Racialized Emotion Recognition Accuracy and Anger Bias of Children's Faces

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University of North Carolina–Chapel Hill

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Research suggests that individuals are racially biased when judging the emotions of others (Elfenbein & Ambady, 2002) and particularly regarding attributions about the emotion of anger (Halberstadt, Castro, Chu, Lozada, & Sims, 2018; Hugenberg & Bodenhausen, 2003). Systematic, balanced designs are rare, and are comprised of adults viewing adults. The present study expands the questions of racialized emotion recognition accuracy and anger bias to the world of children. Findings that adults demonstrate either less emotion accuracy and/or greater anger bias for Black versus White children could potentially explain some of the large racialized disciplinary discrepancies in schools. To test whether racialized emotion recognition accuracy and anger bias toward children exists, we asked 178 prospective teachers to complete an emotion recognition task comprised of 72 children's facial expressions depicting six emotions and divided equally by race (Black, White) and gender (female, male). We also assessed implicit bias via the child race Implicit Association Test and explicit bias via questionnaire. Multilevel modeling revealed nuanced racialized emotion recognition accuracy with a race by gender interaction, but clear racialized anger bias toward both Black boys and girls. Both Black boys and Black girls were falsely seen as angry more often than White boys and White girls. Higher levels of either implicit or explicit bias did not increase odds of Black children being victim to anger bias, but instead decreased odds that White children would be misperceived as angry. Implications for addressing preexisting biases in teacher preparation programs and by children and parents are discussed.

Keywords: emotion recognition, perceptions, racialized anger bias, child facial expression, racial bias

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Understanding what others are feeling and thinking is a key skill associated with achieving successful interpersonal relationships in a wide variety of settings (Castro, Cheng, Halberstadt, & Grühn, 2016; Mayer, Salovey, Caruso, & Sitarenios, 2001). Individuals who are better able to recognize emotions in others and can accurately interpret the causes and consequences of an emotion find that others feel more socially connected with and trusting of them, perceive them as more likable, and provide more support in a variety of work-related and academic settings (Halberstadt, Denham, & Dunsmore, 2001; Hall, Andrzejewski, & Yopchick, 2009; Schlegel, Mehu, van Peer, & Scherer, 2018).

In the educational context, teachers' understanding of the emotions of their students has wide-ranging impact on student learning and engagement with school. Because some emotions direct students forward into learning (e.g., enjoyment, hope) and other emotions slow students' engagement with learning (e.g., anxiety, boredom; Pekrun, Goetz, Titz, & Perry, 2002; Putwain, Becker, Symes, & Pekrun, 2018), it is helpful to be attuned to what students are feeling. Teachers' interpretations (and misinterpretations) of students' emotions likely relate directly to teachers' responsiveness to students' needs (Jennings & Greenberg, 2009). Further, students who perceive that their teacher understands them, is responsive to their needs, and works to create a supportive

classroom climate demonstrate better social skills (Broekhuizen, Mokrova, Burchinal, Garrett-Peters, & the Family Life Project Key Investigators, 2016) and less disruptive behavior in the classroom (Hamre & Pianta, 2001; Shin & Ryan, 2017).

Emotion recognition includes two key features: accurately assessing what a person is feeling and a lack of consistent misjudgments about what a person is feeling. In the context of school, being able to discern what a child is feeling can help teachers scaffold learning more effectively (e.g., what a child is passionate about, finds frustrating). In contrast, consistent misinterpretations of emotions can lead to inaccurate and unfair assessments about a child's engagement and strengths/weakness. Misinterpretations about children's anger (e.g., perceiving anger when it does not exist) can be highly problematic in two ways. Anger is emotionally contagious in multiple types of settings (Elfenbein, 2014; Halberstadt, Beale, Meade, Craig, & Parker, 2015) and a cascading effect from incorrectly perceived anger to teachers becoming angry themselves, resulting in truly angry students is not an unlikely consequence (Becker, Goetz, Morger, & Ranellucci, 2014). Further, because perceived anger (even if misinterpreted) can evoke punishment as well as anger (Côté-Lussier, 2013), teachers' misperception of anger may also lead to adverse consequences such as undeserved interruptions from learning (e.g., time outs or suspensions). In the present study, we investigated both types of emotion recognition.

Accurate and inaccurate judgments may also not be distributed equally to all students. Although teachers usually wish to see children as individuals and they become educators because of their idealistic goals (Yarrow, 2009), the complexity of understanding children's emotions may intersect with the racial biases teachers have acquired through living in a culture in which racial stereotypes are well-embedded (Glock, 2016; Posey-Maddox, 2017). Further, emerging research suggests that such racial biases may influence teachers' recognition and responses to their students (e.g., Skiba et al., 2011; Warikoo, Sinclair, Fei, & Jacoby-Senghor, 2016).

Teacher misinterpretations of behavior, particularly hostility or anger, may contribute to the bleak reality that Black children face in today's school systems. As early as preschool, Black children are three times more likely to be suspended or expelled from preschool than White children (Skiba, Michael, Nardo, & Peterson, 2002; United States Department of Education, Office of Civil Rights, 2016). Racial differences in the presence of teacher-reported conflict is clear in kindergarten, and the gap between Black and White children in teacher-student conflict actually increases over the elementary school years with serious consequences for underachievement of Black children (Spilt & Hughes, 2015).

Black children also continue to receive disciplinary referrals, suspensions, and expulsions with two to four times the rate as White students in elementary school, even for minor infractions (Riddle & Sinclair, 2019; Skiba et al., 2011). Further, the number of student suspensions are rising, with rates having tripled in the last 40 years, and almost half of all Black students by 2007 reporting having faced suspension at some point in their school experiences (Aud, KewalRamani, & Frohlich, 2011; United States Department of Education, Office of Civil Rights, 2016). K-12 suspensions and expulsions are disproportionately higher in the United States South (Smith & Harper, 2015) and in school communities with more students of color in addition to more students living in families in the low-income category (Ramey, 2015).

The work on disproportionality strongly suggests that these statistics are not due to differences in children's academic performance or aggressive behavior, so much as teacher perceptions, because racial disparities in suspensions and expulsions prevail even when the contributing behaviors or events are equalized (e.g., Bottiani, Bradshaw, & Mendelson, 2017; Okonofua & Eberhardt, 2015; Skiba et al., 2002; Spilt & Hughes, 2015). Moreover, there is evidence that these results may at least partly be in the eyes of the beholder, in that teachers scan the behaviors of Black children more closely than White children as they search for rule infractions (Gilliam, Maupin, Reyes, Accavitti, & Shic, 2016) and evaluate Black children's behavior, even when similar, more negatively than White children's behavior (Yates & Marcelo, 2014). Thus, school disciplinary responses seem to be activated by more than actual misbehavior, and may be activated when teacher interpretations are clouded by unchecked biases.

To begin the process of linking social psychological processes in emotion with potential racism in school experiences, we tested adults' emotion understanding, and particularly for anger, of young Black and White boys and girls. We also investigated whether either implicit or explicit racial bias exacerbate race-related differences in how adults understand children's emotions. We see these as the first steps in assessing whether racialized understanding of emotions might contribute to racially discriminatory practices in schools.

Emotion Understanding Accuracy and Race

Being understood by the "other" facilitates forming and maintaining positive social relationships (Pollmann & Finkenauer, 2009; Reis, Lemay, & Finkenauer, 2017). In contrast, feeling misunderstood can be a source of both interpersonal conflict and either personal challenge or withdrawal (Lun, Oishi, Coan, Akimoto, & Miao, 2010; Verschueren, 2015). Being understood should be experienced equally across all individuals—that is, we would like to think that everyone has an equal opportunity to be understood, and that, as adults, we have the capacity to offer understanding to all others, regardless of sociodemographic characteristics.

Cross-race interactions do not yet meet this goal, with substantially less positivity and feeling understood in cross-race compared to same-race interactions (Mallett, Akimoto, & Oishi, 2016). Accurate identification of emotions is clearly important in encounters involving individuals of different races, particularly given the potential to interpret nonverbal cues in very different ways and based on "in" and "out" groups, however minimally constructed they are (Friesen et al., 2019; Young & Hugenberg, 2010). This may be particularly important in power-invested relationships such as those between teachers and their students. In addition, meta-analyses reveal that adults are less able to recognize the emotions of Black versus White individuals, regardless of the ethnicity of the observer, even in designs that fully balance ethnicity across stimuli and participant (Elfenbein & Ambady, 2002). Differences in accuracy in recognizing emotions by race of actor has also been corroborated with careful filming of emotion expressions of Black and White adult faces, using dynamic expressions previously

judged as beginning with a neutral expression and moving to a prototypical emotion (Halberstadt et al., 2018).

Emotion Understanding Inaccuracy and Race: Racialized Anger Bias

Consistently misperceiving a particular emotion when a different emotion is being expressed can lead to problematic social interactions (Mallett et al., 2016). In particular, anger bias (perceiving anger when it does not exist) has been associated with enacting various types of aggression and antisocial behavior (Kupersmidt, Stelter, & Dodge, 2011; Leist & Dadds, 2009).

The broader literature suggests that anger bias is racialized, with Black adults stereotyped as angry and emotionally dysregulated (Cooper, 2018; Franklin, 2004). Importantly, these stereotypes clearly activate hostile responses in the perceiver (Bargh, Chen, & Burrows, 1996). Further, anger is perceived more quickly than happiness in Black faces, but the opposite effect appears for White faces; and anger is perceived more quickly and for longer in young Black men's faces than young White men's faces (Hugenberg, 2005; Kang & Chasteen, 2009), with faces computerized to be Black and White based on physiognomic differences. The same effects occur with real adults, rather than computerized faces, whose emotion faces were Facial Action Coding System (FACS)-coded to ensure accuracy for the desired emotion. Even with faces not depicting anger, participants demonstrated significantly more anger bias for the Black actors (both female and male) than White actors (Halberstadt et al., 2018). No study, however, has examined the existence of anger bias when judging children. In line with previous work, we expected more frequent perceptions of anger even when it did not exist in Black children's faces than in White children's faces.

With one exception (Halberstadt et al., 2018), research on racialized anger bias has focused on men, yet stereotypes about Black women and girls as loud, antagonistic, aggressive, or angry persist in popular culture (Brown Givens & Monahan, 2005; Cooper, 2018). Black girls report experiencing being "angrified" in school, even when they are not angry, or when they have legitimate complaints which are dismissed for "being overly emotional" (E. W. Morris, 2007; M. W. Morris, 2016). Therefore, we predicted that Black girls as well as Black boys would experience racialized anger bias.

Implicit and Explicit Bias in Association With Emotion Accuracy and Anger Bias

A common approach to understanding racialized differences is to consider implicit and explicit bias at the individual level. These biases are thought to manifest as distinct behavioral dispositions (Carruthers, 2018), with less positive and more negative responses toward groups for whom individuals harbor prejudice (Dasgupta & Rivera, 2006; Miller, Smith, & Mackie, 2004). Implicit biases are thought to be automatically activated responses occurring outside of an individual's conscious awareness (Dasgupta, 2013; Greenwald, Poehlman, Uhlmann, & Banaji, 2009). Explicit biases reflect more conscious attitudes, beliefs, and stereotypes and are more likely to be expressed, although they can also be concealed when desired (Greenwald et al., 2009; Kim, 2003). Although recent debates have questioned whether implicit bias successfully predicts discriminatory behavior, or even whether implicit bias is "implicit," most critics agree that both implicit and explicit bias continue to be important constructs worth exploring (Carlsson & Agerström, 2016; McConnell & Leibold, 2001; Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013; K. Payne, Vuletich, & Lundberg, 2017; Yamaguchi & Beattie, 2020).

In research specific to emotion, implicit bias has sometimes strengthened racialized effects. Implicit bias toward Blacks is associated with perceptions of computerized Black, but not White, faces as angry (Hugenberg & Bodenhausen, 2003). Also, when these faces were constructed to be racially ambiguous, the angry (but not the happy) faces tend to be categorized significantly more often as Black than White, an effect strengthened by implicit prejudice (Dunham, 2011; Hugenberg & Bodenhausen, 2004). Further, for participants identifying a face as Black, their perceptions of anger intensity were actually greater than those participants identifying a face as White (Hutchings & Haddock, 2008). Thus, we included measures of both implicit and explicit bias in our work.

Participant Considerations

We focused on prospective teachers as particularly relevant to the question of school outcomes for young children. Students in teacher preparation programs show emotion perception ability below the expected average for the wider population (Corcoran & Tormey, 2012). Unfortunately, students receive very little training during their prospective years about how to understand and respond to students' emotions and regulate their own classroom emotions (Jennings & Greenberg, 2009), despite findings that such training may improve self-confidence, empathy, and self-awareness (Garner, Bender, & Fedor, 2018; Lasauskiene & Rauduvaite, 2015) and the likelihood of their placement as new teachers in the classrooms with the most challenging students (Dias-Lacy & Guirguis, 2017). In addition, a college-aged population provides a more conservative test of racialized anger bias, as this is the population most likely to have had racially diverse educational experiences themselves.

The Present Study

In the present study, we expand research on emotion accuracy and anger bias to an important vulnerable population—children. Today, over 56 million children are in school in the United States (United States Department of Education, Institute of Education Sciences, 2019), and their school experience sustains a vital national resource. Thus, we investigated prospective teachers' racialized emotion understanding of children's facial displays, and we did so in two ways. For emotion accuracy, we tested whether prospective teachers were as accurate in understanding the emotion of Black children as White children. We anticipated that we would find racialized emotion accuracy, given previous results with adults and one child study (Felleman, Carlson, Barden, Rosenberg, & Masters, 1983), although we thought that improvements in video technology might reduce these effects. For anger bias, we tested whether prospective teachers misjudged Black children as angry more frequently than White children. We anticipated racialized anger bias, given previous results with adults, and qualitative reports for children. For both questions, we predicted

that racialized judgments would occur for girls as well as boys, and we also predicted that implicit and/or explicit bias would exacerbate racialized phenomena in emotion-related judgments.

To assess emotion accuracy and anger bias, we used a validated measure of 72 children's facial expressions of six different emotions, as they developed from very low intensity to moderate intensity of expression. The race by gender design allowed us to assess the degree to which prospective teachers' judgments were racialized. In addition, we assessed the extent to which racialized judgments were impacted by implicit and explicit bias. Because of the importance of learning about racialized emotion understanding in individuals intending to work in school settings, we enlisted prospective teachers as participants. Funding for this study was based on the hypotheses described above and the study was approved by the institutional review board and conducted in accordance with APA ethical conduct of research with human subjects (IRB no. 6544).

Method

Participants

Participants were 178 prospective teachers (M_{age} = 22.48 years, SD_{age} = 5.24), recruited from education programs of three southeastern universities. The sample was predominantly female (89%) and White (White 70%; Hispanic 9%, Asian 8%, Black 6%, Biracial 5%, Native American 1%, Middle Eastern 1%), reflecting the composition of teachers in this region as well as public schools in the United States (National Center for Education Statistics, 2017). The majority of participants planned on certification to teach multiple grades (early education through elementary 67.5%, middle and high school 28.7%, and multiple education levels 3.8%). Although 20.9% of the participants had no formal classroom experience, 28.3% had between 1 week to 1 month, 23.7% had one semester, and 27.1% had 1 year or more in the classroom. Participants received credit toward course requirements in their education classes or $25 for participating if they had already completed those course requirements.

To determine sample size, we turned to the most analogous finding in the literature, which was Sacco and Hugenberg's (2009; Study 1) demonstration that facial maturity of adults facilitates accurate recognition of fear and anger expressions. Using the reported effect (d = 0.76) from their between-person study with a single level of analysis, a power analysis with G*Power (V3.1; Faul, Erdfelder, Lang, & Buchner, 2007) software indicated that 47 participants would yield 95% power. Our aim in the current study was to be able to assess within- and between-person effects and to be able to explain some between-person variance with measures of racial bias. With these goals in mind and because our stimuli were more ecologically valid and thus less controlled, we aimed to collect 150 to 200 participants so that we would have sufficient power to detect effects across levels. To achieve this sample size, and to increase generalizability, we turned to the teacher education programs in three large, public universities. The universities range from highly prestigious to less prestigious; all three are described as in the top 100 public universities (U.S. News and World Report, 2019).

Procedure

Prospective teachers were invited to participate in this study, entitled "Understanding Emotions in the School Setting," as one way to complete course requirements or through e-mail communications with prospective teacher lists at the participating universities. Participants then received a link to an online survey, and were asked to work in a distraction-free environment and to plan for a 1.5- to 2-hr study. The study began with the tasks having the least emphasis on race (e.g., the emotion recognition task described below, a measure of general beliefs about emotions), and concluded with the implicit and explicit racial bias tasks (in that order). To access the implicit bias tasks hosted by Project Implicit, participants were directed to the Project Implicit's Internet-hosted task from within the Qualtrics survey, and then were returned to the original survey to finish the explicit bias task and provide demographic information. Below we report on responses to the emotion recognition task, the implicit association task, and the explicit racism questionnaire. Participants were thanked for their time and debriefed.

Measures

Emotion recognition: Perceptions of Children's Emotions in Videos, Evolving and Dynamic (PerCEIVED) Task. This computerized task (Halberstadt, Cooke, Hagan, & Liu, 2020) is comprised of short video clips of 72 children (Ages 9–13), M_{age} = 11, evenly distributed by gender (boy, girl) and race (Black, White). The clips show the children expressing facially one of six basic emotions: happy, sad, angry, afraid, surprise, and disgust. There are three actors for each Gender × Race × Emotion group. Five rounds are available, with each round including all 72 facial expressions. The first round contains the very beginning of an emotional expression ("A" level of emotional expressions), and the fifth round includes a fully prototypically created facial expression ("E" level emotional expression, as per FACS coding, Ekman, Friesen, & Hager, 2002). The neutrality, prototypically, and level of these expressions were validated by two FACS-certified coders (using the anatomically based FACS; Ekman, et al., 2002). A similar, briefer task with adults has demonstrated ample construct validity for both accuracy and anger bias in adults (Halberstadt et al., 2018); stability in skill level in this task is indicated by test-retesting 3 months later ($r[24]$ = .70, $p <$ .001; Halberstadt, Cooke, Hagan, & Liu, 2020).

We chose the first three rounds for our measure, because prototypical expression by children in third grade is already rare (Castro, Camras, Halberstadt, & Shuster, 2018). Thus, the prospective teachers initially saw only small amounts of information, followed by more facial information becoming available in the two subsequent rounds. The prospective teachers were asked to supply their best judgment about the emotion depicted in each face, by clicking on the emotion label that best described the emotion. Faces were randomized within each round. This version of the task takes approximately 25–30 min to complete. Please see Figure 1 for examples.

Emotion recognition accuracy. Emotion recognition accuracy was calculated using a traditional accuracy scoring paradigm: responses that matched the target emotion received a score of 1 and responses that did not match received a score of 0 for each of 216 faces. Anger bias was calculated as the erroneous attribution

Figure 1. Picture description of the child increasingly clear task where each picture represents the apex for each round. Photos reprinted with consent of the individuals depicted. See the online article for the color version of this figure.

of anger when happy, sad, fear, surprise, or disgust were expressed in the 180 nonangry faces; incorrect attributions of anger received a score of 1 and correct attributions of other emotions received a score of 0.

Implicit bias (child race Implicit Association Test [IAT]). The IAT (Baron & Banaji, 2006; Greenwald, McGhee, & Schwartz, 1998) is thought to measure implicit bias, and is a dual categorization task with good psychometric properties (Greenwald et al., 2009). An assumption of the race IATs is that, to the extent that negative valence is associated with Black faces (and positive valence with White faces), participants will respond more quickly when Black faces are paired with "bad" or unpleasant words (and White faces with "good" or pleasant words); these are called "compatible" trials, compared to the opposite pairings, called "incompatible trials". Response times on the compatible and incompatible trials are then used to compute D scores, with higher scores indicating greater implicit bias (Greenwald, Nosek, & Banaji, 2003). Project Implicit hosted the task and calculated the D scores. Trials where the participant's response latency was greater 10,000 ms were removed. Further, participants ($N = 29$) were removed from analyses involving the IAT when they had more than 30% errors overall, more than 40% errors on any given block, or who had a latency less than 300 ms on more than 10%. These quality constraints are in accordance with the recommendations of Greenwald et al., 2003. We included both the traditional IAT with adult faces as well as the child version with faces of young children (Baron & Banaji, 2006). Because the two tasks were correlated within the current study ($r[136] = .49, p < .001$) we report on just the child race IAT, as the more conceptually relevant task for our questions.[1]

Racially Explicit Attitudes of Classroom Teachers (RE-ACT): Classroom subscale. We augmented six relevant items from Okeke (2009) to create an 18-item scale subscale investigating beliefs about racial differences in the educational context. Examples of questions are "Black students don't study very much" and "Black students are more emotional than White students". Participants respond on a scale from 1 (*strongly disagree*) to 6 (*strongly agree*). In this sample, Cronbach's alpha = .93. In a sample of 32 prospective teachers and counselors, test-retest reli-

ability ($r[30] = .78, p \leq .01$) indicated persistent beliefs over 10 weeks.

Results

Analytic Plan

We began by exploring descriptive statistics. Hypothesis testing then involved assessing whether prospective teachers' emotion recognition accuracy and anger bias when viewing children's emotion expressions varied by the race and gender of the child, and whether participants' implicit or explicit bias exacerbated any differences. For hypothesis testing, we used multilevel modeling (Raudenbush & Bryk, 2002) and SAS software (Version 9.4). First, we predicted differences in prospective teachers' emotion recognition accuracy and anger bias scores on the PerCEIVED task, including face race and face gender, as well as interaction effects, at Level 1 (within-person variability). We then included prospective teachers' implicit and explicit biases at Level 2 (between-person differences). All assumptions regarding univariate and multivariate normality were met. Multilevel models were conducted to assess the independent effects of actor race and gender on participant accuracy in emotion recognition, controlling for round within the task (as more information was provided in each subsequent round). All analyses are reported using odds ratios (*OR*s); for recognition accuracy, 1 indicates an accurate response and 0 an inaccurate response, and for anger bias, 1 indicates anger bias (identifying anger when no anger is present), and 0 indicates no anger bias.

Preliminary analyses of the fully unconditional models (null models) included only the intercept (accuracy) to partition the variance within and between persons (Nezlek, 2001). Because multilevel models with dichotomous outcomes assume that there is no error at Level 1, we followed previous convention and used

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[1] We also replicated the analyses below with an average score of the Adult IAT and Child IAT. The results were in the same direction and of a slightly stronger magnitude for this combination IAT score. Supplemental Table 1 can be found in the supplemental materials.

3.29 as our Level 1 variance in calculating the intraclass correlation coefficient (ICC; Ene, Leighton, Blue, & Bell, 2015; Snijders & Bosker, 1999).

Level 1:

$$\text{ACCURACY or ANGER BIAS}_{it} = \beta_{0it} + \beta_1(\text{GENDER})_{it}$$
$$+ \beta_2(\text{RACE})_{it} + \beta_3(\text{GENDER} \times \text{RACE})_{it}$$
$$+ \beta_4(\text{ROUND})_{it} + \beta_5(\text{ROUND} \times \text{ROUND})_{it} + r_{it}$$

Level 2:

$$\beta_{0i} = \gamma_{00} + \gamma_{01}(\text{BIAS} : \text{Implicit or Explicit})$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11}(\text{BIAS} : \text{Implicit or Explicit})$$

$$\beta_{2i} = \gamma_{20} + \gamma_{21}(\text{BIAS} : \text{Implicit or Explicit})$$

$$\beta_{3i} = \gamma_{30}$$

$$\beta_{4i} = \gamma_{40}$$

$$\beta_{5i} = \gamma_{50}$$

In these equations, the within-person effects at Level 1 are modeled by the main effect of gender (β_1), the main effect of race (β_2), and the interaction of gender and race (β_3), controlling for linear (β_4) and quadratic (β_5) effects of round (to statistically control for increases in accuracy as the expression of the emotion intensifies). These effects become the outcome variables at Level 2 where between-person effects are modeled. Specifically, each initial gamma (γ) statistic represents the sample average effect for the target variable. γ_{01} represents the main effect of bias, γ_{11} represents the cross-level interaction of bias differences in the association between gender and accuracy, and γ_{21} represents the cross-level interaction of bias differences in the association between race and accuracy.

Descriptive Statistics

In this sample, participants exhibited implicit bias (Child IAT) against Black children, with a preference for White children ($M = 0.28$, $SD = 0.41$, ranging from -0.92 to 1.04). For explicit bias, participants on average disagreed with the classroom racialized statements, but not strongly, indicating some degree of bias ($M = 2.20$, $SD = .71$, ranging from 1.00 to 4.00). The correlation between the implicit and explicit bias measures was $r[147] = .23$, $p < .0001$. When implicit bias was included in models, $N = 149$, following quality constraint recommendations for improbable reaction times set by Project Implicit.

Emotion Understanding Accuracy

The null model indicated that the average odds of accurately recognizing the emotional expressions across gender and race was 1.21 (95% CI [1.15, 1.27]). The ICC calculations indicated 97% variability in accuracy was within person ($\sigma^2 = 0.10$, $z = 7.84$, $p < .001$) and thus 3% variability in accuracy between persons, providing sufficient variability to conduct further analyses. This means that 97% of the variability in accuracy assessments was due to within-person processes. The proceeding analyses focus on this large amount of within person variance (Model 1) and then on the between person variance (Models 2 and 3), shown in Table 1. Additionally, variance around the slopes of the predictors was constrained in all three models. When the models did converge (Model 2), there was not a significant difference between the randomly varying slopes models and the constrained slopes models (Singer, 1998). Therefore, we continued with the most parsimonious models with fixed slopes.

Model 1: Gender and race. Multilevel analyses indicated significant main effects of actor gender ($p < .01$) and actor race

Table 1

Odds Ratios (and Confidence Intervals) of Multilevel Models of the Interaction Between Actor Gender, Actor Race, and Participants' Racial Bias on Emotion Recognition Accuracy, Controlling for Round

	Outcome: Emotion recognition accuracy					
	Model 1: Gender and race of child		Model 2: Implicit racial bias		Model 3: Explicit racial bias	
Predictor	*OR*	CI	*OR*	CI	*OR*	CI
Fixed effects						
Intercept	**0.20*****	[0.17, 0.24]	**0.21*****	[0.17, 0.25]	**0.23*****	[0.18, 0.29]
Actor gender	**1.52*****	[1.43, 1.61]	**1.54*****	[1.43, 1.65]	**1.54*****	[1.33, 1.78]
Actor race	**1.22*****	[1.15, 1.29]	**1.27*****	[1.19, 1.37]	**1.26****	[1.10, 1.78]
Actor Gender × Actor Race	**0.71*****	[0.65, 0.77]	**0.70*****	[0.63, 0.76]	**0.71*****	[0.65, 0.77]
Racial Bias			1.04	[0.91, 1.20]	0.95	[0.87, 1.02]
Actor Gender × Racial Bias			0.99	[0.91, 1.13]	1.00	[0.94, 1.06]
Actor Race × Racial Bias			0.93	[0.83, 0.94]	0.99	[0.93, 0.94]
Covariance parameters						
Round	**2.82*****	[2.37, 3.37]	**2.83*****	[2.33, 3.43]	**2.87*****	[2.40, 3.43]
Round × Round	**0.90*****	[0.86, 0.94]	**0.90*****	[0.86, 0.94]	**0.90*****	[0.86, 0.94]

Note. Actor gender is coded as 0 for male and 1 for female. Actor race is coded as 0 for White and 1 for Black. To control for the effect of increasing information in each round, round, and round² were included in all models. Implicit racial bias was measured using the Child Implicit Association Test. For this model only, the total sample size was 149 due to quality constraints; explicit racial bias was measured using the Racially Explicit Attitudes of Classroom Teachers Classroom subscale. *OR* = odds ratio; 95% CI = confidence interval. Bold type indicates a significant finding of $p < .01$.
** $p < .01$. *** $p < .001$.

($p < .01$; see Table 1). These are qualified by the interaction between gender and race ($p < .01$), however, and the average odds of recognizing emotions of Black girls was 1.27 (95% CI [1.19, 1.35]), White girls 1.45 (95% CI [1.37, 1.54]), Black boys 1.18 (95% CI [1.11, 1.26]) and White boys 0.98 95% CI [0.93, 1.03]; Figure 2). Simple effects analyses demonstrated that, for both Black and White children, participants were significantly more accurate for girls than boys (Black children: $OR = 1.07$, 95% CI [1.01, 1.14], $p < .01$; White children: $OR = 1.48$, 95% CI [1.40, 1.57], $p < .001$). Further, participants were significantly more accurate for White than Black girls ($OR = 0.87$, 95% CI [0.82, 0.93], $p < .001$), but for Black than White boys ($OR = 1.20$, 95% CI [1.14, 1.28], $p < .001$). The interaction also demonstrates that the difference between White girls and boys was greater than between Black girls and boys, with accuracy for girls being highest for both races. Interestingly, the accuracy for White boys was the lowest (see Figure 2). Because this was surprising, we reran the same model without the White boy who received the lowest accuracy score, and still retained the significant effect ($p < .01$).

Model 2: Child race IAT. When participants' IAT scores were included in the model, all previously described interactions remained significant. There was no main effect of implicit bias ($p = .539$), and no new significant interactions emerged (see Table 1).

Model 3: REACT--Explicit bias in the classroom. When participants' explicit bias scores were included in the model, all previously described interactions remained significant. There was no main effect of explicit bias ($p = .168$), and no new significant interactions emerged (see Table 1).

Anger Bias

The null model indicated that the average odds of anger bias across gender and race was 0.08 (95% CI [.08, .09]). That is, anger bias (coded as 1) was not a frequent occurrence, resulting in ORs below 1. Nevertheless, differences were observed in how often anger bias occurred. Following the same procedures described for accuracy, we found 95% variability in anger bias within persons ($\sigma^2 = 0.16$, $z = 5.94$, $p < .001$) and 5% variability in anger bias between persons, providing sufficient variability to conduct further analyses. The proceeding analyses focused on this large amount of within person variance (Model 1), and then on the between person variance (Models 2 and 3), shown in Table 2. Variance around the slopes of the predictors was constrained in all three models because the models failed to converge when random effects were added to the model.

Model 1: Gender and race. Multilevel analyses indicated significant main effects of actor gender ($p < .001$) and actor race ($p < .01$; see Table 2). These were qualified by the interaction between race and gender ($p = .01$), such that the average odds of exhibiting anger bias toward Black girls was 0.08 (95% CI [0.07, 0.09]), White girls 0.04 (95% CI [0.04, 0.05]), Black boys 0.11 (95% CI [0.10, 0.12]), and White boys 0.10 (95% CI [0.09, 0.11]; Figure 3). Simple effects analyses demonstrated that, as predicted, boys were misperceived as angry significantly more often than girls for both races (Black children: $OR = 0.74$, 95% CI [0.67, 0.83], $p < .001$; White children: $OR = 0.50$, 95% CI [0.44, 056], $p < .001$). Additionally, as predicted, Black children were misperceived as angry at higher odds than White children were (girls: $OR = 1.74$, 95% CI [1.53, 1.98], $p < .001$; boys: $OR = 1.16$, 95% CI [1.04, 1.29], $p < .01$). This interaction demonstrates that the
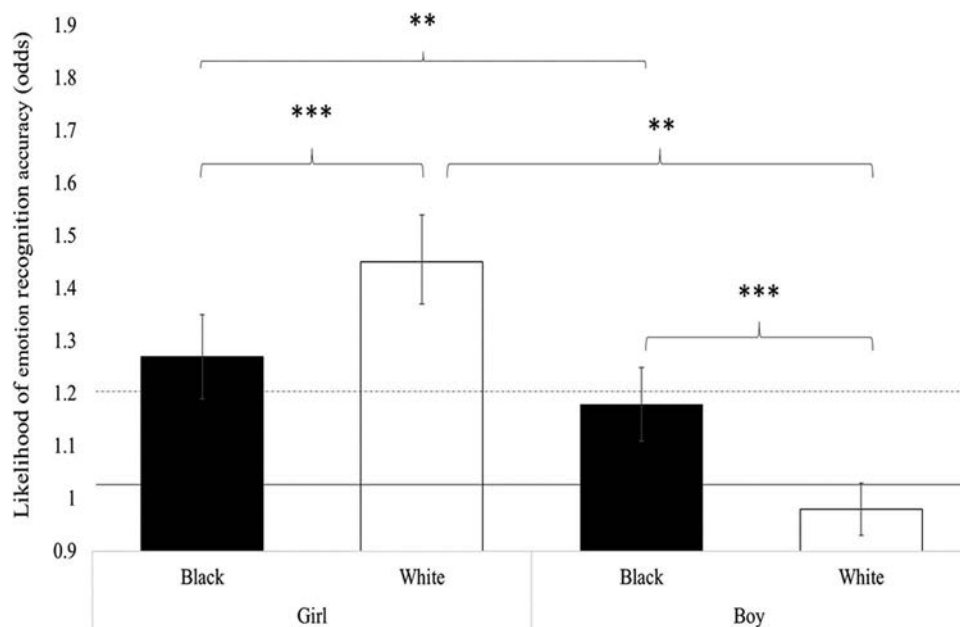

Figure 2. Odds of accurately labeling the emotional expression by actor race and actor gender. Dotted line represents average level of accuracy across race and gender. Solid line represents equal odds of accuracy and inaccuracy. ** $p < .01$. *** $p < .001$.

Table 2

Odds Ratios (and Confidence Intervals) of Multilevel Models of the Interaction Between Actor Gender, Actor Race, and Racial Bias on Anger Bias

| | Outcome: Anger bias | | | | | |
| | Model 1: Gender and race of child | | Model 2: Implicit racial bias | | Model 3: Explicit racial bias | |
Predictor	*OR*	CI	*OR*	CI	*OR*	CI
Fixed effects						
Intercept	**0.30****	[0.22, 0.41]	**0.33****	[0.24, 0.47]	**0.37*****	[0.25, 0.57]
Actor gender	**0.49****	[0.43, 0.56]	**0.50****	[0.43, 0.58]	**0.50*****	[0.38, 0.66]
Actor race	**1.16****	[1.05, 1.29]	1.06	[0.93, 1.21]	0.89	[0.68, 1.17]
Actor Gender × Actor Race	**1.50****	[1.27, 1.77]	**1.48****	[1.23, 1.78]	**1.47*****	[1.24, 1.74]
Racial bias			0.82	[0.65, 1.03]	0.90	[0.80, 1.02]
Actor Gender × Racial Bias			0.92	[0.74, 1.16]	1.00	[0.89, 1.12]
Actor Race × Racial Bias			**1.33****	[1.06, 1.67]	**1.13***	[1.01, 1.27]
Covariance parameters						
Round	**0.41*****	[0.29, 0.58]	**0.39*****	[0.27, 0.58]	**0.42*****	[0.30, 0.60]
Round × Round	**1.13****	[1.04, 1.24]	**1.14****	[1.03, 1.26)	**1.12***	[1.03, 1.23]

Note. Actor gender is coded as 0 for male and 1 for female. Actor race is coded as 0 for White and 1 for Black. To control for the effect of increasing information in each round, round, and round^2 were included in all models. Where the model includes the Child Implicit Association Test, implicit racial bias, the total sample size was 149 due to quality constraints. Implicit racial bias was measured using the Child IAT, and for this model only the total sample size was 149 due to quality constraints; explicit racial bias was measured using the Racially Explicit Attitudes of Classroom Teachers Classroom subscale. *OR* = odds ratio; 95% CI = confidence interval. Bold type indicates a significant finding of $p < .05$.
* $p < .05$. ** $p < .01$. *** $p < .001$.

magnitude of the effect of race was greater for girls than boys; however, Black boys receive the highest amount of anger bias (see Figure 3).[2]

Model 2: Child IAT. As shown in Table 2, when implicit bias scores were included in the model, the main effect of gender and the interaction between gender and race remained significant (all *p*s <.05), but the significant main effect of race disappeared ($p = .40$), and there was no main effect of implicit bias ($p = .08$) or an interaction between implicit bias and gender ($p = .50$). However, as predicted, a significant interaction between actor race and implicit bias emerged (Figure 4). When implicit bias was low (when Child IAT was 1 *SD* below the mean) the odds of misattributing anger toward Black children was 0.09 (95% CI [0.08, 0.10]) and toward White children was 0.08 (95% CI [0.07, 0.09]). When implicit bias was high (when Child IAT was 1 *SD* above the mean), the odds of misattributing anger toward Black children was 0.09 (95% CI [0.08, 0.10]) and toward White children was 0.07 (95% CI [0.06, 0.07]). Participants low in implicit bias did not differ on their odds of anger bias between Black and White children (*OR* = 1.03, 95% CI [0.83, 1.28], $p = .78$). However, for participants who were high in implicit racial bias (preference for White faces) there was a greater likelihood of misattributing anger to Black children than White children (*OR* = 1.41, 95% CI [1.07, 1.85] $p < .01$). This effect appears to be due to less misattributed anger toward White children when participants are high in implicit bias.

Model 3: REACT—Explicit bias in the classroom. As shown in Table 2, when explicit bias scores were included in the model, the main effect of gender and the interaction between gender and race remained significant (all *p*s <.05), but the significant main effect of race disappeared ($p = .40$), and there was no main effect of explicit bias ($p = .12$) or interaction between explicit bias and gender ($p = .98$). As predicted, an interaction between explicit bias and actor race emerged. When explicit bias was low (when REACT was 1 *SD* below the mean) the odds of misattributing anger toward

Black children was 0.09 (95% CI [0.06, 0.12]) and toward White children was 0.09 (95% CI [0.06, 0.12]). When explicit bias was high (when REACT was 1 *SD* above the mean), the odds of misattributing anger toward Black children was 0.09 (95% CI [0.08, 0.10]) and toward White children was 0.08 (95% CI [0.07, 0.08]). Although a small effect, but consistent with the findings above for implicit bias, this effect appears to be due to less misattributed anger toward White children when participants are high in explicit bias.

Discussion

To better understand whether emotion understanding of young children is racialized, and whether individual differences in racial bias (implicit or explicit as measured by the IAT and REACT scales)

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[2] These results invite further exploration of the prospective teachers' accuracy for anger specifically. However, because only 12 children (3 per demographic category) were shown with angry faces, we offer this information tentatively. Again, we found a significant main effect of gender (*OR* = 2.04, CI [1.26, 2.37]), a significant main effect of race (*OR* = 1.52, 95% CI [1.32, 1.77]), and a significant interaction of gender and race (*OR* = 0.43, 95% CI [0.34, 0.53]). The odds of anger accuracy for Black girls was 0.89 (CI [0.78, 1.01]), White girls was 1.33 (95% CI [1.17, 1.52]), Black boys was 1.01 (95% CI [0.88, 1.14]), and White boys was 0.67 (95% CI [0.59, 0.77]). The pattern of effects and the odds of accuracy for each gender/race category remained the same, suggesting that race and gender effects in anger accuracy were quite similar to accuracy of other emotions. In combination with anger bias, it appears that prospective teachers somewhat accurately perceive anger in White girls when they show anger but don't impose anger on them when they don't show anger; they don't perceive Black girls' anger very accurately but they impose anger on Black girls twice as often as White girls; they are at about chance level of recognizing Black boys' anger that is shown but they impose anger on them most of all children; and they are relatively poor at recognizing White boys' anger that is shown and they also impose anger on these boys when they are not expressing anger.
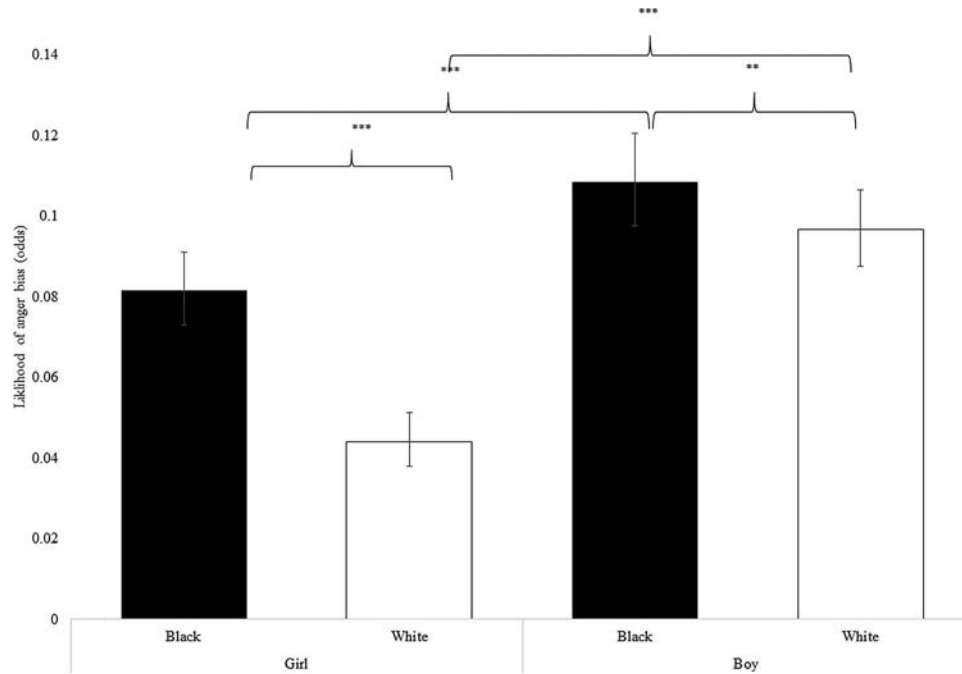
Figure 3. Odds of misattributing anger by actor race and actor gender. ** $p < .01$. *** $p < .001$.

predict racialized emotion understanding, we utilized a new measure with facial expressions of 72 children of elementary-school age, equally distributed across gender, race, and type of emotion. We found racialized recognition accuracy interactions with gender and also clear evidence of racialized anger bias. In general, the participants in the current study did not show evidence of high implicit or explicit racial bias. Despite this, there was enough variability in racial bias on both the IAT and the REACT scales; that is, there were enough racially biased individuals to predict emotion recognition accuracy and anger bias based on individuals' own racial biases. We discuss the racialized recognition accuracy effects first, followed by the racialized anger bias effects, which converge with literature on racialized anger bias with adult faces and may help interpret the disciplinary gaps that Black and White children experience as early as elementary school.
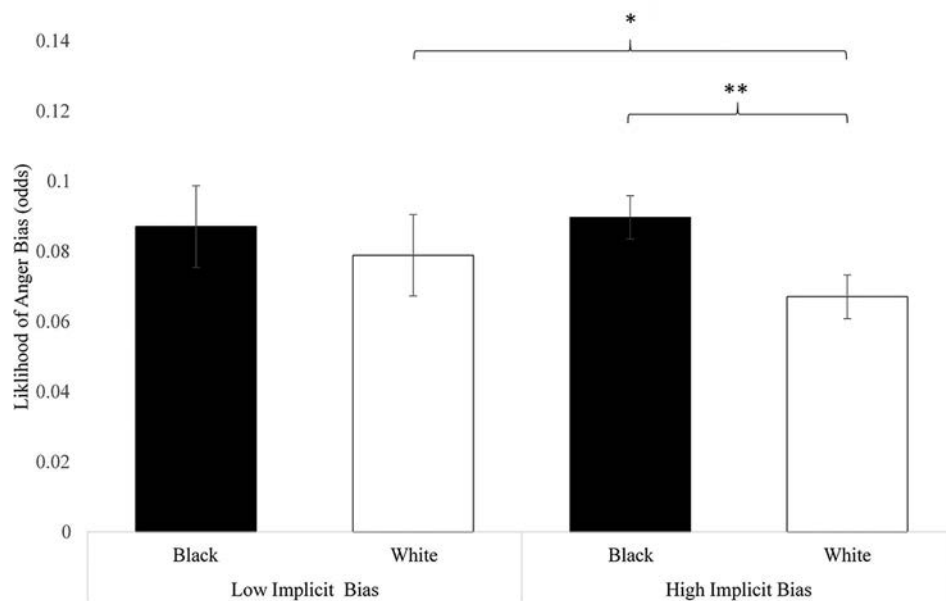

Figure 4. Odds of misattributing anger by race when implicit bias is low (1 *SD* below the mean) and high (1 *SD* above the mean). * $p < .05$. ** $p < .01$.

Racialized Emotion Accuracy Exists for Children, But Differently for Boys and Girls

Instead of a simple, main effect for accuracy for Black versus White faces found in meta-analyses largely conducted with adult faces and photographs (Elfenbein & Ambady, 2002) and the study of adult faces most similar to the current study (Halberstadt et al., 2018), we found a Gender × Race interaction when judging emotion in children's facial expressions. As expected, participants were more accurate for White than Black girls, but were surprisingly more accurate for Black than White boys. Whereas accuracy for Black girls was greater than for Black boys, these odds were more similar to each other than the odds for accuracy for White girls and boys, with substantially greater accuracy for White girls than any other group, and substantially worse accuracy for White boys than any other group. These findings were so striking that we reran analyses without the White boy who received the lowest accuracy score, but the findings held. Further, participants' own implicit and explicit biases did not predict emotion recognition accuracy nor the interaction with race and gender.

The greater success in recognizing the emotions of White girls by the predominantly White and female prospective teachers (nearly three fourths of our participants) fits well with the facial processing literature. White girls would receive the easily activated "in-group" advantage with the population studied, as the prospective teachers were primarily White and female (Young & Hugenberg, 2010). Additionally, as demonstrated in a series of studies, White participants actually use better informational search strategies with White rather than Black faces (Friesen et al., 2019), and this would also lead to great accuracy.

More surprising is the relatively stronger accuracy for Black than White boys. In this case, vigilance toward Black compared to White boys may help explain these findings. Teachers scan Black boys' behaviors significantly more so than for other children, even with preschool-aged children; teachers also acknowledge this greater racialized vigilance in self-reports of their classroom scanning strategies (Gilliam et al., 2016). In our study, it may well be that prospective teachers increased their attention for the Black boys compared to the White boys, and, in the situation of full frontal, clear facial depictions, this led to greater accuracy.

Although the interactions with gender for accuracy were not predicted, and replication is certainly desirable, we note that the stimuli for this study included substantially more actors than the previous published studies combined, and included several filming improvements over previous work (i.e., professional videography, color filming, inclusion of facial movement rather than static photographs). Also, replications, to the degree possible, should include a fully balanced design so as to additionally examine the intersectionality of race and gender effects of the participants as well as the children being judged.

Racialized Anger Bias Exists for Both Girls and Boys

The findings for anger bias are clear and robust. As predicted, Black boys were falsely seen as angry more often than White boys. And, even though anger misperceptions were greater overall for boys than girls, Black girls were also falsely seen as angry more often than White girls. These findings replicate work with adult faces (Halberstadt et al., 2018; Hugenberg & Bodenhausen, 2003,

2004), and demonstrate that Black boys and girls of elementary-school age also experience anger bias being perpetrated upon them.

Also as predicted, racialized anger bias was influenced by both implicit and explicit bias. For both implicit and explicit racial bias (measured by the IAT and REACT scales), high racially biased prospective teachers were more likely to misattribute anger to Black than White children, with no significant difference by race emerging for low racially biased prospective teachers. Interestingly, higher levels of implicit or explicit racial bias did not increase odds of Black children being victim to anger bias, but instead decreased odds that White children would be misperceived as angry, resulting in significantly higher levels of anger bias toward Black children than White children. Because we initially assumed only increases for Black children receiving misjudgments about being angry associated with racial bias, and not decreases for White children receiving misjudgments about being angry, replication of these patterns is needed. These findings also highlight a possibility we had not previously considered; racial prejudice may be directed not only against Black students in a punitive way, but may also be directed toward White students in terms of extending privilege not afforded to other students representing other racial groups.

Why Might Racialized Anger Bias Exist?

Teachers may incorrectly judge children as angry for many reasons, including their own implicit and explicit racial biases as shown in the present study. However, that so little variance is due to individual differences in racial bias also suggests widespread residue of cultural fear of "Black anger" evoked from the long history of scare tactics and fear-mongering by European Americans about African Americans found in the rhetoric from Reconstruction, the lynching century, and media depictions of Civil Rights marches and protests which continues to linger in our cultural stereotypes (Correll et al., 2007; Devine, 1989), as well as the potential misinterpretations of cultural norms between White and Black children in classroom expressiveness (Neal, McCray, Webb-Johnson, & Bridgest, 2003; Rowley et al., 2014).

Additionally, unlike our participants who were allowed to make deliberative and thoughtful decisions, teachers are not able to sit down and watch events closely. Rather, they need to scan and judge the situation quickly, and these types of situations increase biased responding (e.g., Correll et al., 2007). Given that anger bias was observed even in a time-unconstrained environment, we would expect to observe higher levels of anger bias when participants are forced to make quick decisions.

Racialized Accuracy and Anger Bias May Cascade Into Consequences in the Classroom

We identified differential accuracy for boys and girls by race as well as racialized anger bias in a measure that includes the same types of everyday expressions that teachers need to judge on a daily basis. We note that greater accuracy is mutually advantageous for oneself and one's partner particularly in regard to cooperativeness. For example, when adult negotiators had greater emotion recognition accuracy, they were able to achieve greater joint gains in negotiations and cooperativeness, which may play out

well in the classroom (Schlegel et al., 2018). Our findings show this advantage received disproportionally more by White girls, and least often by White boys. Given that the prospective teachers' odds of accuracy for Black girls was almost half the odds for White girls, Black girls may notice a relative lack of mutual understanding with their teachers, when comparing teachers' responses to their White girl classmates. Black boys may feel as understood by their teachers as White boys, given prospective teachers' greater accuracy for Black boys. However, if this is happening due to greater vigilance, rather than teachers' connectedness to Black boys' emotions, the effect of being understood may be offset.

Further, when emotional expressions are consistently misinterpreted, serious communicative issues can arise, and subsequent interactions are more likely to go astray. The robust findings for anger bias suggest that prospective teachers enter the classroom with emotion understanding biases that particularly privilege White children, and that Black students may find explanations about their feelings imposed upon them. Although students of color enter school as eager and excited to learn as White children, feeling misunderstood and unfairly judged may reduce engagement in school or increase likelihood of teachers' self-fulfilling prophecies (Arcia, 2007; Jennings & Greenberg, 2009).

Racialized anger bias can also help explain myriad findings that Black students (both girls as well as boys) receive more frequent and harsher disciplinary actions than non-Black students, even when controlling for equivalency in the offenses (e.g., Bottiani et al., 2017; Losen & Gillespie, 2012; E. W. Morris & Perry, 2016; Okonofua & Eberhardt, 2015; Skiba et al., 2011). These are unfortunately all too common, with almost half of all Black students reporting suspension experiences at some point in their school lives (Aud et al., 2011; United States Department of Education, Office of Civil Rights, 2016). Disciplinary actions affect not only how Black students feel about school, but they disrupt students' school days and substantially reduce learning when in the form of out-of-class suspensions (E. W. Morris & Perry, 2016).

With regard to our results that high implicitly- and/or explicitly-biased teachers demonstrated less anger bias for White students than did low implicitly- and/or explicitly-biased teachers, we do not think that such teachers should strive to engage in more punitive actions toward White students to create equity. Instead, given that suspension rates have tripled in the last 40 years, we think that teachers should endeavor to give Black children the same grace, empathy, and humanization as White children when responding to behavior they view as challenging or problematic. Further, a consideration of all students as being engaged in the process of developing into adults and still growing into maturity (rather than the racialized adultification identified by Goff, Jackson, Di Leone, Culotta, & DiTomasso, 2014) might help to alter and potentially decrease the punitive structuring of educational systems.

Peer relationships can also magnify these effects in that students learn from teachers about how to evaluate the world around them (Greenfield, 1984). Both White and Black children may well be learning racialized anger bias from their teachers, making inferences from the outcomes as they watch what happens to Black peers (consequences) and White boys (entitlements), and they themselves may become junior perpetuators. Certainly by seventh grade, Black students have internalized some of these messages

(e.g., "[Black youth] just bad, you know, like they ain't got no home training"; Legette, 2018).

Although effects from the PerCEIVED task may seem small, only one misjudgment from a teacher, particularly one associated with race, can have an effect on students' school experiences. Further, when multiplied day after day, the potential for Black children to feel misunderstood or misjudged in school, and to receive consequences not due them, is staggering.

Potential for Change

That prospective teachers have generally low accuracy in understanding the emotions of their students is not entirely surprising, given the speed at which emotional expressions must be processed and that expressions in real life tend to be nonprototypical (Castro et al., 2018). Although understandable, low accuracy is still a problem and emotion accuracy modules would likely be useful for educators in general. Awareness of the potential problem of racialized emotion understanding in school may also be important in all teacher education programs.

With regard to the issue of racialized anger bias, this is the second study identifying racialized anger bias of prospective teachers (Halberstadt et al., 2018); the effect sizes in both studies and with two different sets of actors (20 adults in one and 72 children in the other) are nontrivial. Our findings suggest that the bias observed in our study happens to Black children within the school context. And, if Black children are the targets of a bias problem that originates at school, then educators logically bear the brunt of responsibility of antibias actions to remedy it. Teacher workshops and prospective teacher education can begin to include both an awareness of racialized anger bias and the tool box as to how to address it in the classroom (Carter, Skiba, Arredondo, & Pollock, 2017). Skills related to racialized anger bias might begin with awareness and many resources and sites are now available to direct awareness into action (e.g., Embracerace at https://www .embracerace.org/ and Teaching Tolerance at https://www.tolerance .org/).

Parents may also want to consider these findings. Many parents of Black children are already well aware of the problem of "schooling while Black" and the specific experience of racialized anger bias. They also describe the many ways they encourage their children to constrain emotion expression in school, and despite the costs of suppression, because the costs of expression may be so much greater (Allen, 2016; Lozada, 2020). Our study suggests that inexpressiveness (as in our first and second rounds of measurement) does not protect children from misjudgments by others; indeed it may increase the likelihood that Black children's low-level expression of emotions will be misconstrued as anger. Rather than suppression, we might suggest teaching children practical strategies for identifying their emotion to the teacher (e.g., "I was embarrassed when my classmate teased me, so I said 'shut up!'" or "I am frustrated because I *do* want to understand!"). Families may also consider engaging critical inquiry strategies when attempting to advocate for Black elementary schoolchildren by asking questions like, "Could you describe the episode in detail, so that I might offer an interpretation, knowing my own child, of the emotions that may have been involved?" Of course, such practical strategies may decrease inaccurate ascriptions of anger only when elementary school personnel provide opportunities for the Black child and

family advocates to co-construct narratives about emotional displays and can listen effectively.

Awareness by parents of White children about these findings is also important for effecting change. By contributing to conversations about racial bias in school and elsewhere, and by facilitating children's awareness of and resistance to accepting such messages, parents can work to reduce perpetuating racism in the schools and their own families. Although beyond the scope of this research, we note the nascent research and parenting literatures on White parents' race-relevant socialization and the potential of color-conscious ideologies to effect change in children's thinking and behavior (Daniel, 2019; Perry, Skinner, & Abaied, 2019; Vittrup, 2018).

Racialized anger bias, while identified among prospective teachers, is likely an issue that involves both individual and community-wide change. When addressing bias related to race, an important first step is an awareness of bias, followed by the desire to reduce bias, an understanding of the contextual triggers (e.g., the times and places where one's bias is likely to be activated, including the degree to which implicit bias is regionally present), and knowledge about how to replace biased responses with individualized or egalitarian responses. A habit-breaking approach to addressing bias that integrates these elements with stereotype replacement, individuation, and perspective taking has been especially effective (Devine, Forscher, Austin, & Cox, 2012; Forscher, Mitamura, Dix, Cox, & Devine, 2017), and can even result in systemic changes at the classroom level (Carnes et al., 2015). Given recent work demonstrating the power of regionality of bias (Payne, Vuletich, & Brown-Iannuzzi, 2019), perhaps the most important approach is community wide and systemic.

Limitations and Future Directions

The current work improves upon previous emotion recognition research by including a large number of actors ($N = 72$), however, this reduces to 18 children per group (15 children for anger bias). When we removed the White boy for whom participants had the lowest accuracy, however, significant effects were retained, suggesting the robustness of these findings. Nevertheless, increasing the numbers of child actors would be beneficial.

Additionally, given the findings of emotion expression "accents" existing across cultural groups, our inclusion of only prototypical facial expressions that may reflect White norms and which omit cultural and regional accents, may have reduced cultural information available and, subsequently, variance in responses. Nevertheless, we still found racialized accuracy and anger bias, suggesting a conservative estimate of racialized emotion understanding. Including children's own versions of these facial expressions might increase racialized accuracy and anger bias. Thus, we are fairly confident that the racialized interpretation of emotional expressions effect exists, despite this particular shortcoming.

We also included only prospective teachers, and prospective teachers from three different universities in the southeastern region of the United States. Although prospective teachers may be idealistic and committed to children's welfare, and thus, less likely to engage in explicit forms of racism, they are equally prey to the racism experienced in the regions in which they grew up, and we do not know how endemic racialized emotion understanding may

be in other regions of the country. In addition to assessing how widespread racialized emotion understanding may be, it is likely important to determine the motivational or perceptual processes involved in this racialized phenomenon, and at what age children begin to develop similar racialized responses to others' emotional behavior.

We also did not study how prevalent racialized emotion understanding is by teacher ethnicity. We do not yet know to what degree the phenomena identified in this study is more predominant among White, majority populations, or if the fear of or discomfort associated with Black anger is endemic to American cultural messages and thus incorporated within many Americans' response patterns. That is, to paraphrase Steele (1997), maybe racial bias is "in the air." Expanding the measure to include children of different racial and ethnic identities might also allow researchers to investigate anger bias and other emotional biases toward other cultural groups.

Overall, our results strongly suggest another causal mechanism that involves some degree of automaticity in motivational and interpretive racialized assessments related to understanding the emotions of others. Although replication is always important, now that racialized anger bias has been identified for both children and adults, the next questions may be how individuals can identify for themselves when and how racial anger bias is activated, and what kinds of interventions may be most useful in deactivating it in themselves and others.

References

Allen, Q. (2016). 'Tell your own story': Manhood, masculinity and racial socialization among black fathers and their sons. *Ethnic and Racial Studies, 39,* 1831–1848. http://dx.doi.org/10.1080/01419870.2015.1110608

Arcia, E. (2007). Variability in schools' suspension rates of black students. *The Journal of Negro Education, 76,* 597–608.

Aud, S., KewalRamani, A., & Frohlich, L. (2011). *America's youth: Transitions to adulthood* (Report No. NCES 2012–026). Washington, DC: United States Department of Education Sciences, National Center for Education Statistics.

Bargh, J. A., Chen, M., & Burrows, L. (1996). Automaticity of social behavior: Direct effects of trait construct and stereotype-activation on action. *Journal of Personality and Social Psychology, 71,* 230–244. http://dx.doi.org/10.1037/0022-3514.71.2.230

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes. Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science, 17,* 53–58. http://dx.doi.org/10.1111/j.1467-9280.2005.01664.x

Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions: An experience sampling analysis. *Teaching and Teacher Education, 43,* 15–26. http://dx.doi.org/10.1016/j.tate.2014.05.002

Bottiani, J. H., Bradshaw, C. P., & Mendelson, T. (2017). A multilevel examination of racial disparities in high school discipline: Black and White adolescents' perceived equity, school belonging, and adjustment problems. *Journal of Educational Psychology, 109,* 532–545. http://dx.doi.org/10.1037/edu0000155

Broekhuizen, M. L., Mokrova, I. L., Burchinal, M. R., & Garrett-Peters, P. T., & the Family Life Project Key Investigators. (2016). Classroom quality at pre-kindergarten and kindergarten and children's social skills and behavior problems. *Early Childhood Research Quarterly, 36,* 212–222. http://dx.doi.org/10.1016/j.ecresq.2016.01.005

Brown Givens, S. M., & Monahan, J. L. (2005). Priming mammies, jezebels, and other controlling images: An examination of the influence of mediated stereotypes on perceptions of an African American woman. *Media Psychology, 7,* 87–106. http://dx.doi.org/10.1207/S1532785XMEP0701_5

Carlsson, R., & Agerström, J. (2016). A closer look at the discrimination outcomes in the IAT literature. *Scandinavian Journal of Psychology, 57,* 278–287. http://dx.doi.org/10.1111/sjop.12288

Carnes, M., Devine, P. G., Manwell, L. B., Byars-Winston, A., Fine, E., Ford, C. E., . . . Palta, M. (2015). The effect of an intervention to break the gender bias habit for faculty at one institution: A cluster randomized, controlled trial. *Academic Medicine: Journal of the Association of American Medical Colleges, 90,* 221–230.

Carruthers, P. (2018). Implicit versus explicit attitudes: Differing manifestations of the same representational structures? *Review of Philosophy and Psychology, 9,* 51–72. http://dx.doi.org/10.1007/s13164-017-0354-3

Carter, P. L., Skiba, R., Arredondo, M. I., & Pollock, M. (2017). You can't fix what you don't look at: Acknowledging race in addressing racial discipline disparities. *Urban Education, 52,* 207–235. http://dx.doi.org/10.1177/0042085916660350

Castro, V. L., Camras, L. A., Halberstadt, A. G., & Shuster, M. (2018). Children's prototypic facial expressions during emotion-eliciting conversations with their mothers. *Emotion, 18,* 260–276. http://dx.doi.org/10.1037/emo0000354

Castro, V. L., Cheng, Y., Halberstadt, A. G., & Grühn, D. (2016). EU-ReKA! A conceptual model of emotion understanding. *Emotion Review, 8,* 258–268. http://dx.doi.org/10.1177/1754073915580601

Cooper, B. C. (2018). *Eloquent rage: A Black feminist discovers her superpower.* New York, NY: St. Martins Press.

Corcoran, R. P., & Tormey, R. (2012). How emotionally intelligent are pre-service teachers? *Teaching and Teacher Education, 28,* 750–759. http://dx.doi.org/10.1016/j.tate.2012.02.007

Correll, J., Park, B., Judd, C. M., Wittenbrink, B., Sadler, M. S., & Keesee, T. (2007). Across the thin blue line: Police officers and racial bias in the decision to shoot. *Journal of Personality and Social Psychology, 92,* 1006–1023. http://dx.doi.org/10.1037/0022-3514.92.6.1006

Côté-Lussier, C. (2013). Fight fire with fire: The effect of perceived anger on punitive intuitions. *Emotion, 13,* 999–1003. http://dx.doi.org/10.1037/a0034308

Daniel, K. (2019, August 13). Here's my challenge to White parents this year. [Web log post]. Retrieved from https://www.todaysparent.com/family/parenting/heres-my-challenge-to-white-parents-this-school-year/?fbclid=IwAR3q5JKg9dszaIUem6rh50-1GzNLO3HvvmAA2eTEPFPgmeuQgRYJCQnT49Q

Dasgupta, N. (2013). Implicit attitudes and beliefs adapt to situations: A decade of research on the malleability of implicit prejudice, stereotypes, and the self-concept. *Advances in Experimental Social Psychology, 47,* 233–279. http://dx.doi.org/10.1016/B978-0-12-407236-7.00005-X

Dasgupta, N., & Rivera, L. M. (2006). From automatic antigay prejudice to behavior: The moderating role of conscious beliefs about gender and behavioral control. *Journal of Personality and Social Psychology, 91,* 268–280. http://dx.doi.org/10.1037/0022-3514.91.2.268

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56,* 5–18. http://dx.doi.org/10.1037/0022-3514.56.1.5

Devine, P. G., Forscher, P. S., Austin, A. J., & Cox, W. T. L. (2012). Long-term reduction in implicit race bias: A prejudice habit-breaking intervention. *Journal of Experimental Social Psychology, 48,* 1267–1278. http://dx.doi.org/10.1016/j.jesp.2012.06.003

Dias-Lacy, S. L., & Guirguis, R. V. (2017). Challenges for new teachers and ways of coping with them. *Journal of Education and Learning, 6,* 265–272. http://dx.doi.org/10.5539/jel.v6n3p265

Dunham, Y. (2011). An angry = outgroup effect. *Journal of Experimental Social Psychology, 47,* 668–671. http://dx.doi.org/10.1016/j.jesp.2011.01.003

Ekman, P., Friesen, W. V., & Hager, J. (2002). *The facial action coding system* (2nd ed.). Salt Lake City, UT: Research Nexus.

Elfenbein, H. A. (2014). The many faces of emotional contagion. *Organizational Psychology Review, 4,* 326–362. http://dx.doi.org/10.1177/2041386614542889

Elfenbein, H. A., & Ambady, N. (2002). On the universality and cultural specificity of emotion recognition: A meta-analysis. *Psychological Bulletin, 128,* 203–235. http://dx.doi.org/10.1037/0033-2909.128.2.203

Ene, M., Leighton, E. A., Blue, G. L., & Bell, B. A. (2015, April). *Multilevel models for categorical data using SAS PROC GLIMMIX: The basics.* Paper presented at the SAS Global Forum 2015 Proceedings, Cary, NC.

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39,* 175–191. http://dx.doi.org/10.3758/BF03193146

Felleman, E. S., Carlson, C. R., Barden, R. C., Rosenberg, L., & Masters, J. C. (1983). Children's and adults' recognition of spontaneous and posed emotional expressions in young children. *Developmental Psychology, 19,* 405–413. http://dx.doi.org/10.1037/0012-1649.19.3.405

Forscher, P. S., Mitamura, C., Dix, E. L., Cox, W. T. L., & Devine, P. G. (2017). Breaking the prejudice habit: Mechanisms, timecourse, and longevity. *Journal of Experimental Social Psychology, 72,* 133–146. http://dx.doi.org/10.1016/j.jesp.2017.04.009

Franklin, A. J. (2004). *From brotherhood to manhood: How Black men rescue their relationships and dreams from the invisibility syndrome.* Hoboken, NJ: Wiley.

Friesen, J. P., Kawakami, K., Vingilis-Jaremko, L., Caprara, R., Sidhu, D. M., Williams, A., . . . Niedenthal, P. (2019). Perceiving happiness in an intergroup context: The role of race and attention to the eyes in differentiating between true and false smiles. *Journal of Personality and Social Psychology, 116,* 375–395. http://dx.doi.org/10.1037/pspa0000139

Garner, P. W., Bender, S. L., & Fedor, M. (2018). Mindfulness-based SEL programming to increase preservice teachers' mindfulness and emotional competence. *Psychology in the Schools, 55,* 377–390. http://dx.doi.org/10.1002/pits.22114

Gilliam, W. S., Maupin, A. N., Reyes, C. R., Accavitti, M., & Shic, F. (2016). *Do early educators' implicit biases regarding sex and race relate to behavior expectations and recommendations of preschool expulsions and suspensions?* New Haven, CT: Yale Child Study Center, Yale University.

Glock, S. (2016). Does ethnicity matter? The impact of stereotypical expectations on in-service teachers' judgments of students. *Social Psychology of Education, 19,* 493–509. http://dx.doi.org/10.1007/s11218-016-9349-7

Goff, P. A., Jackson, M. C., Di Leone, B. A., Culotta, C. M., & DiTomasso, N. A. (2014). The essence of innocence: Consequences of dehumanizing Black children. *Journal of Personality and Social Psychology, 106,* 526–545. http://dx.doi.org/10.1037/a0035663

Greenfield, P. M. (1984). A theory of the teacher in the learning activities of everyday life. In B. Rogoff & J. Lave (Eds.), *Everyday cognition: Its development in social context* (pp. 117–138). Cambridge, MA: Harvard University Press.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74,* 1464–1480. http://dx.doi.org/10.1037/0022-3514.74.6.1464

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algo-

rithm. *Journal of Personality and Social Psychology, 85,* 197–216. http://dx.doi.org/10.1037/0022-3514.85.2.197

Greenwald, A. G., Poehlman, T. A., Uhlmann, E. L., & Banaji, M. R. (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97,* 17–41. http://dx.doi.org/10.1037/a0015575

Halberstadt, A. G., Beale, K. S., Meade, A. W., Craig, A. B., & Parker, A. E. (2015). Anger in families. *Journal of Social and Personal Relationships, 32,* 810–828. http://dx.doi.org/10.1177/0265407514552617

Halberstadt, A. G., Castro, V. L., Chu, Q., Lozada, F. T., & Sims, C. M. (2018). Teachers' racialized emotion recognition, anger bias, and hostility attributions. *Contemporary Educational Psychology, 54,* 125–138. http://dx.doi.org/10.1016/j.cedpsych.2018.06.004

Halberstadt, A. G., Cooke, A. E., Hagan, C. A., & Liu, X. (2020). *Perceptions of children's emotions in videos, evolving and dynamic [PerCEIVED] task: A validational study.* Unpublished manuscript, North Carolina State University, Raleigh, NC.

Halberstadt, A. G., Denham, S. A., & Dunsmore, J. C. (2001). Affective social competence. *Social Development, 10,* 79–119. http://dx.doi.org/10.1111/1467-9507.00150

Hall, J. A., Andrzejewski, S. A., & Yopchick, J. E. (2009). Psychosocial correlates of interpersonal sensitivity: A meta-analysis. *Journal of Nonverbal Behavior, 33,* 149–180. http://dx.doi.org/10.1007/s10919-009-0070-5

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development, 72,* 625–638. http://dx.doi.org/10.1111/1467-8624.00301

Hugenberg, K. (2005). Social categorization and the perception of facial affect: Target race moderates the response latency advantage for happy faces. *Emotion, 5,* 267–276. http://dx.doi.org/10.1037/1528-3542.5.3.267

Hugenberg, K., & Bodenhausen, G. V. (2003). Facing prejudice. *Psychological Science, 14,* 640–643. http://dx.doi.org/10.1046/j.0956-7976.2003.psci_1478.x

Hugenberg, K., & Bodenhausen, G. V. (2004). Ambiguity in social categorization: The role of prejudice and facial affect in race categorization. *Psychological Science, 15,* 342–345. http://dx.doi.org/10.1111/j.0956-7976.2004.00680.x

Hutchings, P. B., & Haddock, G. (2008). Look black in anger: The role of implicit prejudice in the categorization and perceived emotional intensity of racially ambiguous faces. *Journal of Experimental Social Psychology, 44,* 1418–1420. http://dx.doi.org/10.1016/j.jesp.2008.05.002

Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79,* 491–525. http://dx.doi.org/10.3102/0034654308325693

Kang, S. K., & Chasteen, A. L. (2009). Beyond the double-jeopardy hypothesis: Assessing emotion on the faces of multiply-categorizable targets of prejudice. *Journal of Experimental Social Psychology, 45,* 1281–1285. http://dx.doi.org/10.1016/j.jesp.2009.07.002

Kim, D.-Y. (2003). Voluntary controllability of the Implicit Association Test (IAT). *Social Psychology Quarterly, 66,* 83–96. http://dx.doi.org/10.2307/3090143

Kupersmidt, J. B., Stelter, R., & Dodge, K. A. (2011). Development and validation of the social information processing application: A web-based measure of social information processing patterns in elementary school-age boys. *Psychological Assessment, 23,* 834–847. http://dx.doi.org/10.1037/a0023621

Lasauskiene, J., & Rauduvaite, A. (2015). Expression of pre-service teachers' emotional competency in their educational practice. *Procedia: Social and Behavioral Sciences, 205,* 103–109. http://dx.doi.org/10.1016/j.sbspro.2015.09.031

Legette, K. (2018). School tracking and youth self-perceptions: Implications for academic and racial identity. *Child Development, 89,* 1311–1327. http://dx.doi.org/10.1111/cdev.12748

Leist, T., & Dadds, M. R. (2009). Adolescents' ability to read different emotional faces relates to their history of maltreatment and type of psychopathology. *Clinical Child Psychology and Psychiatry, 14,* 237–250. http://dx.doi.org/10.1177/1359104508100887

Losen, D. J., & Gillespie, J. (2012). *Opportunities suspended: The disparate impact of disciplinary exclusion from school.* Los Angeles, CA: The Civil Right Project, The Center for Civil Rights Remedies.

Lozada, F. T. (2020). *"Our emotions aren't for everyone": African American parents' beliefs about emotion.* Manuscript submitted for publication.

Lun, J., Oishi, S., Coan, J. A., Akimoto, S., & Miao, F. F. (2010). Cultural variations in motivational responses to felt misunderstanding. *Personality and Social Psychology Bulletin, 36,* 986–996. http://dx.doi.org/10.1177/0146167210362979

Mallett, R. K., Akimoto, S., & Oishi, S. (2016). Affect and understanding during everyday cross-race experiences. *Cultural Diversity and Ethnic Minority Psychology, 22,* 237–246. http://dx.doi.org/10.1037/cdp0000032

Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, G. (2001). Emotional intelligence as a standard intelligence. *Emotion, 1,* 232–242. http://dx.doi.org/10.1037/1528-3542.1.3.232

McConnell, A. R., & Leibold, J. M. (2001). Relations among the Implicit Association Test, discriminatory behavior, and explicit measures of racial attitudes. *Journal of Experimental Social Psychology, 37,* 435–442. http://dx.doi.org/10.1006/jesp.2000.1470

Miller, D. A., Smith, E. R., & Mackie, D. M. (2004). Effects of intergroup contact and political predispositions on prejudice: Role of intergroup emotions. *Group Processes & Intergroup Relations, 7,* 221–237. http://dx.doi.org/10.1177/1368430204046109

Morris, E. W. (2007). "Ladies" or "loudies"? *Youth & Society, 38,* 490–515. http://dx.doi.org/10.1177/0044118X06296778

Morris, E. W., & Perry, B. L. (2016). The punishment gap: School suspension and racial disparities in achievement. *Social Problems, 63,* 68–86. http://dx.doi.org/10.1093/socpro/spv026

Morris, M. W. (2016). *Pushout: The criminalization of Black girls in schools.* New York, NY: The New Press.

National Center for Education Statistics. (2017). *1990–2016. Schools and Staffing Survey.* Washington, DC: United States Department of Education.

Neal, L. V. I., McCray, A. D., Webb-Johnson, G., & Bridgest, S. T. (2003). The effects of African American movement styles on teachers' perceptions and reactions. *The Journal of Special Education, 37,* 49–57. http://dx.doi.org/10.1177/00224669030370010501

Nezlek, J. B. (2001). Daily psychological adjustment and the planfulness of day-to-day behavior. *Journal of Social and Clinical Psychology, 20,* 452–475. http://dx.doi.org/10.1521/jscp.20.4.452.22398

Okeke, N. A. (2009). Race stereotypes, academic self-concept and racial centrality in African American adolescents. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 70,* 2600.

Okonofua, J. A., & Eberhardt, J. L. (2015). Two strikes. *Psychological Science, 26,* 617–624. http://dx.doi.org/10.1177/0956797615570365

Oswald, F. L., Mitchell, G., Blanton, H., Jaccard, J., & Tetlock, P. E. (2013). Predicting ethnic and racial discrimination: A meta-analysis of IAT criterion studies. *Journal of Personality and Social Psychology, 105,* 171–192. http://dx.doi.org/10.1037/a0032734

Payne, B. K., Vuletich, H. A., & Brown-Iannuzzi, J. L. (2019). Historical roots of implicit bias in slavery. *Proceedings of the National Academy of Sciences of the United States of America, 116,* 11693–11698. http://dx.doi.org/10.1073/pnas.1818816116

Payne, B. K., Vuletich, H. A., & Lundberg, K. B. (2017). The bias of crowds: How implicit bias bridges personal and systemic prejudice.

Psychological Inquiry, 28, 233–248. http://dx.doi.org/10.1080/1047840X.2017.1335568

Pekrun, R., Goetz, T., Titz, W., & Perry, R. P. (2002). Academic emotions in students' self-regulated learning and achievement: A program of qualitative and quantitative research. *Educational Psychologist, 37,* 91–105. http://dx.doi.org/10.1207/S15326985EP3702_4

Perry, S. P., Skinner, A. L., & Abaied, J. L. (2019). Bias awareness predicts color conscious racial socialization methods among White parents. *Journal of Social Issues, 75,* 1035–1056. http://dx.doi.org/10.1111/josi.12348

Pollmann, M. M., & Finkenauer, C. (2009). Investigating the role of two types of understanding in relationship well-being: Understanding is more important than knowledge. *Personality and Social Psychology Bulletin, 35,* 1512–1527. http://dx.doi.org/10.1177/0146167209342754

Posey-Maddox, L. (2017). Schooling in suburbia: The intersections of race, class, gender, and place in Black fathers' engagement and family–school relationships. *Gender and Education, 29,* 577–593. http://dx.doi.org/10.1080/09540253.2016.1274389

Putwain, D. W., Becker, S., Symes, W., & Pekrun, R. (2018). Reciprocal relations between students' academic enjoyment, boredom, and achievement over time. *Learning and Instruction, 54,* 73–81. http://dx.doi.org/10.1016/j.learninstruc.2017.08.004

Ramey, D. M. (2015). The social structure of criminalized and medicalized school discipline. *Sociology of Education, 88,* 181–201. http://dx.doi.org/10.1177/0038040715587114

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models* (2nd ed.). Thousand Oaks, CA: Sage.

Reis, H. T., Lemay, E. P., Jr., & Finkenauer, C. (2017). Toward understanding understanding: The importance of feeling understood in relationships. *Social and Personality Psychology Compass, 11,* e12308. http://dx.doi.org/10.1111/spc3.12308

Riddle, T., & Sinclair, S. (2019). Racial disparities in school-based disciplinary actions are associated with county-level rates of racial bias. *Proceedings of the National Academy of Sciences of the United States of America, 116,* 8255–8260. http://dx.doi.org/10.1073/pnas.1808307116

Rowley, S. J., Ross, L., Lozada, F. T., Williams, A., Gale, A., & Kurtz-Costes, B. (2014). Framing black boys: Parent, teacher, and student narratives of the academic lives of black boys. *Journal of Advances in Child Development and Behavior, 47,* 301–332. http://dx.doi.org/10.1016/bs.acdb.2014.05.003

Sacco, D. F., & Hugenberg, K. (2009). The look of fear and anger: Facial maturity modulates recognition of fearful and angry expressions. *Emotion, 9,* 39–49. http://dx.doi.org/10.1037/a0014081

Schlegel, K., Mehu, M., van Peer, J. M., & Scherer, K. R. (2018). Sense and sensibility: The role of cognitive and emotional intelligence in negotiation. *Journal of Research in Personality, 74,* 6–15. http://dx.doi.org/10.1016/j.jrp.2017.12.003

Shin, H., & Ryan, A. M. (2017). Friend influence on early adolescent disruptive behavior in the classroom: Teacher emotional support matters. *Developmental Psychology, 53,* 114–125. http://dx.doi.org/10.1037/dev0000250

Singer, J. D. (1998). Using SAS Proc Mixed to fit multilevel models, hierarchical models, and individual growth models. *Journal of Educational and Behavioral Statistics, 23,* 323–355. http://dx.doi.org/10.3102/10769986023004323

Skiba, R. J., Horner, R. H., Chung, C. G., Karega Rausch, M., May, S. L., & Tobin, T. (2011). Race is not neutral: A national investigation of African American and Latino disproportionality in school discipline. *School Psychology Review, 40,* 85–107.

Skiba, R. J., Michael, R. S., Nardo, A. C., & Peterson, R. L. (2002). The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review, 34,* 317–342. http://dx.doi.org/10.1023/A:1021320817372

Smith, E. J., & Harper, S. R. (2015). *Disproportionate impact of K-12 school suspension and expulsion on black students in southern states.* Philadelphia: Pennsylvania University, Center for the Study of Race and Equity in Education.

Snijders, T. A. B., & Bosker, R. J. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling.* Thousand Oaks, CA: Sage.

Spilt, J., & Hughes, J. N. (2015). African American children at-risk of increasingly conflicted teacher-student relationships in elementary school. *School Psychology Review, 44,* 306–314. http://dx.doi.org/10.17105/spr-14-0033.1

Steele, C. M. (1997). A threat in the air. How stereotypes shape intellectual identity and performance. *American Psychologist, 52,* 613–629. http://dx.doi.org/10.1037/0003-066X.52.6.613

United States Department of Education, Institute of Education Sciences (IES), National Center for Education Statistics. (2019). Back to school statistics. Retrieved from https://nces.ed.gov/fastfacts/display.asp?id=372

United States Department of Education, Office of Civil Rights. (2016). 2013–2014 Civil rights data collection: Key data highlights on equity and opportunity gaps in our nation's public schools. Retrieved from http://www2.ed.gov/about/offices/list/ocr/docs/crdc-2013-14.html

U.S. News and World Report. (2019, 31 October). Top public schools/National universities. Retrieved from https://www.usnews.com/best-colleges/rankings/national-universities/top-public?_mode=table

Verschueren, K. (2015). Middle childhood teacher-child relationships: Insights from an attachment perspective and remaining challenges. *New Directions for Child and Adolescent Development, 2015,* 77–91. http://dx.doi.org/10.1002/cad.20097

Vittrup, B. (2018). Color blind or color conscious? White American mothers' approaches to racial socialization. *Journal of Family Issues, 39,* 668–692. http://dx.doi.org/10.1177/0192513X16676858

Warikoo, N., Sinclair, S., Fei, J., & Jacoby-Senghor, D. (2016). Examining racial bias in education: A new approach. *Educational Researcher, 45,* 508–514. http://dx.doi.org/10.3102/0013189X16683408

Yamaguchi, M., & Beattie, G. (2020). The role of explicit categorization in the Implicit Association Test. *Journal of Experimental Psychology: General, 149,* 809–827.

Yarrow, A. L. (2009). State of mind: America's teaching corps is made up of three groups with distinct attitudes about their profession, which has implications for policymakers. *Education Week October, 21,* 21–23.

Yates, T. M., & Marcelo, A. K. (2014). Through race-colored glasses: Preschoolers' pretend play and teachers' ratings of preschooler adjustment. *Early Childhood Research Quarterly, 29,* 1–11. http://dx.doi.org/10.1016/j.ecresq.2013.09.003

Young, S. G., & Hugenberg, K. (2010). Mere social categorization modulates identification of facial expressions of emotion. *Journal of Personality and Social Psychology, 99,* 964–977. http://dx.doi.org/10.1037/a0020400