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EMPIRICAL ARTICLE

White children's empathy-related responding and prosocial behavior toward White and Black children

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Abstract

Relations among White (non-Latinx) children's empathy-related responding, prosocial behaviors, and racial attitudes toward White and Black peers were examined. In 2017, 190 (54% boys) White 5- to 9-year-old children ($M = 7.09$ years, $SD = 0.94$) watched a series of videos that depicted social rejection of either a White or Black child. Empathy-related responses, prosocial behaviors, and racial attitudes were measured using multiple methods. Results showed that younger children showed less facial concern toward Black than White peers and greater increases with age in concern and prosocial behaviors (sharing a desirable prize) for Black, compared to White, targets. Children's facial anger increased with age for White but not Black targets. The findings can extend our understanding children's anti-racism development.

Issues surrounding racism (i.e., a system of dominance that excludes ethnic and racial minorities from power and status; see Harrell, 2000) and White supremacy in the United States are in the forefront of mainstream media today. Given the centuries-long history of White supremacy, it is beyond time for White people to acknowledge and combat systemic and interpersonal racism in the United States. Yet, research on race and racism typically fails to investigate the perpetrators and beneficiaries of racism in the United States. (i.e., White, non-Latinx groups), with

almost no research focused on the development of young White children's racism or anti-racism. According to Roberts and Rizzo (2021), anti-racism is a multi-layered construct that is created and maintained by "a dynamic interplay between psychological factors (i.e., equitable thoughts, feelings, and actions) and sociopolitical factors (i.e., equitable laws, policies, and institutions)" (Roberts & Rizzo, 2021, p. 9). Anti-racism requires action that challenges existing racist systems (Helms, 2020). In order to make progress toward promoting anti-racist action, it is imperative to take a developmental approach to studying processes likely to undergird or promote anti-racism early in life. Developmental research focused on the precursors of anti-racism, particularly in White children, can be used to inform efforts to foster anti-racist actions.

In this study, we examined some probable precursors of anti-racism via a focus on children's prosocial behaviors and emotions of empathy, sympathy, and empathic anger (henceforth referred to as empathy-related responding) toward Black children. Recently, Hazelbaker et al. (2022) proposed a developmental model of White children's anti-racism from early childhood to adolescence. The authors depicted a process of development that involves foundational abilities that are thought to contribute to children's understanding of self in the context of Whiteness and their understanding of biases and racism in society. Of particular relevance to the current study, along with other skills, empathy and sympathy and children's moral development (i.e., understanding of fairness and equity) are viewed as key foundational abilities that promote anti-racism. As children develop more sophisticated cognitive and moral skills, White adolescents can understand structural components of racism and White privilege. When paired with supportive contexts, such as color-conscious socialization and anti-biased educational practices, children and young adolescents can develop a narrative of anti-racism. The skills that develop in childhood are seen as necessary, but not sufficient, to lead children on a path toward various forms of anti-racism in adolescence and beyond.

Research that examines some of the aforementioned foundational abilities is needed—especially in studies focusing on young children. In particular, we investigated young children's empathy-related and prosocial responses to Black versus White peers. Due to the dearth of research in this area, our first goal was to understand biases in young children's prosocial behaviors, empathy-related responding, and attitudes toward Black versus White target children. Our second goal was to examine how young White children's prosocial behaviors, empathy-related responding, and racial attitudes differ across age groups, depending on the target's race.

Theoretical frameworks

To understand the development of children's empathy-related responding and prosocial behaviors toward ethnic and racial minorities, we drew on the integrative model (IM; Coll et al., 1996) and the Social Identity Theory (SIT; Nesdale, 2004; Tajfel, 1978). The IM of ethnic minority children is an overarching theory that emphasizes the importance of studying children in racialized systems (Coll et al., 1996). The IM was originally designed to study and promote ethnic and racial minority competencies and proposed that children's development is profoundly influenced by systems of discrimination (Coll et al., 1996). Scholars have recently used the IM to emphasize that growing up in a context of White power and privilege influences White youth in ways that perpetuate systems of racism and affect children of all races (Seaton et al., 2018). Through this lens, the IM underscores the importance of studying White children's socialization of racism and resulting developmental outcomes in early childhood in the context of their race-based, social status dominant position.

Second, SIT (and the adapted Social Identity Development Theory [SIDT]; Nesdale, 2004; Tajfel, 1978) provides an interpersonal framework for studying the interplay between children's emotions and behaviors toward ingroup and outgroup others. According to the SIT (Tajfel, 1978), an individual's self-concept is partly derived from their membership in social groups and from the emotional significance that they attach to the group. As a result of identification with a group, individuals adopt the values, attitudes, and norms associated with the group. This tendency to classify the self and others into social categories not only influences an individual's self-concept, but also transforms the ways in which they evaluate others (Tajfel, 1982). Furthermore, this tendency has detrimental consequences when White children are socialized in a White supremacist society to view ethnic and racial minority outgroup members as lesser members of society (Billig & Tajfel, 1973).

To better understand the *development* of racial bias and prejudice, Nesdale (2004) adapted SIT and proposed SIDT. SIDT posits that children pass through a series of four stages: From birth to around age 2, children are thought to have little awareness or meaning assigned to social groups. At around age 3, children begin to differentiate others based on markers of social groups (e.g., skin color, gender). Next, children begin to identify with their own social group (and show preference for their group), occurring around age 4 or 5. By around age 7, children's biases are thought to crystalize, and as a result, children possess and express prejudice against outgroups. Therefore, according to the SIDT, White children likely hold greater racial biases around age 7 than when younger. SIDT provides a foundation for examining White children's racial biases in the early school years because it is a developmental period in which children's awareness of race and stereotypes may be developing, given the role of racial socialization from parents, teachers, peers, and schools. Empirical evidence suggests that children may

be aware of race even earlier than theorized, however. For example, Van Ausdale and Feagin (1996) found that White children understood race and racism between the ages of 3 and 5, suggesting that additional studies focused on the change with age in children's biased reactions to ingroup and outgroup peers are needed.

Prosocial behaviors toward ingroup and outgroup persons

Prosocial behavior has been defined as voluntary behavior intended to benefit another, including helping, sharing, comforting, and volunteering (see Eisenberg et al., 2015). Existing work suggests that children and adolescents are not indiscriminately helpful (Carlo & Padilla-Walker, 2020; Malti et al., 2016). As expected, children are likely to behave in ways that benefit their own social ingroups, such as their family members and friends (Paulus & Moore, 2014; Sierksma et al., 2014; Van de Groep et al., 2020). In studies of prosocial behaviors toward ingroup versus outgroup members, researchers have most often used "artificial" group memberships (e.g., different color t-shirts). In these studies, children were more likely to distribute positive resources to members of their own group versus outgroups (Böhm & Buttelmann, 2017; Fehr et al., 2008; Sparks et al., 2017) and, in some cases, were more likely to punish outgroup children by allocating them undesirable resources (Buttelmann & Böhm, 2014).

Although research summarized above speaks to how children might view outgroup members, much of this research hinges on artificial social categories. Such research does not necessarily extend to existing societal constructs (i.e., race) that have longstanding roots in historical oppression. Unfortunately, research specifically focused on children's prosocial behaviors toward various racial and ethnic groups is limited and findings are mixed. On the one hand, researchers have found that young White children allocate more resources to other White children compared to Black children (de França & Monteiro, 2013; Renno & Shutts, 2015). Similarly, White children between the ages of 5–13 years reported that they believed that others have more of an obligation and would feel more positively about helping racial ingroup over outgroup (Black) children (Weller & Lagattuta, 2013). On the other hand, Sierksma et al. (2018) showed that 10- to 13-year-old Dutch children helped Surinamese ethnic outgroup peers in a guessing game *more* than ingroup peers; however, their prosocial behaviors were motivated by their negative stereotypes of the outgroup (e.g., helping with a word game because they were "less smart"; Sierksma et al., 2018). Thus, prosocial behaviors in this study were likely motivated by *White Savior* beliefs (DiAngelo, 2018), or the notion that because Black people do not *know better*, White people must save them

from their own choices and circumstances. White saviorism ignores the structural nature of racism and, instead, assumes racial disparities are the cause of the individual choices of ethnic and racial minorities.

On the other hand, older children seem to allocate resources based on racial equity. For example, in one study, 10- to 11-year-olds, but not 5- to 6-year-olds, allocated more hospital supplies to fictious hospitals pictured serving Black children when they were experimentally manipulated to have fewer hospital supplies but not when hospitals serving White children were manipulated to have fewer supplies (Elenbaas & Killen, 2016). These researchers also showed that with age, children had increasing awareness of wealth status disparities between Black and White individuals. This work suggests that older children, compared to younger children, are more aware of disparities in the United States and make moral decisions based on both moral concerns (i.e., equity and equality) and social groups when making prosocial decisions (McGuire et al., 2018; Rutland & Killen, 2017). Consistent with these findings, Eisenberg (1983) found that children with higher-level prosocial moral reasoning (i.e., more other-oriented or based on internalized values) were less likely to differentiate between prosocial behaviors toward ingroup and outgroup people. Because prosocial moral reasoning is related to their helping behaviors (Eisenberg, 1986), it stands to reason that older children, compared to younger children, may be more equitable in their concern for others (Eisenberg, 1986).

Allocating resources equally (vs. helping ingroup members more) could be an indication of children's motivation for fairness and equity or their desire to rectify societal inequities. Thus, White children's prosocial behaviors toward ethnic and racial minority children may indicate that they recognize and understand inequities in society, and/or are concerned about fairness. With age, children can develop a greater understanding of White privilege (see Hazelbaker et al., 2022). Thus, we see early prosocial behaviors toward ethnic and racial minority children as a potential precursor to later behaviors that challenge racism and discrimination toward marginalized youth. However, equal or greater sharing with Black peers could also reflect the view that Black peers are disadvantaged and need to be "saved" (DiAngelo, 2018). Because it is difficult to know the motivations for White children's prosocial behaviors toward racial outgroup members, in this study, we move beyond a focus on only prosocial behaviors to study other-oriented emotional responses.

Empathy-related responding

It is important to differentiate between empathy and its related reactions (i.e., sympathy, empathic anger)—reactions that often stem from one's initial empathic reaction to another. Empathy is defined as an emotional

state that is the same or similar to what the other person is feeling or would be expected to feel, such as feeling sad when viewing someone else who is sad. Sympathy is a response that likely stems from empathy and consists of feelings of sorrow or concern for another (Eisenberg et al., 2015). Children also may experience empathic anger in response to another's distress or anger when that distress is attributable to another person (see Laible et al., 2008). The distinctions among these emotions are often unclear in operationalizations of measures used to assess "empathy," so we use the term "empathy-related responding" to encompass empathy, sympathy, and empathic anger. Empathy-related responding is the focus of this work because it is believed to be a powerful motivation for altruism (Batson, 2011). In fact, empathy, sympathy, and empathic anger have been related to increased prosocial behaviors in children and adolescents (see Eisenberg et al., 2015), as well as school-aged children's defending or bystander intervention in bullying situations, including social exclusion and physical, verbal, and psychological hostility (Ma et al., 2019; Nickerson et al., 2015). Although bullying sometimes involves social category memberships, such as race or ethnicity, the bulk of research on bullying has not differentiated between personal versus ethnic or racial forms of bullying. However, children of color report more victimization than do their White peers (Felix & You, 2011). Regardless of the nature of the bullying context, the positive association between empathy and taking actions against a bully is relevant to challenging discrimination because defenders of bullying are acting to rectify an injustice.

Children's empathy-related responding differs based on characteristics of the targets, as they do for prosocial behaviors (Eisenberg et al., 2015; Peplak & Malti, 2021). It is possible that children see more similarities between themselves and members of their same perceived race, leading to more liking, positive thoughts, perspective taking (i.e., understanding another's thoughts and emotions), and empathy-related responding toward racially similar others (Eisenberg et al., 2010; Peplak & Malti, 2021). Few studies have focused on children's differential empathy based on race or ethnicity (see O'Driscoll et al., 2021). In one rare study of 11- and 12-year-old Arab children in Israel, researchers found lower levels of empathy toward Jewish-Israeli children (the majority outgroup that holds status and power) than Arab-Israeli children (Shechtman & Basheer, 2005).

If an individual feels sympathy or anger for people who experience racism and discrimination, it is reasonable to assume that they would be more motivated to disrupt these inequities. In a recent qualitative study of middle-school students, Thomann and Suyemoto (2018) demonstrated that developing an emotional connection (i.e., feeling angry and sad about the effects of racism) was involved in White youths' understanding of structural racism. In addition, adolescents' empathic anger regarding social injustices has been found to predict their anti-racist action (Bañales et al., 2021), demonstrating that moral, empathy-based outrage can motivate youth to act. There also is evidence that higher levels of empathy are associated with less racial bias. For example, adults' empathic feelings of anger when reading about discrimination have been related to reduced bias in attitudes toward African American versus White people (Finlay & Stephan, 2000), and global empathy has been found to be related to lower levels of prejudice in a meta-analytic review (Pettigrew & Tropp, 2008). Aboud and Spears Brown (2013), in their review of intervention studies with children, noted that interventions that focus on increasing children's empathy, particularly if they offer specific or concrete examples of discrimination and exclusion, are most effective at reducing bias in young children compared to other interventions. That is, White children's empathy-related responding may predict their continued empathy, sympathy, or empathic anger in response to ethnic and racial minority children's experiences of bias and racism. We also propose that empathy-related reactions toward ethnic and racial minority children predict later behaviors that challenge racism and discrimination, perhaps directly or through White children's recognition of ethnic and racial minority children's experience of racism/inequities, their attitudes about ethnic and racial minority children, or their understanding of their own Whiteness (see Hazelbaker et al., 2022).

Children's racial attitudes

Despite the limited research on young White children's empathetic concern toward racial outgroups, empirical evidence indicates that young White children's attitudes toward ethnic and racial minorities are informed by racism. Although many parents, teachers, and policy makers believe that "children do not see color," there is evidence that young children, in fact, exhibit racial bias. Children favor their own racial group and hold negative attitudes about other racial groups at early ages (Aboud, 1988, 2005; Baron & Banaji, 2006; Raabe & Beelmann, 2011). White children are particularly likely to develop racial favoritism. Katz and Kofkin (1997) showed that over half of the White children in their study at age 6 years had pro-White and anti-Black biased attitudes.

With experience, children learn that it is socially unacceptable to express negative attitudes toward various racial groups. In fact, older children (ages 10 and 11 years) are more likely than younger children (ages 8 and 9 years) to avoid talking about race, even when such avoidance hinders performance on a task (Apfelbaum et al., 2008). When asked explicitly about their attitudes, researchers have shown a decrease in racial biases around 8–10 years of age (Baron & Banaji, 2006; Raabe & Beelmann, 2011). This decline may be the result of children's increasing awareness of the importance of appearing equitable in explicit attitudes and behaviors (Killen & Stangor, 2001; Rutland et al., 2007).

In her qualitative work, Hagerman (2020) found that White children's racial ideologies appear to solidify during middle to late childhood and carry over to adolescence. Thus, children's racial attitudes in early development could set the stage for developing long-term positions about race. In a study of youth in Northern Ireland, a context plagued by intergroup conflict, adolescents' more positive attitudes toward ethnic minorities were found to predict prosocial action toward refugees and participation in collective action and political activism to benefit refugees (Taylor & McKeown, 2021). Thus, we suggest that children's positive racial attitudes about Black peers are an important component to understanding the development of later compassion and prosocial action that benefit ethnic and racial minority peers and combat racism.

The current study

To our knowledge, researchers have not investigated young White children's prosociality and empathy-related responding toward White versus Black others. We focused on an important age group, kindergarten through second grade, because research highlights this period as particularly sensitive to the development and crystallization of racist attitudes (Raabe & Beelmann, 2011). Furthermore, the beginning of formal schooling may be White children's first exposure to ethnic and racial minority others, representing their first opportunity for interracial interactions.

The first goal of this study was consistent with the thinking of recent scholars who have used the IM (Coll et al., 1996) to emphasize the need to examine how White youth perpetuate systems of racism and discrimination given their position of power and privilege in the United States (Seaton et al., 2018). We focused on examining young White children's empathy-related responding, prosocial behaviors, and attitudes toward White and Black children to understand whether young White children demonstrate biases that favor White versus Black children. We used a multi-method approach to test how findings converge across methods, including children's self-report, observation of facial expression, and behavioral tasks. We were particularly confident in the facial measures of empathy-related responding toward White versus Black peers because these responses are unlikely to be influenced by social desirability. However, our hypotheses regarding these biases were somewhat exploratory.

Our second goal was to examine whether children's empathy-related responding, prosocial behaviors, and attitudes toward Black peers changed with age. Our hypotheses regarding age differences were exploratory. On the one hand, as children become more aware of inequities toward Black peers and have more contact with diverse others in school, there may be increases in prosocial behaviors and empathy-related responding toward Black peers with age. On the other hand, consistent with SIDT, between the ages

of 5 to 7 and beyond, children may learn to identify more (and have more positive attitudes toward) their ingroup with age. Thus, children could show increases in prosocial behaviors, empathy-related responding, and positive racial attitudes toward White peers, and decreases in the aforementioned toward Black peers, with age.

METHOD

Participants

Given that White, non-Latinx are the group with racial power and privilege in the U.S., the sample included 190 (54% boys) non-Latinx, White children (hereafter referred to as White children for brevity) between the ages of 5 and 9 years ($M = 7.09$, $SD = 0.94$) with no developmental delays. This sample size is adequate in power as suggested by G*-Power 3.1; a sample size of 158 is needed to achieve 80% statistical power to detect a moderate effect size of 0.25. There were 19 sibling pairs in the sample. Families were recruited from two locations in the United States: a Southwest metropolitan area ($n = 99$) and a Northeast metropolitan area ($n = 91$). Southwest participants were recruited via various methods (e.g., local museums, bookstores, after school programs, Facebook); Northeast participants were recruited from a participant pool hosted by the Psychology Department in the university. The sample of parents was highly educated, with a mean-level of education as 6.07 and 5.88 for mothers' and fathers' education, respectively (1 = some high school, no diploma; 2 = high school diploma or general education diploma; 3 = some college but no degree; 4 = high school diploma plus technical training; 5 = 2-year degree; 6 = Bachelor's Degree; 7 = Master's Degree; 8 = PhD, MD, JD, or other doctorate). Most of the parents were married (85.3%). The median annual income was between $75,000 and $100,000, with income ranging from less than $15,000 to over $100,000.

Procedures

The study was approved by the Institutional Review Board of both universities (Study Numbers 00004912 and 999863-12). The data collection was completed in 2017, prior to the onset of the COVID-19 pandemic. Participating children and their primary parents (i.e., the parent who spent the most time with the child) were invited to the universities for a 60–90 min visit. The primary parent provided informed consent and child assent was granted by describing the study, reminding them of their confidentiality, and giving them the option to stop participating at any time. The parent was escorted to a private room to complete questionnaires during the majority of the laboratory visit. A female undergraduate research assistant administered a series of tasks. All the research assistants who worked directly with the

children were White or appeared to be White. Families were compensated $40 for their participation in the campus visit, and children received a variety of small gifts and a participation certificate.

In a laboratory, children watched a series of videos that depicted social rejection toward either a White or Black child (matched for participants' sex). Empathy-related facial responses to the films were coded, and children reported their emotions after each film. Children participated in multiple resource-allocation tasks to assess prosociality to Black and White children. Children's racial attitudes also were assessed.

Measures

Prosocial behaviors toward White and Black children

Children's prosocial behaviors toward others were measured by three tasks: chocolate sharing, star sharing, and money sharing. Although each of the tasks had slightly different methods and response options, we explored whether children's responses differed by children's age or the race of the target child.

Chocolate sharing task

In this task, children's allocation toward various targets was assessed using a forced-choice task, similar to the tasks used by Böhm and Buttelmann (2017) and Fehr et al. (2008). In this task, children were shown pictures of 10 same sex peers (5 White, 5 Black). Children were given two options that varied in the level of cost to self and generosity to others. In the first choice, children could choose to give either zero chocolates to the other while getting one chocolate for the self (selfish choice) or giving two chocolates to the other and getting zero chocolates for self (altruistic option); in the second choice, the children could chose to give either zero chocolates to the other while getting two chocolates for self (selfish choice) or giving one chocolate to other and one chocolate to the self (equitable option). In the next choice, children could give none to other and give one to the self (selfish option) versus giving one to the other and one to the self (equitable option). In another option, children could give one chocolate to the other and zero to self (altruistic option) versus giving no chocolates to the other and one chocolate to the self (selfish option). In the final option, children could choose giving two chocolates to the other and getting two chocolates for self (equitable option) versus giving zero chocolates to the other and getting three chocolates for self (selfish choice). Children were told that they could keep all of the chocolates earned in the task. Each forced choice option was given for both Black and White peers (counterbalanced), resulting in a total of 10 trials. We computed a continuous score based on the number of chocolates the child allocated to Black versus White targets. For example, if the child consistently made the "selfish" choice, the total number of chocolates would be 0, whereas consistently choosing the more prosocial choice summed to 7. Thus, rather than relying on any particularly pairing, this score represented the child's prosocial choices across all of the pairs. Furthermore, this total score was highly correlated with scores from the prosocial or altruistic sharing trials, $rs(188) = .97-.99$, $ps < .001$.

Star sharing

The star-sharing task involved children distributing glow-in-the-dark stickers between themselves and another (passive) recipient. Similar allocation tasks have been used in prior work with similarly aged children (e.g., Ongley & Malti, 2014). Children were awarded a total of 10 glow-in-the-dark star stickers (at two separate occasions). After demonstrating the glow-in-the-dark properties of the stickers, the experimenter showed the child a picture of a same-sex peer (either Black or White, counterbalanced). The experimenter explained that there were not enough stickers for the children who were coming to the laboratory the next day. If they wished, they could give none, some, or all of their glow-in-the-dark stickers to the child shown in the picture by putting any of their star stickers in an envelope and sealing the envelope while the experimenter was out of the room. The experimenter left the room and came back when the participating child finished distributing the stickers. This procedure was done at two separate times throughout the laboratory procedure, once for a Black peer and once for a White peer (5 stars each time). Children kept their stars at the end of the visit. The child's scores reflected the number of stars shared with Black versus White peers (of 5).

Money sharing

At the end of the laboratory visit, children were given 10 quarters as one part of their prize for participating in the visit. Following the presentation of the quarters, the children watched a short video that depicted two children (one Black and one White) who were disappointed and sad because they did not have enough money to go on their school trip to Disney. To ensure that the children had not viewed the same actors in the empathy-inducing videos (see below), children in the money sharing film were always the other sex as the participating child. After the video, the experimenter checked that the children understood the video and showed the participating child two pencil pouches with each actor's picture on a pouch. The children were told that perhaps if enough children donated, the children might be able to afford to go on their school trip. Children were instructed that they could give none, some, or all of their prize money to neither, one, or both of the children in the video by putting their money in the pouch and zipping it while the experimenter was out of the room. The experimenter left the room and came back when the participating child finished distributing (or not). The child's score reflected the number of coins shared with Black versus White actors.

Empathic concern and anger toward White and Black children

During the visit, children were seated at a chair in front of a screen. Children were told that they would be watching a video about some kids at school who were about the same age as them. They watched a series of short video clips depicting an injustice toward a Black or White child that were created specifically for this research project. Presentation of the four videos was separated by other study tasks and there were two videos in each set. The two videos in each set differed from each other slightly but were matched somewhat in content (see detailed descriptions in Supporting Information).

Film stimuli creation

To create the films, a screenwriter worked with a Principal Investigator (PI) to develop several realistic peer bullying scenarios. Next, we conducted a small focus group of teachers (100% female, all but one identified as White) with experience in Kindergarten through 2nd grade to give feedback on the scripts (and other measures not included in the present study). Their feedback focused on whether the clips were equivalent within the sets, if they were age-appropriate, and if they were realistic. Teachers were paid $25 for their participation in these focus groups. The scripts were revised based on the feedback from the focus groups. Next, audition announcements were sent to several local youth theater programs, and 16 child actors (8 boys, 8 girls) were used across the films to reduce the concern that physical attractiveness of any one actor would play a role in the findings. There were six Black child actors (3 boys, 3 girls) and 10 White child actors (5 boys, 5 girls). All actors were similar in age to each other and with participants. The videos were filmed at a local school on a summer weekend in classrooms, hallways, playgrounds, and in the school library.

Film stimuli

The first set of videos included "Uh Oh OJ" and "Art Project." In "Uh Oh OJ," a child (either Black or White) is depicted having lunch with a peer discussing the friend's upcoming birthday party. The child takes a sip of their orange juice and casually mentions how much they enjoys the drink. Another child (the perpetrator, White) then comes into view. The perpetrator overhears their conversation and teases the child by first mocking them and then stating, "if you love it (orange juice) so much, you should wear it." The perpetrator then grabs the child's drink and pours the orange juice on the child's white shirt. The victim responds with disbelief and appears sad. In "Art Project" a child (either Black or White) is depicted having lunch with a peer discussing their art project to be displayed in the school's art show. Another child (the perpetrator, White) then comes into view. The perpetrator overhears their conversation, teases the child by mocking them and then stating "I know what

could make it (the art project) better!" The perpetrator then grabs the child's chocolate milk carton and pours chocolate milk over the project, ruining it. The victim responds with disbelief and appears sad.

The second set of films included "New Shirt" and "New Haircut." In the New Shirt clip, a child (Black or White) is reading a book in the school library. Two children (the perpetrators, White) come into view and sarcastically ask the child, "What are you wearing?" The child replies proudly that their father purchased the shirt for them during a recent trip. The perpetrators tease the child, by laughing and telling the child that their shirt is "ugly and weird" and then high-five each other. The victim then grabs their backpack to cover their shirt and looks sad. In the New Haircut clip, a child (Black or White) is reading a book in the school lounge. The perpetrator (White) comes into view and asks the child if they did something new to their hair. The child replies proudly that they got a new haircut. The perpetrator teases the child by laughing and telling the child that their hair looks "all crazy and weird." The victim then puts a hoodie over their hair and looks sad.

In all of the films, the perpetrator was always White, similar in age to the participant, and the sex of the actors in every video was matched to the participating child. Thus, each film was filmed in four ways (White victim boys, White victim girls, Black victim boys, Black victim girls). Children viewed counterbalanced orders of the videos, such that the presentation of Black versus White victims and presentation of storylines were counterbalanced.

Validity of the empathy-inducing films

Similar films have been used in prior work (without differing targets) to evoke an emotional reaction in children (see Eisenberg et al., 2015, for a review). To determine if the films evoked an emotional reaction, for each film except one in which victimization started at the beginning of the film, we coded children's facial expressions during a neutral episode of the clip (the period prior to the victimization) and a victimization episode. We compared children's facial expressions across the neutral and victimization episodes and showed that children expressed significantly more facial sadness, anger, and concerned attention in the victimization episodes compared to the neutral episodes, $ts = -3.43$, -2.99, and -2.81, $ps < .01$ for sadness, anger, and concerned attention, respectively. In addition to the facial data, to determine if the films evoked an empathy response, we also examined children's neurological reactions to the film using electro-encephalogram (EEG) methods in a subsample of the children in the current study ($n = 58$). Researchers have frequently linked increases in mu suppression to the experience of empathy during observations of others experiencing unpleasant stimuli or events, such as physical pain (Cheng et al., 2014). The videos used in the current study evoked mu suppression, which demonstrated that children had a neurophysiological response to observed victimization (Fraser et al., 2020).

Self-reported empathic concern

Following the presentation of each video, children were shown a picture of the victim in the clip and asked to report on a four-point scale from *0* (not at all) to *3* (a whole lot) how much they felt sad, sorry for, unhappy, upset, nervous, afraid, and happy. To assist children in using this scale, pictures of Lego stacks were used as a reference for each of the possible response options (ranging from one Lego to a four-Lego stack). For the purposes of this study, we focused on feeling sad, sorry for, unhappy, and upset responses because these emotions are likely to assess children's empathic concern. These adjectives have been used in prior research (e.g., Eisenberg et al., 1991) with adequate reliability and predictive validity (see Eisenberg et al., 2015). We averaged the scores for each emotion across the two sets of films (separately for Black and White victims, *r*s = .46 to .58, *p*s < .01).

Facial responses

Training for coding children's facial expressions was conducted over the course of several months. PIs met with graduate student coders to teach the coding system. To begin the training, graduate students and PIs together coded videos of pilot participants' facial expressions and together created consensus coding and revised and clarified the coding manual as needed. Next, coders watched participant videos separately, and disagreements were resolved by consensus and through continued meetings with PIs. This process continued until inter-rater reliability of at least 0.70 was met. From that point forward, coding continued with weekly reliability checks to prevent drift until the coding was complete.

Children's facial responses during the films were coded using a 4-point coding system (*0* = no display of the emotion; *3* = strong display of the emotion) in 15-s epochs across the duration of the film. The coding system was taken from prior work (Eisenberg et al., 1991) and has been found to relate in expected ways to children's helping behaviors (Eisenberg et al., 1990). Videos were coded by several graduate research assistants and one reliability coder across both sites, and 20% of the videos were used for reliability. In addition, the sound was eliminated for the coding of the facial expressions to keep coders unaware of what was going on in the films or the race of the target child in the film. Children's *concerned attention* was coded as other-oriented attention, such as eyebrows pulled down flat and forward toward the bridge of the nose, furrowing in the center of the brow, head, and body-oriented forward (intraclass correlation [ICC] = .79). *Anger* was coded when children's brows were pulled in and down, the mouth was square and tense, and/or cheeks tense and raised (ICC = .75), and *Sad* was marked by the inner corners of the eyebrows drawn up, furrows in the forehead, looking down in a sad way, downturned mouth, and/or lip trembling (ICC = .65). We also coded distress, but because it reflects children's anxious, self-focused reactions, we did not consider it for this study. Furthermore, children's fear, happiness, and surprise were coded, but frequencies were low and were not used in the current study. We averaged the scores for each emotion across the two sets of films (separately for Black and White victims).

Children's racial attitudes toward White and Black children

Children's racial attitudes were measured in two tasks that reflected their social inclusion.

Social distance–street exercise

Children's racial bias was measured using the street exercise (Valk & Karu, 2001) which was modified for use with younger children (Griffiths & Nesdale, 2006). In this task, children were shown a diagram of seven houses in a straight line with the middle house colored with red bricks and labeled "your house." The other houses were grayscale. Children were then given a set of four pictures of families that were identical in composition (i.e., heterosexual couple with two children, one boy and one girl) but varied in race (e.g., White and Black). There were two pictures of families of each race. Children were told to imagine that their house is the one in the middle and asked to choose where the other families will live on the diagram. For each race, the average distance (i.e., number of houses away from the child's house) was calculated (see Griffiths & Nesdale, 2006; Valk & Karu, 2001).

Social inclusion

Children's racial biases were also measured following the empathy-inducing films. After each film, children were shown a picture of the victim in the video and asked to report on a scale of *0* (not at all) to *3* (a whole lot), how much they "like" the victim, want to sit with the victim, and want to play with the victim. Similar measures of social inclusion have been used in prior research using minimal group membership manipulations (see Nesdale et al., 2005). Scores were computed for each item (sit, play, like) averaged across the two sets of films separately for the Black and White victims (Cronbach's αs = .74 and .79 for White and Black targets, respectively). We then created a social inclusion composite of the three items, separately for Black and White film victims—a measure that reflects children's attitudes about the victims. This measure was positively related to children's reported emotions and social inclusion toward Black peers was positively related to facial concern and prosocial behaviors toward Black targets (see Supporting Information).

Covariates

The primary care-giving parent reported on both mothers' and fathers' educational attainment and household

income. These scores were standardized and averaged to create a measure of socioeconomic status (SES). In addition, research site (i.e., Northeast location, Southwest location) was coded and considered as a control variable, and children's report of sex was used. Children's social desirability was measured with a shortened version of Marlow–Crowne Social Desirability Scale (Crowne & Marlowe, 1964) including 14-item true-false items for the original scale, such as "do you always listen to your parents?" and "when you make a mistake, do you always admit that you are wrong?" (α = .71). All items were averaged to compute the social desirability score.

RESULTS

Preliminary analyses

Means and standard deviations of study variables by grade are presented in Table 1. Using paired samples *t*-tests as a descriptive tool, we also tested any effects of race for the full sample and within each grade and found that children (especially at kindergarten) reported more unhappiness in response to White versus Black targets. Kindergarteners also displayed more facial concern, but

less facial anger, in response to White targets compared to Black targets. First graders shared more money with Black, compared to White, targets (see Table 1).

Sex differences

In regard to sex differences, girls ($M = 0.18$, $SD = 0.35$) had a higher mean level of concern than did boys ($M = 0.09$, $SD = 0.22$), independent samples $t(139.5) = 2.04$, $p = .04$. Girls demonstrated higher levels of social inclusion preference to Black children ($M = 2.39$, $SD = 0.67$) than did boys ($M = 2.07$, $SD = 0.94$), $t(183.1) = 2.76$, $p = .01$. No other sex differences were significant.

Site differences

Data collection site (i.e., Southwest vs. Northeast) differences were examined using independent samples t-tests. There were no significant site differences for children's self-reported emotions. Children in the Southwest showed less facial anger ($M = 0.07$, $SD = 0.17$) in response to videos with Black victims than children in the Northeast ($M = 0.14$, $SD = 0.25$), $t(156.3) = 2.09$, $p = .04$.

TABLE 1   T-tests within grade and means (standard deviation) by race of target and grade

	Full sample		Kindergarten		1st		2nd	
	N = 188–190		N = 62–64		N = 67–68		N = 58	
	White	**Black**	**White**	**Black**	**White**	**Black**	**White**	**Black**
Prosocial behaviors								
Chocolates	3.87 (2.44)	3.81 (2.64)	2.67 (2.38)[a]	2.32 (2.26)[a]	4.32 (2.28)	4.25 (2.59)	4.66 (2.23)	4.91 (2.36)
Stars	2.10 (1.19)	2.10 (1.27)	1.73 (1.06)	1.66 (1.14)	2.19 (1.12)	2.26 (1.18)	2.40 (1.31)	2.40 (1.38)
Money	2.06 (1.50)	2.08 (1.46)	1.77 (1.49)	1.76 (1.35)	2.10 (1.42)[b]	2.26 (1.39)[b]	2.33 (1.56)	2.21 (1.62)
Empathy-related responding								
Self-report								
Sad	1.45 (1.10)	1.48 (1.10)	1.27 (1.14)	1.23 (1.13)	1.37 (1.06)	1.41 (1.02)	1.74 (1.06)	1.85 (1.08)
Sorry	2.48 (0.80)	2.47 (0.81)	2.29 (0.95)	2.20 (0.97)	2.57 (0.74)	2.54 (0.74)	2.58 (0.65)	2.68 (0.60)
Unhappy	1.64 (1.10)[b]	1.52 (1.11)[b]	1.61 (1.21)[b]	1.31 (1.10)[b]	1.46 (1.08)	1.45 (1.13)	1.90 (0.95)	1.85 (1.02)
Upset	1.35 (1.12)	1.27 (1.11)	1.18 (1.14)	.98 (1.08)	1.17 (1.06)	1.21 (1.08)	1.75 (1.09)	1.65 (1.08)
Facial response								
Concern	0.16 (0.29)	0.13 (0.29)	0.20 (0.32)[c]	0.09 (0.22)[c]	0.18 (0.28)	0.11 (0.26)	0.16 (0.26)	0.20 (0.38)
Angry	0.10 (0.20)	0.10 (0.21)	0.04 (0.12)[b]	0.10 (0.24)[b]	0.13 (0.23)	0.11 (0.19)	0.14 (0.22)	0.09 (0.21)
Sad	0.14 (0.26)	0.15 (0.26)	0.15 (0.25)	0.17 (0.27)	0.10 (0.19)	0.13 (0.22)	0.18 (0.33)	0.15 (0.30)
Racial attitudes								
Social distance	1.95 (0.70)	1.92 (0.58)	1.95 (0.63)	1.90 (0.65)	1.94 (0.72)	1.89 (0.57)	1.97 (0.76)	1.99 (0.50)
Social inclusion	2.25 (0.74)	2.22 (0.84)	2.19 (0.91)	2.10 (1.01)	2.16 (0.69)	2.22 (0.75)	2.42 (0.54)	2.34 (0.72)

Note: 1st = first graders; 2nd = second graders; self-reported "sorry for" indicates concern.

Abbreviation: KG, kindergarten.

[a]Indicates that in paired sample *t*-tests, means approached significant differences from each other, $p < .10$.

[b]Indicates that in pared sample *t*-tests, means were significantly different from each other, $p \leq .05$.

[c]Indicates that in paired sample *t*-tests, means were significantly different from each other, $p \leq .01$.

There were also site differences for money sharing toward both White and Black peers. Specifically, children in the Southwest gave less money to White children ($M = 1.80$; $SD = 1.48$) than did children in the Northeast ($M = 2.36$; $SD = 1.46$), $t(186) = 2.61$, $p = .01$. Children in the Southwest also gave marginally less money to Black children ($M = 1.89$; $SD = 1.49$) than did children in the Northeast ($M = 2.29$; $SD = 1.41$), $t(186) = 1.90$, $p = .06$.

Correlations with social desirability and SES

We examined whether children's social desirability was related to any of the study variables. Correlations indicated that children's social desirability was significantly negatively related to reported upset for the White victim, $r(186) = -.17$, $p < .05$, and reported sad for the Black victim, $r(186) = -.15$, $p < .05$, but was unrelated to any facial responses. Social desirability was unrelated to prosocial behaviors or racial attitudes.

Family SES was not significantly related to reported empathic concern, facial empathy-related responses, or prosocial behaviors. Higher family SES was negatively related to social distance preference for White families, $r(184) = -.15$, $p < .05$, but was unrelated to any other measure of racial attitudes.

Correlations within study variables

Correlations among all study variables are available in Supporting Information.

Primary analyses

To determine whether children's sympathy, prosocial behaviors, and racial attitudes were associated with children's age and the target's race, linear mixed-effects models (SPSS mixed) with maximum likelihood estimation were conducted. Linear mixed effect models account for the correlation between the repeated measurements of the same individual. Based on differences reported above for child sex (i.e., facial concern, social inclusion) and data collection site (i.e., money sharing, facial anger, facial distress), when applicable, we controlled for these variables. We conducted these analyses hierarchically, such that in the first step, the fixed effects included the control variables (when applicable), race of target, and child age. In the second step, we included the interaction between race of target and child age (see Table 2).

We also computed analyses in which only one sibling was considered, removing 19 children. In these analyses, the results remained similar. We chose to present the findings with the full sample in order to maximize power and because of the focus on age effects in the current study (as the siblings were of different ages).

Prosocial behaviors

In terms of children's willingness to share resources, we found age differences in children's prosocial behaviors for all three measures of prosocial sharing of higher means with age, $Fs (190, 190, 188) = 29.18, 8.56$, and 3.87, $ps \leq .01$, .01, .05, for chocolate, star, and money distribution, respectively. There were no main effects for the race of the target child. However, there was a significant interaction between race and child age in predicting children's

TABLE 2 Mixed-effects estimates

	Race	Age	Sex	Site	Race × age
Step 1: main effects					
Prosocial behaviors					
Chocolates	.06	.94**	—	—	—
Stars	.00	.25**	—	—	—
Money	−.02	.22*	—	.45*	—
Empathy-related responding					
Reported					
Sad	−.03	.24**	—	—	—
Sorry	.01	.16**	—	—	—
Unhappy	.12*	.18*	—	—	—
Upset	.08	.24**	—	—	—
Facial					
Concern	.03	.00	.07+	—	—
Angry	−.01	.02+	—	.05*	—
Sad	−.01	.00	—	—	—
Racial attitudes					
Social distance	.05	.01	—	.43**	—
Social inclusion	.03	.07	.25*	—	—
Step 2: interaction race × age					
Prosocial behaviors					
Chocolates	.06	1.06**	—	—	−.24*
Stars	.00	.27**	—	—	−.04
Money	−.02	.17	—	.45*	.08
Empathy-related responding					
Reported					
Sad	−.03	.28**	—	—	−.09
Sorry	.01	.21**	—	—	−.08+
Unhappy	.12*	.23**	—	—	−.10
Upset	.08	.27**	—	—	−.07
Facial					
Concern	.03	.03	.07+	—	−.05*
Angry	−.01	.00	—	.05*	.05**
Sad	−.01	−.01	—	—	.02
Racial attitudes					
Social distance	.04	.03	—	—	.00
Social inclusion	.03	.07	.25*	—	−.01

+$p < .10$.
*$p \leq .05$; **$p < .01$.

chocolate candy sharing, $F(190) = 4.00$, $p = .047$, such that the positive slope between age and sharing chocolates was stronger for Black recipients, $\beta = 1.06$, $p < .001$, compared to White recipients, $\beta = 0.83$, $p < .001$ (see Figure 1). This pattern could be due to greater sharing with White than Black victims in kindergarten. No other interactions were found.

Empathic concern and anger

We next examined results for children's self-reported empathic concern. All reported emotions increased with age, $Fs(190, 190, 190, 190) = 9.32$, 8.14, 5.34, and 9.49, $ps < .01$, .01, .05, .01, for sadness, sorry, unhappy, and upset, respectively. There was also an effect for race in children's reports of being unhappy, such that children reported feeling more unhappy in response to the White target films compared to the Black target films, $F(190) = 3.81$ $p = .05$. There was a near significant interaction between child age and race of victim for children's reported sorry, $F(190) = 3.58$, $p < .06$. Children's reported concern more strongly increased with age for Black ($\beta = 0.21$, $p < .001$) compared to White ($\beta = 0.12$, $p < .05$) victims (see Figure S1).

Next, children's facial responses to the films were examined. There were no main effects for race of the target child. Race of target by age interactions was found for children's concerned attention and anger, $Fs(188) = 4.33$ and 8.39, $ps < .05$ and .01, respectively. Probes of the interactions revealed a positive slope for facial concern for Black targets, $\beta = 0.03$, ns but a negative slope for White victims $\beta = -0.02$, ns (see Figure 2a; slopes were significantly different from each other but not from zero). This pattern could be due to the fact that facial concern was significantly higher for White than Black targets in kindergarten. Children's facial anger, which was significantly lower for White than Black victims in

kindergarten, increased with age for White ($\beta = 0.05$, $p < .01$), but not Black ($\beta = 0.01$, ns) victims (see Figure 2b).

Racial attitudes

We tested effects of age, race of target, and the interaction on children's social distance and social inclusion scores and found no evidence of either race, age, or interaction effects. Results did not differ when SES was also controlled when predicting social distance scores.

DISCUSSION

There is an urgency to focus on the perpetrators of racism and discrimination, and researchers have a responsibility to identify ways to promote equity and justice for marginalized youth. Unfortunately, few researchers have taken steps toward understanding the precursors of anti-racism that can be measured in young White children. In addition, many researchers have taken a "colorblind" approach to studying White children's equitable attitudes, feelings, and behaviors by largely ignoring the role of race and racism on children's empathy-related responding and prosocial behaviors. In this study, we addressed this gap in the literature by examining equity in White children's concern for, generosity toward, and attitudes about Black and White peers. This study is a first step to understand young White children's empathy-related responding and prosocial behaviors toward marginalized groups and paves the way for future studies that can help promote White children's actions to challenge inequities, to stand up to discrimination, and to find ways to dismantle White power and privilege in the United States.
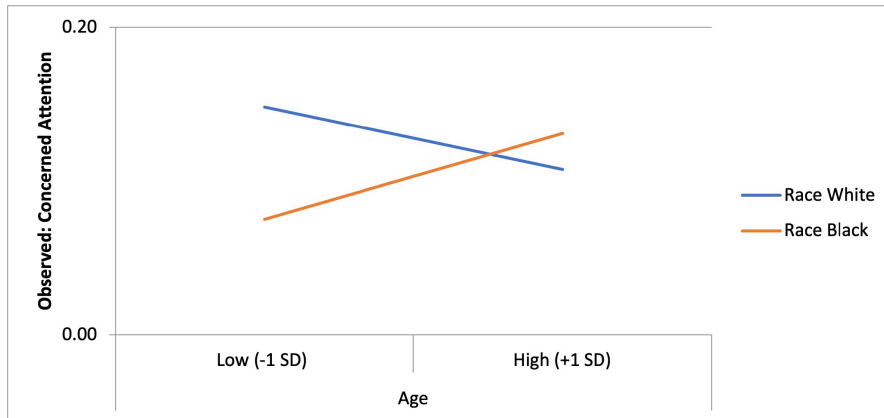
The first goal of this study was to present multi-method approach to studying ways to reduce prejudice
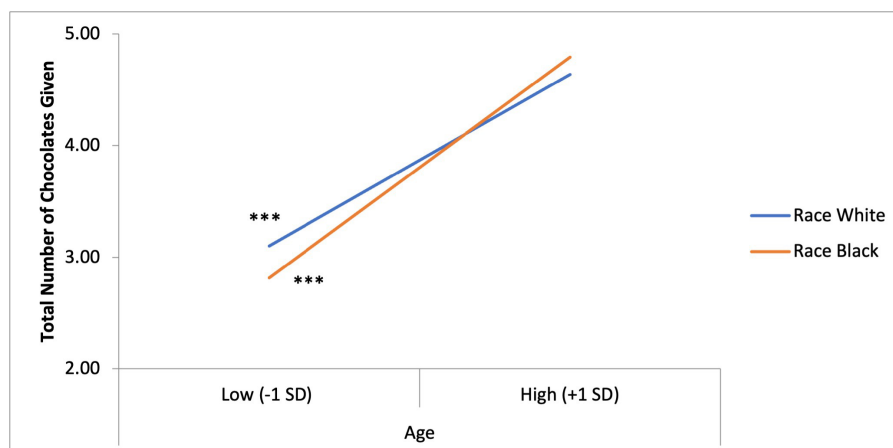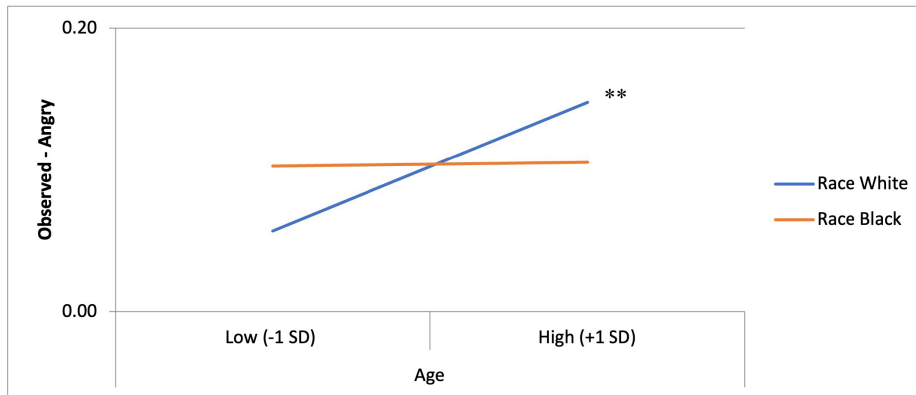

Note. *** $p < .001$

FIGURE 1 The interaction of race of target and child age to predict chocolate distribution.

(a) Concerned attention

(b) Facial Anger

Note. ** *p* < .01

FIGURE 2 The interactions of race of target and child age to predict facial concerned attention and facial anger.

and racism by drawing from the prosocial and moral literature. Consistent with Hazelbaker et al. (2022) model of anti-racism, we have argued that very young White children are unlikely to call out racism when it occurs, fight collectively to change anti-racist systems, serve as allies to people of color, or teach other White people about racism. Thus, we focused on some foundational skills that may set the stage for later anti-racist behaviors. In the adult literature, empathy has been related to lower bias and prejudice (Finlay & Stephan, 2000; Pettigrew & Tropp, 2008). Furthermore, Bruneau et al. (2017) showed that empathy felt for particular outgroups (i.e., Americans regarding Arabs, Hungarians regarding refugees, Greeks regarding Germans) predicted prosocial behaviors toward the outgroup, even after controlling for trait-level empathy. To our knowledge, however, researchers have not assessed White children's empathic concern specifically toward Black people. In this study, we assessed both observed and reported empathy-related responding in response to short, emotionally evocative films that we created especially for this work that depicted a social injustice toward White and Black children. We believe that it is especially important to use

multi-method data with young children because they may have difficulty comprehending their own emotional states (see Eisenberg & Fabes, 1990). Furthermore, because different measures may assess different aspects of empathy-related responding (some that are more easily masked or impacted by social desirability than others), it is critical to examine this construct in multiple ways.

Our findings indicate that 5- to 9-year-olds' reported empathy-related responding increased with age toward both Black and White peers, findings that are consistent with research on global indices of empathy or sympathy (Eisenberg et al., 2015). Similar patterns were found in the interaction between race and age for children's facial concern and reported "sorry for," such that there was a greater increase with age in children's concern for Black targets compared to White targets. Children's facial concern and their reported "sorry for" both reflect children's sympathy and other-oriented sorrow. Interestingly, younger children in this sample showed less facial concern toward Black peers compared to White peers (as evident in both the mean-level grade comparisons as well as the mixed models). These findings indicate that White children as young as kindergarten-age develop clear

in-group preferences for other White children (Katz & Kofkin, 1997; Raabe & Beelmann, 2011). With age, and possibly with more exposure to Black peers and diversity, children become more equitable in their feelings of sorrow for others who experience victimization and perhaps more willing to help outgroup victims.

The same pattern of results was found for children's prosocial behaviors. Children's distribution of chocolate candies increased more dramatically with age for Black targets compared to White targets. Again, similar to the empathic concern findings, younger children in this sample shared more chocolates with White peers, compared to Black peers (as evident in both the mean-level grade comparisons as well as the mixed models). Thus, younger White children tend to distribute more resources to their racial ingroup, consistent with other work in this area (Renno & Shutts, 2015). Our findings may indicate that as children develop, they become less biased; that is, children's allocations progress from providing more resources to their own racial group to a focus on equality (giving the same amount to everyone; Fehr et al., 2008; Rutland & Killen, 2017). It is also possible, however, that as children age, they are more aware of the desirability to appear less biased or may be contributing to *White Saviorism* (DiAngelo, 2018). Thus, perhaps their greater equity with age is due to children's desire to not appear explicitly racist.

Interestingly, children's facial anger showed a different pattern. Whereas facial anger in response to injustice toward a Black child remained at about the same level, regardless of children's age, there was increased facial anger with age in response to victimization against a White child. We view facial anger as a reflection of children's empathic anger (Batson et al., 2009). With age and experience with peers, children may view teasing and harming others' property as particularly egregious. However, as they developed, White children became angrier when viewing such episodes involving White victims compared to Black victims. These findings are important because researchers have shown that empathic anger motivates reparation and prosocial behaviors (Vitaglione & Barnett, 2003; Xiao et al., 2019) and antiracist action in adolescents (Bañales et al., 2021).

We offer two speculative arguments for this unexpected finding. First, it is possible that our findings regarding an increase in facial anger with age for White victims indicate that children show increased evidence of racism or ingroup bias with age, as predicted by SDIT. Thus, at least when it comes to witnessing bullying situations, it is possible that White children are more outraged when they observe their racial ingroup being bullied. Understanding the motivations and development of empathic anger toward White and Black peers is an important avenue for further examination. Second, it is also possible that White children as young as kindergarten perceive the injustices toward Black children depicted in the videos as racism and express anger in

response to such behaviors, based on higher mean levels in facial anger response to Black versus White victims at this age (Van Ausdale & Feagin, 1996). On the other hand, when viewing the White victim, White kindergarten children may perceive the context as mean, inappropriate, or unfair (but not necessarily as bullying). These young children display concern, rather than anger, for the White victims (as indicated by the very low mean in facial anger but relatively high mean in facial concern at this age). However, perhaps as children get more experience in school and with peers (where there may be trained to stand up to bullying or not to tolerate bullying at their school), they may be more prone to experience anger when an ingroup member is teased or victimized.

White children's greater increase in prosocial behaviors toward Black, compared to White, targets were found only for the chocolate distribution task and not the other sharing tasks. It is possible that the lack of findings for the other measures is due to the different methodologies. The chocolate sharing task had multiple forced-choice options that did not generally allow for equal or "fair" sharing within each trial. On the other hand, the glow-in-the-dark stars were offered to the children on two separate opportunities in which children could distribute between the self and other. That is, children could easily provide the same number of glow-in-the-dark stars to the Black versus the White child simply by remembering their choice in the previous opportunity. Indeed, most children gave the same number of stars to each target (Ms = 2.10 to both White and Black targets). The money task also was fairly different because children were forced to distribute between three possible targets (Black target, White target, themselves) and could try to be "fair" by giving equally to the Black and White target (Ms = 2.06 and 2.08 to White and Black, respectively). We also acknowledge a site difference in sharing money, such that children in the Southwest shared less money to both targets. It is possible that children in the Southwest viewed the trip as less "out of reach," because the location of Disney(land) is somewhat closer (driving distance) than for children in the Northeast.

We also did not find any effects for racial attitudes. Prior research shows that children believe it is unfair to exclude others based on race (Killen & Stangor, 2001). Our measures of racial attitudes may have captured children's tendency to behave fairly toward children in their immediate social group. It would be important to ask children their reasoning for including or excluding children in their social groups. Other measures of racial attitudes (i.e., stereotypes, implicit attitudes, negative attributions) could provide different findings. Furthermore, our study points to the need to include a variety of measures of children's empathy-related responses and behaviors toward various targets, rather than simply studying racial attitudes or reasoning.

Rather than focusing on prejudice and biases in White youth, this study sought to provide a first step to studying

precursors of anti-racism in very young children. Although we could not examine White young children's behaviors that specifically challenge racism (Aldana et al., 2019; Seaton, 2020), we focused on important skills that are developing in young children and can be examined separately in response to different targets. Specifically, we argue that young children's empathy-related responding and moral behaviors toward Black peers motivate children's willingness to take anti-racist actions, such as challenging racism and participating in actions that challenge structural racism. Children who develop an emotional connection with historically marginalized groups and who are motivated by concerns about equity and fairness, are likely to continue to experience concern for victims of racism and awareness of biases and racism. As proposed by Hazelbaker et al. (2022), these abilities may contribute to later anti-racist action. An important area for further research is to understand the ways that young children's early concern for and prosocial behaviors benefiting ethnic and racial minority children predict their later anti-racist behaviors (either directly, or through various mechanisms; Hazelbaker et al., 2022).

It is also important to acknowledge that our study investigates interpersonal precursors of anti-racism that are necessary, but not sufficient, for the development of anti-racism. The present study did not incorporate measures to assess institutional racism that likely operates in White children's development of anti-racism. Consistent with Roberts and Rizzo (2021), we view anti-racism as multi-layered, including both psychological and sociopolitical factors. Thus, we acknowledge this issue as a limitation and an important area for future research. Furthermore, our measures of anti-racism lacked an intersectional lens. In our empathy-inducing stimuli, children viewed Black and White targets of their same sex. Although done to isolate race effects, this method eliminated our ability to investigate how White children might exhibit biases at the intersection of race and sex outgroups. Such research is important to understand whether White people are more likely to be an ally to all Black people. Another important limitation is that we did not test whether children had difficulty comprehending their own emotional states after watching the films. Indeed, when using self-report data for children's empathy, there is often a concern that children are unaware of their feelings or may not be able to reliably identify their emotions, particularly with young children. Because children's reported emotions were related in expected ways to global measures of sympathy and children's prosocial behaviors, this gives us some added confidence in these measures (see Supporting Information). We also were unable to separate how the perceived social class of the victims may have been intertwined with race for some of our measures, such as the money-sharing task and street exercise.

There are numerous strengths of this investigation. First, the present investigation is one of few to address issues related to racism and anti-racism in young White

children. To dismantle the system of racism in the United States, the development of White people's racial bias and anti-racism must be the focus of research, given White individuals are the primary beneficiaries of these systems of power and privilege. The groundwork for anti-racist action is undoubtedly laid in childhood; thus, it is noteworthy that our study paves a path for examining these issues before anti-racist action is likely to occur—in early development. Researchers should continue to examine the development of White children's biases so that parents, teachers, and practitioners can combat biases via education about the interpersonal and structural presence of racism in the United States. Second, our study presents a potentially powerful method for studying children's feelings toward Black peers. Roberts and Rizzo (2021) defined anti-racism as a system of equity based on race, including equitable feelings and actions. Thus, because we focused on empathy-related responding, research on sympathy, empathic anger, and prosocial behaviors directed toward minority group members may be one way to examine the early foundations of anti-racism. Third, our study uses a multi-method approach to examining these abilities in young children. Our use of observational methods, self-reported measures, and behavioral tasks allowed us to study nuances in children's responses to historically marginalized people. The variety of measures also created an opportunity to examine factors that are less likely to be impacted by children's social desirability or need to appear "equitable" or "fair."

Our work raises questions for future investigations. In particular, longitudinal work is needed to examine whether children's sympathy and empathic anger predict later critical consciousness and critical action (Heberle et al., 2020). It is imperative that researchers examine the progression of White children's empathy-related responses, prosocial behaviors, and racial attitudes toward their racial outgroups across childhood. We call for research that investigates how the precursors studied in this work predict later anti-racist behaviors, and whether other mechanisms, such as children's understanding of self in the context of Whiteness or and understanding of society (i.e., biases, racism) mediate these relations (Hazelbaker et al., 2022). Our cross-sectional evidence indicates that children exhibit biases in empathy-related responding by kindergarten, and we suspect that such biases are evident at even younger ages (i.e., preschool). Next, more research is needed on White children's responses to Black peers as well as to other historically marginalized individuals (e.g., Latinx, Asian). For example, research is needed on whether White children show stereotyping and oppression specifically toward children of color that reside in their communities (e.g., Latinx in the Southwest) or whether such attitudes and behaviors are exhibited equally across multiple ethnic and racial minority children.

Finally, a next step for researchers is to understand the socialization of racism and anti-racism in young White children. Researchers have shown that White

parents are largely silent when it comes to issues of race (Hagerman, 2014; Katz, 2003). Currently, "colorblindness" is part of the current face of racism in this country by maintaining White power and privilege through denial and inaction (Kendi, 2019). That is, when parents are silent about race, children form their own conclusions about racial inequities and have no tools to acknowledge or change racist structures and systems. On the other hand, parents' color conscious attitudes may provide an environment that recognizes the salience of race in children's daily lives and the structure of racism that creates racial inequities. Hagerman (2020) showed that children who grew up in a "progressive" context and had diverse friends and schools were more likely to accept that racism is a problem today. On the other hand, children who attended a segregated, mostly White school, had mostly White friends, and had parents who adopted a colorblind approach to racial socialization, believed that racism was not a problem today and that inequities and police violence were not due to race. She also showed that racial ideologies that appear in middle to late childhood (her sample at Wave 1 was aged 10–13) were largely the same, if not more polarized, by adolescence (Wave 2 aged 14–17). More research is needed to understand how children learn to become anti-racist and how the socialization of race changes with age. Particularly relevant to the current study, we must examine how White parents socialize race and promote empathy-related responding and behaviors toward ethnic and racial minority children.

In summary, there is almost no research on the development of anti-racism in young children. Our work contributes to the understanding of anti-racism by focusing on empathy-related responding toward Black and White peers and their willingness to allocate desirable resources to them. The findings show that younger children tend to feel more sorrow toward White versus Black peers. However, anger—an emotion that might be particularly important for motivating anti-racist action—seems to follow a different pattern. White children show more outrage toward injustices against other White children across the early school years, suggesting that early childhood may be a critical time for interventions that directly address White children's feelings when witnessing Black peers' distress to promote anti-racism and intergroup harmony.

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REFERENCES

Aboud, F. E. (1988). *Children and prejudice*. Addison-Wesley.

Aboud, F. E. (2005). The development of prejudice in childhood and adolescence. In J. F. Dovidio, P. Glick, & L. A. Rudman (Eds.), *On the nature of prejudice: Fifty years after Allport* (pp. 310–326). Blackwell.

Aboud, F. E., & Spears Brown, C. (2013). Positive and negative intergroup contact among children and its effect on attitudes. In G. Hodson & M. Hewstone (Eds.), *Advances in intergroup contact* (pp. 176–199). Psychology Press.

Aldana, A., Bañales, J., & Richards-Schuster, K. (2019). Youth anti-racist engagement: Conceptualization, development, and validation of an anti-racism action scale. *Adolescent Research Review*, *4*, 369–381. https://doi.org/10.1007/s40894-019-00113-1

Apfelbaum, E. P., Pauker, K., Ambady, N., Sommers, S. R., & Norton, M. I. (2008). Learning (not) to talk about race: When older children underperform in social categorization. *Developmental Psychology*, *44*, 1513–1518. https://doi.org/10.1037/a0012835

Bañales, J., Aldana, A., Richards-Schuster, K., Flanagan, C. A., Diemer, M. A., & Rowley, S. J. (2021). Youth anti-racism action: Contributions of youth perceptions of school racial messages and critical consciousness. *Journal of Community Psychology*, *49*, 3079–3100. https://doi.org/10.1002/jcop.22266

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. https://doi.org/10.1111/j.1467-9280.2005.01664.x

Batson, C. D. (2011). *Altruism in humans.* Oxford University Press.

Batson, C. D., Chao, M. C., & Givens, J. M. (2009). Pursuing moral outrage: Anger at torture. *Journal of Experimental Social Psychology*, *45*, 155–160. https://doi.org/10.1016/j.jesp.2008.07.017

Billig, M., & Tajfel, H. (1973). Social categorization and similarity in intergroup behaviour. *European Journal of Social Psychology*, *3*, 27–52. https://doi.org/10.1002/ejsp.2420030103

Böhm, R., & Buttelmann, D. (2017). The impact of resource valence on children's other-regarding preferences. *Developmental Psychology*, *53*, 1656–1665. https://doi.org/10.1037/dev0000365

Bruneau, E. G., Cikara, M., & Saxe, R. (2017). Parochial empathy predicts reduced altruism and the endorsement of passive harm. *Social Psychological and Personality Science*, *8*, 934–942. https://doi.org/10.1177/1948550617693064

Buttelmann, D., & Böhm, R. (2014). The ontogeny of the motivation that underlies in-group bias. *Psychological Science*, *25*, 921–927. https://doi.org/10.1177/0956797613516802

Carlo, G., & Padilla-Walker, L. (2020). Adolescents' prosocial behaviors through a multidimensional and multicultural lens. *Child Development Perspectives*, *14*, 265–272. https://doi.org/10.1111/cdep.12391

Cheng, Y., Chen, C., & Decety, J. (2014). An EEG/ERP investigation of the development of empathy in early and middle childhood.

Developmental Cognitive Neuroscience, *10*, 160–169. https://doi.org/10.1016/j.dcn.2014.08.012

Coll, C. G., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., Garcia, H. V., & McAdoo, H. P. (1996). An integrative model for the study of developmental competencies in minority children. *Child Development*, *67*, 1891–1914. https://doi.org/10.1111/j.1467-8624.1996.tb01834.x

Crowne, D. P., & Marlowe, D. (1964). *The approval motive: Studies in evaluative dependence*. Wiley.

de França, D. X., & Monteiro, M. B. (2013). Social norms and the expression of prejudice: The development of aversive racism in childhood. *European Journal of Social Psychology*, *43*, 263–271. https://doi.org/10.1002/ejsp.1965

DiAngelo, R. (2018). *White fragility: Why it's so hard for white people to talk about racism*. Beacon Press.

Fraser, A. M., Hampton, R. S., Spinrad, T. L., Varnum, M., Blais, C., Eisenberg, N., Gal-Szabo, D. E., Berger, R. H., Xu, J., & Xiao, S. X. (2020). Children's mu suppression is sensitive to witnessing others' social victimization. *Social Neuroscience*, *15*(3), 348–354. https://doi.org/10.1080/17470919.2020.1722220

Eisenberg, N. (1983). Children's differentiations among potential recipients of aid. *Child development*, *54*, 594–602. https://doi.org/10.2307/1130046

Eisenberg, N. (1986). *Altruistic emotion, cognition, and behavior*. Lawrence Erlbaum Associates.

Eisenberg, N., Eggum, N. D., & Di Giunta, L. (2010). Empathy-related responding: Associations with prosocial behavior, aggression, and intergroup relations. *Social Issues and Policy Review*, *4*, 143–180. https://doi.org/10.1111/j.1751-2409.2010.01020.x

Eisenberg, N., & Fabes, R. A. (1990). Empathy: Conceptualization, measurement, and relation to prosocial behavior. *Motivation and Emotion*, *14*, 131–149. https://doi.org/10.1007/BF00991640

Eisenberg, N., Fabes, R. A., Schaller, M., Carlo, G., & Miller, P. A. (1991). The relations of parental characteristics and practices to children's vicarious emotional responding. *Child Development*, *62*, 1393–1408. https://doi.org/10.1111/j.1467-8624.1991.tb01613.x

Eisenberg, N., Fabes, R., Miller, P. A., Shell, R., Shea, C., & May-Plumlee, T. (1990). Preschoolers' vicarious emotional responding and their situational and dispositional prosocial behavior. *Merrill-Palmer Quarterly*, *36*(4), 507–529.

Eisenberg, N., Spinrad, T. L., & Knafo-Noam, A. (2015). Prosocial development. In M. E. Lamb & R. M. Lerner (Eds.), *Handbook of child psychology and developmental science: Socioemotional processes* (Vol. *3*, 7th ed., pp. 610–656). John Wiley & Sons, Inc.

Elenbaas, L., & Killen, M. (2016). Children rectify inequalities for disadvantaged groups. *Developmental Psychology*, *52*, 1318–1329. https://doi.org/10.1037/dev0000154

Fehr, E., Bernhard, H., & Rockenbach, B. (2008). Egalitarianism in young children. *Nature*, *454*, 1079–1084. https://doi.org/10.1038/nature07155

Felix, E. D., & You, S. (2011). Peer victimization within the ethnic context of high school. *Journal of Community Psychology*, *39*, 860–875. https://doi.org/10.1002/jcop.20465

Finlay, K. A., & Stephan, W. G. (2000). Improving intergroup relations: The effects of empathy on racial attitudes. *Journal of Applied Social Psychology*, *30*, 1720–1737. https://doi.org/10.1111/j.1559-1816.2000.tb02464.x

Griffiths, J. A., & Nesdale, D. (2006). In-group and out-group attitudes of ethnic majority and minority children. *International Journal of Intercultural Relations*, *30*, 735–749. https://doi.org/10.1016/j.ijintrel.2006.05.001

Hagerman, M. A. (2014). White families and race: Colour-blind and colour-conscious approaches to white racial socialization. *Ethnic and Racial Studies*, *37*, 2598–2614. https://doi.org/10.1080/01419870.2013.848289

Hagerman, M. A. (2020). Racial ideology and white youth: From middle childhood to adolescence. *Sociology of Race & Ethnicity*, *6*, 319–332. https://doi.org/10.1177/2332649219853309

Harrell, S. P. (2000). A multidimensional conceptualization of racism-related stress: Implications for the well-being of people of color. *American Journal of Orthopsychiatry*, *70*, 42–57. https://doi.org/10.1037/h0087722

Hazelbaker, T., Brown, C. S., Nenadal, L., & Mistry, R. S. (2022). Fostering anti-racism in white children and youth: Development within contexts. *American Psychologist*, *77*, 497–509. https://doi.org/10.1037/amp0000948

Heberle, A. E., Rapa, L. J., & Farago, F. (2020). Critical consciousness in children and adolescents: A systematic review, critical assessment, and recommendations for future research. *Psychological Bulletin*, *146*, 525–551. https://doi.org/10.1037/bul0000230

Helms, J. E. (2020). *A race is a nice thing to have: A guide to being a white person or understanding the white persons in your life* (3rd ed.). Cognella.

Katz, J. H. (2003). *White awareness: Handbook for anti-racism training*. University of Oklahoma Press.

Katz, P. A., & Kofkin, J. A. (1997). Race, gender, and young children. In S. S. Luthar, J. A. Burack, D. Cicchetti, & J. R. Weisz (Eds.), *Developmental psychopathology: Perspectives on adjustment, risk, and disorder* (pp. 51–74). Cambridge University Press.

Kendi, I. X. (2019). *How to be an antiracist*. Random House.

Killen, M., & Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development*, *72*, 174–186. https://doi.org/10.1111/1467-8624.00272

Laible, D., Eye, J., & Carlo, G. (2008). Dimensions of conscience in mid-adolescence: Links with social behavior, parenting, and temperament. *Journal of Youth and Adolescence*, *37*, 875–887.

Ma, T.-L., Meter, D. J., Chen, W.-T., & Lee, Y. (2019). Defending behavior of peer victimization in school and cyber context during childhood and adolescence: A meta-analytic review of individual and peer-relational characteristics. *Psychological Bulletin*, *145*(9), 891–928. https://doi.org/10.1037/bul0000205

Malti, T., Gummerum, M., Ongley, S., Chaparro, M., Nola, M., & Bae, N. Y. (2016). "Who is worthy of my generosity?" recipient characteristics and the development of children's sharing. *International Journal of Behavioral Development*, *40*, 31–40. https://doi.org/10.1177/0165025414567007

McGuire, L., Rizzo, M. T., Killen, M., & Rutland, A. (2018). The development of intergroup resource allocation: The role of cooperative and competitive in-group norms. *Developmental Psychology*, *54*, 1499–1506. https://doi.org/10.1037/dev0000535

Nesdale, D. (2004). Social identity processes and children's ethnic prejudice. In M. Bennett & F. Sani (Eds.), *The development of the social self* (pp. 219–245). Psychology Press.

Nesdale, D., Maass, A., Durkin, K., & Griffiths, J. (2005). Group norms, threat, and children's racial prejudice. *Child Development*, *76*, 652–663. https://doi.org/10.1111/j.1467-8624.2005.00869.x

Nickerson, A. B., Aloe, A. M., & Werth, J. M. (2015). The relation of empathy and defending in bullying: A meta-analytic investigation. *School Psychology Review*, *44*(4), 372–390. https://doi.org/10.17105/spr-15-0035.1

O'Driscoll, D., Taylor, L. K., & Dautel, J. B. (2021). Essentialist beliefs affect children's outgroup empathy, attitudes and prosocial behaviours in a setting of intergroup conflict. *International Journal of Psychology*, *56*(1), 151–156. https://doi.org/10.1002/ijop.12679

Ongley, S. F., & Malti, T. (2014). The role of moral emotions in the development of children's sharing behavior. *Developmental Psychology*, *50*(4), 1148–1159. https://doi.org/10.1037/a0035191

Paulus, M., & Moore, C. (2014). The development of recipient-dependent sharing behavior and sharing expectations in preschool children. *Developmental Psychology*, *50*, 914–921. https://doi.org/10.1037/a0034169

Peplak, J., & Malti, T. (2021). Toward generalized concern: The development of compassion and links to kind orientations. *Journal of Adolescent Research*, 074355842110078. https://doi.org/10.1177/07435584211007840

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology*, 38, 922–934. https://doi.org/10.1002/ejsp.504

Raabe, T., & Beelmann, A. (2011). Development of ethnic, racial, and national prejudice in childhood and adolescence: A multinational meta-analysis of age differences. *Child Development*, 82, 1715–1737. https://doi.org/10.1111/j.1467-8624.2011.01668.x

Renno, M. P., & Shutts, K. (2015). Children's social category-based giving and its correlates: Expectations and preferences. *Developmental Psychology*, 51, 533–543. https://doi.org/10.1037/a0038819

Roberts, S. O., & Rizzo, M. T. (2021). The psychology of American racism. *American Psychologist*, 76, 475–487. https://doi.org/10.1037/amp0000642

Rutland, A., Abrams, D., & Levy, S. (2007). Introduction: Extending the conversation: Transdisciplinary approaches to social identity and intergroup attitudes in children and adolescents. *International Journal of Behavioral Development*, 31, 417–418. https://doi.org/10.1177/0165025407083669

Rutland, A., & Killen, M. (2017). Fair resource allocation among children and adolescents: The role of group and developmental processes. *Child Development Perspectives*, 11, 56–62. https://doi.org/10.1111/cdep.12211

Seaton, E. K. (2020). A Luta Continua: Next steps for racism research among black American youth. *Child Development Perspectives*, 14, 244–250. https://doi.org/10.1111/cdep.12388

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. https://doi.org/10.1037/amp0000315

Shechtman, Z., & Basheer, O. (2005). Normative beliefs supporting aggression of Arab children in an intergroup conflict. *Aggressive Behavior*, 31, 324–335. https://doi.org/10.1002/ab.20069

Sierksma, J., Lansu, T. A. M., Karremans, J. C., & Bijlstra, G. (2018). Children's helping behavior in an ethnic intergroup context: Evidence for outgroup helping. *Developmental Psychology*, 54, 916–928. https://doi.org/10.1037/dev0000478

Sierksma, J., Thijs, J., & Verkuyten, M. (2014). Ethnic helping and group identity: A study among majority group children. *Social Development*, 23, 803–819. https://doi.org/10.1111/sode.12077

Sparks, E., Schinkel, M. G., & Moore, C. (2017). Affiliation affects generosity in young children: The roles of minimal group membership and shared interests. *Journal of Experimental Child Psychology*, 159, 242–262. https://doi.org/10.1016/j.jecp.2017.02.007

Tajfel, H. (Ed.). (1978). *Differentiation between social groups: Studies in the social psychology of intergroup relations.* Academic Press.

Tajfel, H. (1982). Social psychology of intergroup relations. *Annual Review of Psychology*, 33, 1–39.

Taylor, L. K., & McKeown, S. (2021). Adolescent outgroup helping, collective action, and political activism in a setting of protracted conflict. *International Journal of Intercultural Relations*, 85, 37–46. https://doi.org/10.1016/j.ijintrel.2021.09.001

Thomann, C. R., & Suyemoto, K. L. (2018). Developing an anti-racist stance: How white youth understand structural racism. *The Journal of Early Adolescence*, 38, 745–771. https://doi.org/10.1177/0272431617692443

Valk, A., & Karu, K. (2001). Ethnic attitudes in relation to ethnic pride and ethnic differentiation. *The Journal of Social Psychology*, 141, 583–601. https://doi.org/10.1080/00224540109600573

Van Ausdale, D., & Feagin, J. R. (1996). Using racial and ethnic concepts: The critical case of very young children. *American Sociological Review*, 779–793. https://doi.org/10.2307/2096453

Van de Groep, S., Zanolie, K., & Crone, E. A. (2020). Giving to friends, classmates, and strangers in adolescence. *Journal of Research on Adolescence*, 30, 290–297. https://doi.org/10.1111/jora.12491

Vitaglione, G. D., & Barnett, M. A. (2003). Assessing a new dimension of empathy: Empathic anger as a predictor of helping and punishing desires. *Motivation and Emotion*, 27, 301–325. https://doi.org/10.1023/A:1026231622102

Weller, D., & Lagattuta, K. H. (2013). Helping the in-group feels better: Children's judgments and emotion attributions in response to prosocial dilemmas. *Child Development*, 84(1), 253–268. https://doi.org/10.1111/j.1467-8624.2012.01837.x

Xiao, S. X., Spinrad, T. L., & Eisenberg, N. (2019). Longitudinal relations of preschoolers' dispositional and situational anger to their prosocial behavior: The moderating role of shyness. *Social Development*, 28, 383–397. https://doi.org/10.1111/sode.12346

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