimination and Affect, Moderated by Racial Socialization Messages

Positive Affect		Negative Affect	
Fixed Effects	Coefficients(SE)	Fixed Effects	Coefficients(SE)
Intercept	3.13(0.17)***	Intercept	1.44(0.10)***
Level-2 Person Variables		Level-2 Person Variables	
Adolescent Gender	-0.33(0.13)*	Adolescent Gender	0.05(0.07)
Adolescent Age	0.03(0.04)	Adolescent Age	0.04(0.03)
Cohort	0.09(0.15)	Cohort	0.06(0.09)
Parent Education	0.02(0.05)	Parent Education	0.05(0.02)*
District A	-0.11(0.19)	District A	0.21(0.11)†
District B	0.01(0.18)	District B	-0.08(0.09)
Level-1 Daily Variables		Level-1 Daily Variables	
Day	-0.01(0.00)*	Day	0.01(0.00)
Previous-day Positive Affect	0.19(0.03)***	Previous-day Negative Affect	0.05(0.03)
Daily Negative Affect	0.01(0.06)	Daily Positive Affect	0.01(0.02)
Racial Pride	0.05(0.05)	Racial Pride	-0.01(0.04)
Racial Barrier	0.02(0.06)	Racial Barrier	0.09(0.05)†

Self-worth	0.32(0.06)***	Self-worth	-0.17(0.04)***
Racial Discrimination	0.12(0.11)	Racial Discrimination	0.05(0.08)
Racial Discrimination X Racial Pride	0.22(0.17)	Racial Discrimination X Racial Pride	0.11(0.19)
Racial Discrimination X Racial Barrier	-0.19(0.18)	Racial Discrimination X Racial Barrier	-0.23(0.15)
Racial Discrimination X Self-worth	-0.36(0.18)*	Racial Discrimination X Self-worth	0.49(0.20)*

†p <

.10. *p < .05. **p < .01. ***p < .001.

Table 4

Time Lag HLM Estimate of the Relations Between Same-day Racial Discrimination and Affect, Moderated by Previous-Day Racial Socialization

Positive Affect		Negative Affect	
Fixed Effects	Coefficients(SE)	Fixed Effects	Coefficients(SE)
Intercept	3.20(0.17)***	Intercept	1.36(0.11)***
Level-2 Person Variables		Level-2 Person Variables	
Adolescent Gender	-0.27(0.14)†	Adolescent Gender	0.07(0.08)
Adolescent Age	0.05(0.05)	Adolescent Age	0.02(0.03)
Cohort	0.12(0.15)	Cohort	0.11(0.09)
Parent Education	0.01(0.05)	Parent Education	0.05(0.02)*
District A	-0.12(0.20)	District A	0.26(0.12)*
District B	0.05(0.19)	District B	-0.09(0.10)
Level-1 Daily Variables		Level-1 Daily Variables	
Day	-0.01(0.00)*	Day	0.01(0.00)
Previous-day Positive Affect	0.19(0.03)***	Previous-day Negative Affect	0.05(0.03)
Daily Negative Affect	-0.02(0.06)	Daily Positive Affect	0.01(0.02)
Previous-day Racial Pride	0.01(0.05)	Previous-day Racial Pride	0.03(0.03)

Previous-day Racial Barrier	-0.09(0.06)	Previous-day Racial Barrier	0.03(0.04)
Previous-day Self-worth	0.09(0.05)†	Previous-day Self-worth	-0.06(0.03)†
Racial Discrimination	0.07(0.10)	Racial Discrimination	0.11(0.08)
Racial Discrimination X Previous-day Racial Pride	0.02(0.16)	Racial Discrimination X Previous-day Racial Pride	0.35(0.16)*
Racial Discrimination X Previous-day Racial Barrier	-0.10(0.17)	Racial Discrimination X Previous-day Racial Barrier	-0.40(0.17)*
Racial Discrimination X Previous-day Self-worth	-0.14(0.17)	Racial Discrimination X Previous-day Self-worth	0.27(0.15)†

†p < .10. *p < .05. **p < .01. ***p < .001.

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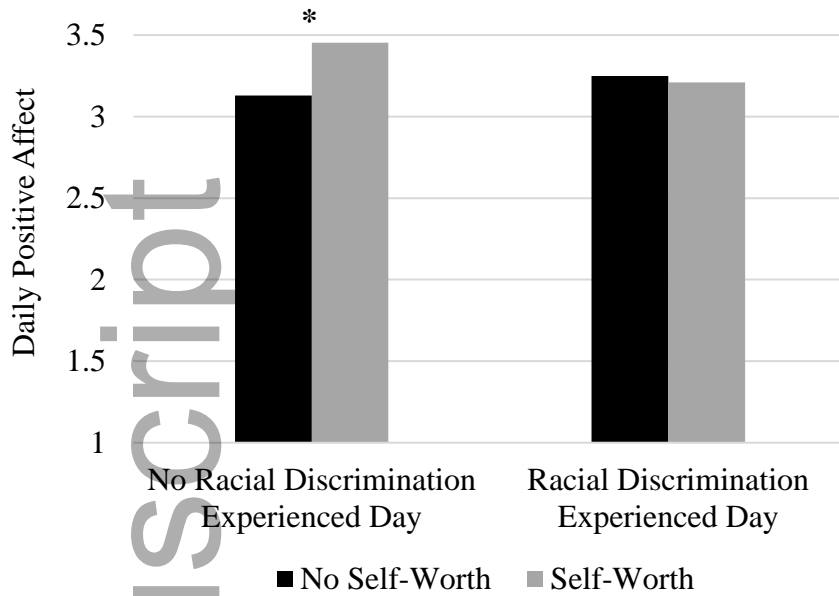


Figure 1. Same-Day Relations Between Racial Discrimination and Positive Affect, Moderated by Self-worth Message

Note. On days in which racial discrimination was not experienced, adolescents who received a self-worth message reported significantly higher positive affect compared to adolescents who did not receive a self-worth message, $p < .001$.

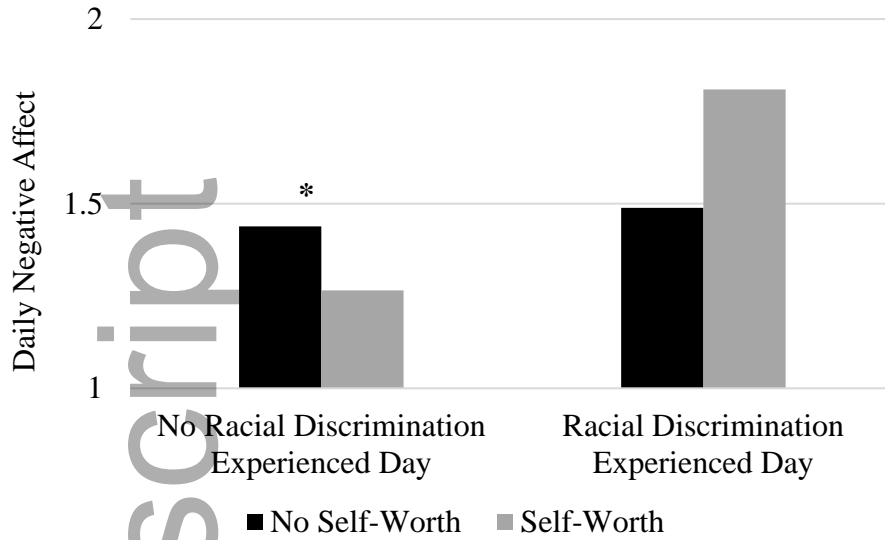


Figure 2. Same-Day Relations Between Racial Discrimination and Negative Affect, Moderated by Self-worth Message

Note. On days in which racial discrimination was not experienced, adolescents who received a self-worth message reported significantly lower negative affect compared to adolescents who did not receive a self-worth message, $p < .001$.

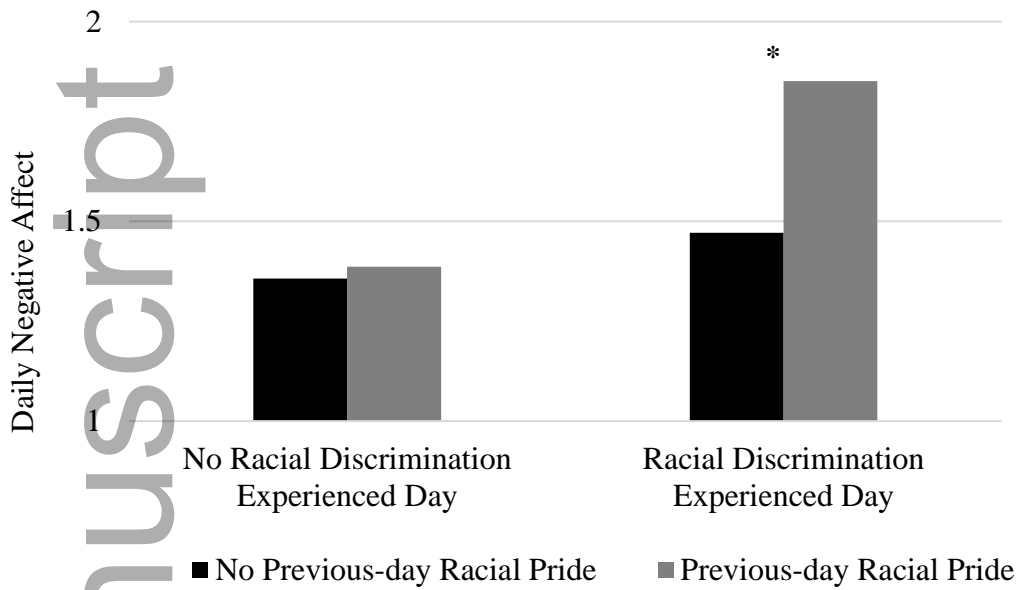


Figure 3. Same-day Relation Between Racial Discrimination and Negative Affect, Moderated by Previous-Day Racial Pride Message

Note. On days in which racial discrimination was experienced, adolescents who received a racial pride message on the previous day reported significantly higher negative affect compared to adolescents who did not receive a racial pride message on the previous day, $p < .05$.

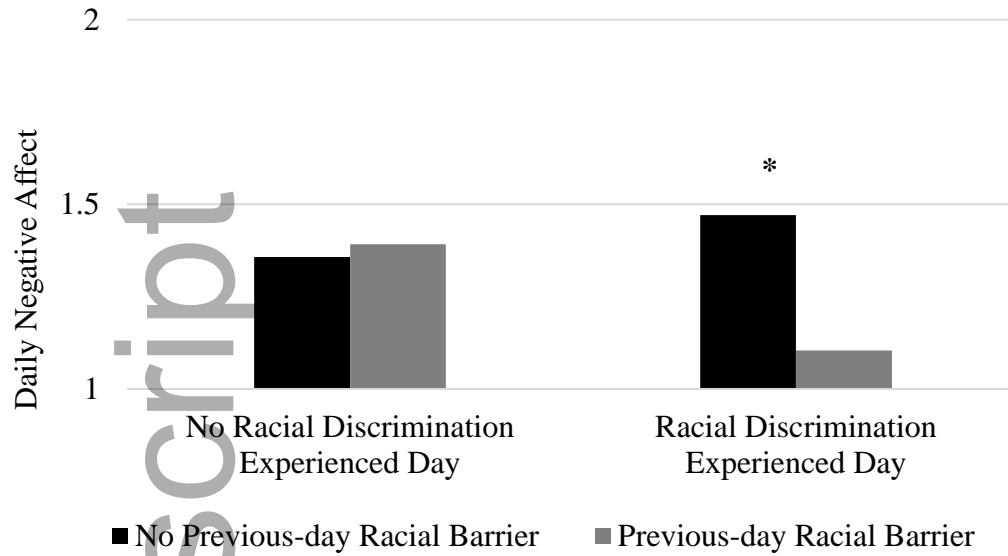


Figure 4. Same-day Relation Between Racial Discrimination and Negative Affect, Moderated by Previous-Day Racial Barrier Message

Note. On days in which racial discrimination was experienced, adolescents who received a racial barrier message on the previous day reported significantly lower negative affect compared to adolescents who did not receive a racial barrier message on the previous day, $p < .05$.