White Parents' Color-Blind Racial Ideology and Implicit White Preference as

Predictors of Children's Racial Attitudes

by

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ABSTRACT

This study examined relations between White parents' color-blind and implicit racial attitudes and their children's racial bias as well as moderation by diversity in children's friends and caregivers, parental warmth, child age, and child sex. The sample included 190 White/Non-Hispanic children (46% female) between the ages of 5 and 9 years (M = 7.11 years, SD = .94) and their mothers (N = 184) and fathers (N = 154). Data used were parents' reports of color-blind racial attitudes (Color-blind Racial Attitudes Scale; CoBRAS), parental warmth, and racial/ethnic diversity of children's friendships and caregivers, direct assessment of primary parent implicit racial attitudes (Implicit Association Test; IAT), and direct assessment of children's racial attitudes. Results supported hypothesized relations between parent racial attitudes and some child racial bias variables, especially under certain conditions. Specifically, both mothers' and fathers' color-blind racial attitudes were positively related to children's social inclusion preference for White children over Black children and parents' implicit White preference positively predicted child social inclusion racial bias, but only for younger children. Fathers' color-blind racial attitudes positively predicted children's social inclusion racial bias only when children's pre-K caregivers were mostly White and were inversely related to children's implicit White preference when children's caregivers were more racially heterogeneous. Finally, parental warmth moderated relations such that, when mothers' warmth was low, mother color-blind attitudes were negatively related to children's racial bias in social distance preference and fathers' color-blind attitudes positively predicted children's social inclusion bias only when father warmth was low or average.

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DEDICATION

To my parents, Ligia and Stefan, who taught me the value of education and supported me

relentlessly throughout the process. Thank you for your encouragement, love, inspiration,

and all you have sacrificed to give me the opportunities and support that made this

possible. Love you to the moon!

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Children's Racial Attitudes

Both institutional and interpersonal racism perpetuated by Whites in the United States is significantly detrimental to the mental health and well-being of people of color and to Whites themselves (Benner & Graham, 2013; Harrell, 2000; Spanierman & Heppner, 2004). In today's society, parents must help children navigate a diverse world and in doing so can either perpetuate or challenge the racism that is dominant in society. However, researchers have consistently found that, at least in research contexts, White parents avoid talking to their children about race and racism (Brown, Tanner-Smith, Lesane-Brown, & Ezell, 2007; Hamm, 2001; Katz, 2003; Pahlke, Bigler, & Suizzo, 2012). This avoidance might be explained in part by White parents' tendencies to endorse color-blind racial ideology (CBRI), meaning that many parents insist that neither they nor their children "see" race and that race does not, and should not, affect any of their behaviors (Pahlke et al., 2012; Vittrup, 2016). Although, in adults, CBRI has been linked to higher levels of racial bias, the extent to which parents' colorblind racial ideology is related to their young children's racial biases has never been empirically tested, to my knowledge. Additionally, White parents' levels of implicit racial bias also may be related to their children's racial bias, especially under specific circumstances. The present study examines relations between White parents' CBRI and implicit racial bias and children's racial bias, as well as the likely moderating roles of diversity in children's friendships, diversity in children's caregivers/teachers, parental warmth, and child age and sex.

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Theoretical Foundation

The present work examines aspects of a larger heuristic framework (Figure 1) that draws on several theoretical perspectives. Modern theoretical perspectives assert that White parents' attitudes and practices related to socialization around race and racism (Figure 1, Boxes B and C) serve to maintain White power and privilege by promoting children's biases (Burton et al., 2010). There are many parental attitudes and socialization behaviors that may contribute to the development of children's racial bias. The present work examines the role of parents' own attitudes, focusing specifically on implicit racial attitudes and color-blind racial ideology.

White parents' color-blind racial ideology (CBRI) is the dominant worldview held by White Americans that race does not, and should not, matter and thereby denies the existence of race-based discrimination (Bonilla-Silva, 2015; Neville et al., 2013). Color-blind ideology operates through both color-evasion (i.e., denial of differences and emphasis on sameness) and power-evasion (i.e., denial of racism and insistence that everyone has equal opportunities; Frankenberg, 1989; Neville et al., 2013). By denying and minimizing experiences of interpersonal and structural racism, color-blind racial ideology serves to reinforce systems of White power and privilege and to reinforce racial prejudice (Bonilla-Silva, 2015; Frankenberg, 1989; Neville et al., 2013). Accordingly, there is evidence that color-blind ideology is predictive of White adults' racial biases as measured in a myriad of ways. For example, higher levels of color-blind racial attitudes are related to higher levels of modern racial bias (i.e., belief that racism is a thing of the past and that racial minorities bring inequity upon themselves with their lack of work ethic), more negative attitudes toward women's and racial equality, and more negative explicit evaluations of racial/ethnic minorities (Neville et al., 2013; Neville, Lilly,

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Duran, Lee, & Browne, 2000; Richeson & Nussbaum, 2004). The mechanisms by which these adult attitudes may be passed on to their children have not been thoroughly researched or understood.

In his seminal work, Gordon Allport (1954) emphasized the important socializing role that parents play in the development of children's prejudice. Allport theorized that parents influence children's prejudice both directly, through explicit communication of bias, and indirectly, by controlling the environment in which children grow up (Figure 1, Box D). Among aspects of the environment, Allport (1954) posited that children's meaningful contact with diverse others may reduce their prejudice thereby moderating parents' socializing role (Figure 1, Box D). The present study examines boxes B, D, and E of the heuristic framework and extends previous empirical work by examining the relations between parents' own attitudes and their children's racial biases as well as several contextual moderators of these relations.

White Children's Racial Biases

Racial biases as evidenced by both same race favoritism and other-race discrimination emerge early in life. Importantly, this tendency to favor one's own racial group appears to exist primarily for children of the majority racial/ethnic group and not for minority groups, who do not show a preference for their own group, highlighting the need to focus on these biases in White families (Baron & Banaji, 2009; Griffiths & Nesdale, 2006; Hamm, 2001). White children, as young as 3 years old, demonstrate explicit (i.e., actively expressed) and implicit (i.e., outside of immediate cognitive awareness) racial biases in affective, cognitive, and behavioral domains assessed through a variety of measures (see Raabe & Beelmann, 2011, for a review). Typically, explicit biases are thought to be easier to access through reflection and cognitive control,

whereas implicit biases are harder to access and control, especially when the time between stimulus and response is very short (Baron, 2015). Thus, the reporting of explicit biases is thought to be more subject to social desirability and social norms, whereas measurement of implicit biases is considered less impacted by social norms. Specific examples of explicit racial biases in early childhood include White children's preference for White dolls and children's stereotyped discriminatory beliefs measured by the Preschool Racial Attitude Measure II and Multiresponse Racial Attitude measure (Doyle & Aboud, 1995; Griffiths & Nesdale, 2006; Katz, 2003). Implicit racial attitudes are typically assessed through non-verbal methods including the Implicit Association Test (child IAT; Baron & Banaji, 2006) and Affect Misattribution Procedure (AMP; Dunham, Chen, & Banaji, 2013; Payne, Cheng, Govorun, & Stewart, 2005), although sometimes are assessed by asking children to engage in a task which is verbal but which assesses racial attitudes indirectly, such as by asking children to make judgements about the intentions or behaviors of diverse people (Baron, 2015).

Explicit cognitive biases appear to increase throughout early childhood and to peak in middle childhood (ages 5-7), then decrease slightly into late childhood (ages 8-10), whereas implicit biases remain fairly stable (Baron & Banaji, 2006; Doyle & Aboud, 1995; Raabe & Beelmann, 2011). This pattern of development might reflect a degree of social desirability as children learn and internalize the color-blind social norm that racism is not something to talk about publicly (Baron & Banaji, 2006). Although implicit biases appear stable from early elementary school onward, implicit biases are malleable to intervention, suggesting that their apparent stability might be a product of consistency in socializing and environmental forces rather than developmental invariability (Baron, 2015; Gonzalez, Steele, & Baron, 2016). The

malleability of children's racial biases combined with evidence that biases may be most flexible immediately following their formation, highlights the importance of providing children with anti-racism messaging early in life (Gregg et al., 2006). It is worth noting that other researchers have found that implicit biases may be most flexible around age 10 and not in early elementary school, thus indicating the need to further study these biases especially in relation to predictors at various ages.

Relations of White Parents' Racial Attitudes to Children's Racial Biases

In accordance with theories of parental socialization of racial attitudes, researchers have found relations from parents' to children's racial attitudes and behaviors, but not from children to parents (Rodríguez-García & Wagner, 2009). A meta-analysis of parent-child similarity of in-group attitudes reported a medium effect size for similarity of parent and child racial attitudes (Degner & Dalege, 2013). For example, in a longitudinal study, parents who reported that racial diversity was less important to them when children were 9-months old had children with higher levels of explicit negative bias towards racial out-groups at 6 years old (Katz, 2003). Moreover, parental socialization practices such as using ethnic labels to make generalizations about an entire group of people predicts children's ethnic essentialism which is itself related to prejudice and stereotyping (Segall et al., 2015).

It is also worth noting that some researchers have not found relations between mothers' and children's racial attitudes (Aboud & Amato, 2001; Aboud & Doyle, 1996). However, even in the studies that did not find relations between maternal and child attitudes, children's perceptions of their mothers' attitudes were significantly related to children's own attitudes (Aboud & Doyle, 1996; Vittrup & Holden, 2011). Additionally, children whose mothers demonstrated fewer

stereotyped beliefs about Black individuals tended to have more favorable attitudes towards racial out-groups (Aboud & Doyle, 1996). It is likely that the strength of the association between parent and child attitudes varies based on the attitudes being assessed & the potential contextual moderators; thus, it is important to further examine novel aspects of parents' racial attitudes such as implicit racial attitudes and color-blind racial ideology as well as to examine potential moderators of the relations between parent and child racial attitudes.

Relations between Parents' Implicit Racial Attitudes and Children's Racial Attitudes

Most extant research examines parents' explicit racial attitudes and socialization practices. The fact that research linking explicit parent racial attitudes with young child racial attitudes is inconsistent suggest that parents might communicate certain biases to young children implicitly more than explicitly. This is consistent with Allport's (1954) assertion that one way in which children learn bias from their parents is by "catching" it from the environment their parents set up and from parents' non-explicit cues. Indeed, studies with preschool children demonstrated that children can learn to prefer one group over another from watching adults' non-verbal cues and will generalize that social bias to other members of the group both when the groups are race-based and when groups are designed for the purpose of the experiment (e.g., color of shirts;(Castelli et al., 2008; Skinner et al., 2017, 2019).

Parents' implicit racial attitudes are likely important predictors of the non-verbal socialization cues they provide their children. In general, adults with higher levels of implicit racial bias demonstrate lower levels of positive and friendly non-verbal signals in interactions with people of color (Dovidio et al., 2002; Richeson & Shelton, 2005). Accordingly, in one study, mothers' higher levels of implicit racial bias as measured by the Implicit Association Test

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predicted higher levels of their young children's racial bias as measured by hypothetical playmate choice and a behavioral attributions task (Castelli et al., 2009). White parents' implicit attitudes may be transmitted to children both through non-verbal communication and through subtle implicit socialization practices. For example, children whose parents focused more on same race pictures when reading a storybook in toddlerhood had higher levels of negative attitudes towards other races in preschool (Katz, 2003; Katz & Barrett, 1997). The present study extends previous research by examining several moderators which may enhance or weaken the strength of the association between parent implicit racial attitudes and children's racial bias.

Relations between Parents' Color-Blind Racial Ideology and Children's Racial Attitudes

White parents' color-blind racial ideology (CBRI) is another likely parental predictor of children's racial bias. Eduardo Bonilla-Silva (2018) proposes four frames by which color-blind racial ideology functions: minimization of racism, abstract liberalism, naturalization, and cultural racism. In the context of parenting, minimization of racism refers to avoidance of the topic of race in conversation, and the insistence that race is not a relevant characteristic that affects individuals' lives. Similarly, abstract liberalism refers to communicating the idea that everyone, regardless of race, has equal opportunities and that anyone can do anything they want as long as they try hard enough. Naturalism and cultural racism refer to parents communicating the idea that race-based segregation is natural and unavoidable and that certain cultures have attributes that contribute to the inequality. All four of these frames function together to maintain existing systems of racism and White power and privilege while superficially remaining "color-blind."

Researchers who have investigated White parents' socialization practices have found that White parents rely heavily on the minimization of racism and abstract liberalism frames of

CBRI. Specifically, at least in the context of research studies, White parents generally avoid explicitly talking about race (Bartoli et al., 2016; Hagerman, 2014; Katz, 2003; Loyd & Gaither, 2018; Pahlke et al., 2012; Vittrup, 2016). Parents who avoid constructive conversations about race often justify their socialization practices using rationale that reflects color-blind racial ideology. For example, parents report believing that race is not a current issue and that children should be raised to evaluate people based on other factors and to treat everyone the same (Bartoli et al., 2016; Hagerman, 2014; Vittrup, 2016). The absence of intentional conversations about race communicates to children that the differences they observe in how individuals are treated is not due to race but due to individual capabilities, which allows for systemic racism to inform children's biases without being challenged. This type of parental socialization minimizes the real experiences of people of color, and it may serve to reinforce children's racial bias. Indeed, parents' lack of constructive race-related conversations predicts higher levels of negative biases in children as measured through doll studies and self-reported stereotypical beliefs (Katz, 2003).

Even parents who report believing that it is important to discuss race and who desire to raise non-racist children most often do not discuss race in practice (Pahlke et al., 2012; Priest, Walton, White, Kowal, Fox, et al., 2014; Vittrup, 2016; Vittrup & Holden, 2011). Some of these parents incorrectly believe that their children do not see race and that talking about race will only emphasize racial differences and will increase children's bias (Hagerman, 2014; Matlock & DiAngelo, 2015; Priest, Walton, White, Kowal, Fox, et al., 2014; Vittrup, 2016). Indeed, in an interview study of 107 mothers with children between the ages of 4 and 7 years, all but three mothers reported that their children have no racial bias and 29% reported that their children do not notice racial differences (Vittrup, 2016). As children age and their cognitive abilities

develop, it is likely that parents understand that their children do visually *see* racial categories. Nevertheless, throughout middle and late childhood parents continue to say that children do not notice race (Hunter et al., 2012) and that children do not base their friendship decision on race but rather on socioeconomic status and shared interests (Hamm, 2001). Other White parents believe that their children are too young at 4 or 5 years old to learn about race, or that it is best to hold off discussions until the child asks a question or makes an inappropriate comment (Matlock & DiAngelo, 2015; Priest, Walton, White, Kowal, Fox, et al., 2014; Vittrup, 2016). Again, it is likely that these White parents' racial socialization practices change as children develop and begin to ask questions about race. However, avoidant or reactive (i.e., only engaging in discussion if child initiates) parenting practices are enabled by White privilege and are informed by societal color-blind racial ideology, although it is less clear in these cases how directly parents' CBRI is related to their socialization practices.

Despite abundant evidence that White parents rely on color-blind frameworks, no studies, to my knowledge, have directly examined the relations between White parents' CBRI and their children's racial attitudes. Although it seems that, in general, White parents avoid talking positively about race and this avoidance is related to higher levels of children's racial bias (Katz, 2003), it is important to also understand whether parents' color-blind racial *ideology* is related to children's bias. Existing studies have used parents' lack of conversations about race as evidence of parental color-blindness (Katz, 2003; Katz & Barrett, 1997; Pahlke et al., 2012); however, this method is flawed. Parents' avoidance of conversations about race varies in how directly it is influenced by parents' color-blind racial *ideology*. Some parents may explicitly teach color-blind racial ideology to their children by, for example, teaching children that race is not a factor in how

people are treated today (i.e., minimizing racism). Yet other parenting practices may be influenced by societal color-blind racial ideology even if parents themselves have an awareness of racism and White privilege. For example, because of the pervasiveness of color-blind racial ideology, parents might be uncomfortable talking with their children about race while, at the same time, they themselves recognize that race-based discrimination is a current societal problem. The present study extends previous research by measuring relations between parents' CBRI and children's racial attitudes directly, rather than indirectly as done in past studies.

Moderation by Racial/Ethnic Diversity in Children's Friendships and Caregivers

As previously described, researchers have found somewhat inconsistent strengths of associations between parent and child racial attitudes. Inconsistency in these relations may be in part due to moderation by other variables. One potential moderator of the relations between parent and child racial attitudes is racial diversity in children's friendships and caregivers. CBRI theorists contend that people of color may provide counter-narratives that help reduce White's levels of color-blind racism and increase critical understanding of racism (Bonilla-Silva et al., 2004; Neville et al., 2013). It is therefore likely that children's meaningful relationships with people of color may buffer the socializing role of their parents. Thus, the present study examines whether racial/ethnic diversity in children's friendships and caregivers moderates the associations between parental color-blind beliefs and children's racial bias.

Cross-race friendships and other meaningful relationships are directly related to decreases in bias, generally. For White adults, having friendships with people of color is related to a higher amount of critical understanding of racism (Neville et al., 2013). Similarly, for children, cross-race friendships are related to lower levels of racial bias, measured through multiple methods

(see Davies, Tropp, Aron, Pettigrew, & Wright, 2011, for a review). The impact of cross-race friendships on the reduction of children's bias has also been demonstrated longitudinally during the early elementary school years (Gaias et al., 2018). Lower bias related to racial/ethnic diversity in friendships is possibly due to increased meaningful contact with other races which enables individuals to see the effects of racism and to hear counter-narratives which challenge stereotypes. Higher levels of White children's cross-race friendships also may be indicative of a more racially diverse environment, which has itself been related to lower levels of negative stereotyping of other races (McGlothlin & Killen, 2006; Rutland et al., 2005). Although, to my knowledge, there is no literature that examines the role of cross-race non-parental caregivers/early childhood teachers for White children's racial bias, it is likely that these individuals play a similar socializing role in children's lives and are able to provide racial counter-narratives as well as generally more diverse environments. Therefore, because children's meaningful contact with members of other racial/ethnic groups can directly reduce children's bias, it is likely that relationships with both cross-race friends and caregivers may mitigate parents' socializing role.

It is important to note that, at least in the early childhood and elementary years, parents play a central role in shaping their children's friendships by supporting some relationships and not others. Indeed, parents who employ color-conscious socialization practices often report intentionally fostering diverse relationships in their children's lives, whereas parents with color-blind socialization practices often show no such efforts and justify their children's homogenous social groups as being related to shared interests or economic status and not to racial attitudes (Hagerman, 2014, 2017; Hamm, 2001). Thus, it is likely that children whose parents have

relatively lower levels of racial bias may have more cross-race relationships, whereas children with parents who have higher levels of racial bias may not have as many. Especially with the rare likelihood of cross-race relationships for children with highly racially biased parents, it is likely that children's cross-race relationships have the potential to buffer the impact of parents' racial attitudes on children.

Moderation by Parental Warmth

Aspects of parenting are another potential moderator of the relations between parent and child racial attitudes. Specifically, parental warmth is likely to affect the quality of the parent-child relationship and thus, the degree of children's internalization of parental attitudes (Grusec et al., 2000; Grusec & Goodnow, 1994; Hoffman, 1979). Researchers theorize that this occurs because children whose parents are warm and positive spend more time in their parents' proximity and generally have higher regard of their parents, increasing the opportunity and likelihood that children will more strongly identify with their parents' values (Grusec et al., 2000; Hoffman, 1979). Accordingly, in empirical studies, parental warmth predicts adolescents' value congruence to their parents' values both concurrently (Knafo & Schwartz, 2003) and longitudinally (Brody et al., 1994).

There is also evidence that warmth plays a key role in children's internalization of parents' racial attitudes, specifically. Rusnak (2014) found that maternal warmth moderated the association between young adults' perceptions of their mothers' racial attitudes and their own self-reported racial attitudes, such that the association between mother and child attitudes was stronger under conditions of high maternal warmth. In a study with younger children, Sinclair and colleagues (2005) found that, for 4th and 5th grade children, the quality of the parent-child

relationship moderated the relations between parental prejudice and child racial bias such that for children who strongly identified with their parents, parental prejudice positively predicted implicit racial bias and marginally positively predicted explicit racial bias. For children who did not identify strongly with their parents, parental prejudice was unrelated to implicit racial bias and negatively related to explicit racial bias (Sinclair, Dunn, & Lowery, 2005). Moreover, there is evidence that parents who perceive greater warmth in their relationship with their child also report that they employ higher levels of positive ethnic and racial socialization (Brown et al., 2007). Thus, it may be possible that in families with warmer parent-child interactions, parents both engage in more ethnic and racial socialization and children are more likely to internalize the values communicated. Collectively, this body of research highlights the important role of parental warmth and the parent-child relationship for understanding parents' socializing role in their children's racial attitudes. The present study examines this important potential moderator to better understand the conditions that might strengthen the connection between parent and child attitudes.

Moderation by Child Age and Sex

Children's racial attitudes show a developmental trajectory as children get older in which explicit racial biases decrease and implicit biases remain stable (Baron & Banaji, 2006; Doyle & Aboud, 1995; Raabe & Beelmann, 2011). This is likely because children learn that explicit racial biases may not be socially acceptable in all contexts (and children may be particularly motivated to mask their biases in a research context). Because color-blindness is the current socially acceptable face of racism, parents may not mask their color-blindness in the same way that children mask their racial bias. Although adults' CBRI and implicit racial attitudes are thought to

be relatively stable without exposure to a change in context or educational program, it is likely that White parents' beliefs about their children's racial awareness and corresponding socialization practices change as children become older. More research is needed to understand how White parents' socialization practices with regard to race changes with child age before hypotheses can be made about these effects.

As children become older, they are also exposed to more socializing forces, including more peers and teachers. There is evidence that these additional relationships serve as additional contexts to learn about race and develop racial attitudes. For example, aspects of the early school context such as anti-bias teaching practices, cooperative learning programs, and diversity of people and materials in the classroom can reduce children's racial bias (Aboud & Fenwick, 1999; Bigler, 1999; Casey, 2010; Derman-Sparks et al., 2015; Dessel, 2010; Gaias et al., 2018). The socializing aspect of the school context may be particularly salient for White children, as White parents often defer to school for ethnic and racial socialization (Hamm, 2001). Additionally, the strength of the role of peers as socialization agents increases as children age (Priest, Walton, White, Kowal, Baker, et al., 2014). For example, Poteat (2007) demonstrated a longitudinal peer group socialization effect on adolescents' homophobic attitudes such that members within peer groups had more similar views over time. The increased socializing influence of peers and teachers as children grow older likely weakens the strength of the association between parent and child racial attitudes, especially if messages from teachers and peers contradict those of parents.

Exploratory analyses will also be conducted to examine the potential role of children's sex. It is possible that children's sex may moderate the association between parents' attitudes and

children's racial bias. There is some evidence that boys are more susceptible to parental behavior than are girls, particularly in regard to children's externalizing behavior, self-regulation and social outcomes, including peer acceptance (Davidov & Grusec, 2006; Rothbaum & Weisz, 1994). This moderating effect has not yet been assessed with regard to the transmission of racial bias.

Present Study

The present study aims to better understand the relations between White parents' racial attitudes and their children's racial attitudes. The limited previous research in this area has found inconsistent relations between parents' and young children's racial attitudes, indicating the need to study potential moderators in addition to direct effects. Moreover, researchers studying White parents' ethnic and racial socialization practices have observed that White parents' avoid talking about race with their children. This finding has often been interpreted as evidence of parental color-blindness, however, to my knowledge, parental color-blind racial ideology has never been empirically measured in these prior studies. To address this critical gap in the research, the present study examined the following questions:

1) Are White parents' implicit racial attitudes and color-blind racial ideology (CBRI) related to their children's racial bias in explicit attitudes, implicit attitudes?

Hypothesis: Higher levels of parents' CBRI and higher levels of parent implicit prejudice will be related to higher levels of children's explicit and implicit racial attitudes.

2) How are the relations between White parents' implicit racial attitudes and color-blind racial ideology and children's racial bias moderated by the diversity of a child's friends and caregivers?

Hypothesis: Parents' racial attitudes would be less strongly related to children's explicit and implicit racial bias when there are higher levels of diversity in children's friends and caregivers, than when diversity in children's friends and caregivers is low.

3) How are the relations between White parents' racial attitudes and children's racial bias moderated by parental warmth?

Hypothesis: Parents' racial attitudes would be more strongly related to children's explicit and implicit racial bias when parental warmth is high than when parental warmth is low.

4) How are the relations between White parents' racial attitudes and children's racial bias moderated by child age and sex?

Hypothesis: Parents' racial attitudes would be more strongly related to children's explicit and implicit racial bias for younger children. Analyses with child sex will be exploratory.

Method

Participants

The present sample includes 190 White/Non-Hispanic children (46% female) between 5 and 9 years of age ($M = 7.11$ years, $SD = .94$) and their parents (mothers, N=184; fathers; N=154). There were 19 sibling-pairs in this sample. The sample is highly educated and wealthy, with 41% of mothers and 42% of fathers having earned a Bachelor's degree, and 41% of mothers and 35% of fathers having earned higher education degrees. The median family income was between $75,000 and $100,000. Although this sample represents only a specific subset of the

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population, it is informative for the present study because wealthy, well-educated White families benefit most from systems of White power and privilege.

Recruitment and Eligibility

Data were collected at two sites, in two different geographic locations in the United States (i.e., southwest and northeast). Full eligibility requirements for both sites were White children between Kindergarten and 2nd grade with no developmental delays. Recruitment strategies varied between sites. In the southwest, approximately 40% of the participants were recruited through flyers and tabling events at community locations including bookstores, children's museums, and libraries. Additionally, 20% of participants were recruited through ads placed on social media websites and sent to local afterschool programs through e-mail. Finally, participants were asked to recommend friends to the program; approximately 40% of participants at the southwest location were recruited through this snowball sampling method. All interested parents were invited to fill out an interest form that included questions about race and only White participants were enrolled in the study.

At the northeast location families were recruited through a University participant pool. Families who had previously indicated willingness to be contacted about research opportunities and had children in the desired age range were recruited. Whenever possible, families were screened for race before recruitment. However, some non-White families attended data collection. Data from these families is not included in the present analyses.

Procedure

During scheduling, families were asked to select the parental caregiver who spends the most time with the children (i.e., the primary caregiver) to attend data collection in-person.

Primary caregivers (92% mothers) and their children attended a 90 minute data collection session. Once caregiver informed consent and child assent was granted, children participated in various tasks designed to assess racial attitudes. Child direct assessments were conducted by teams of White, female undergraduate research assistants supervised by graduate students and the PI. Prior to data collection, all research assistants participated in two weeks of training after which they completed an evaluation comprised of at least one practice assessment with a volunteer child.

While children were participating in direct-assessment, primary caregivers responded to a series of questionnaires. In cases in which a caregiver came in with a sibling pair (N=19), the adult was asked to complete one questionnaire for self-reported items, and two separate questionnaires for questions about their children (one for each child). With the primary caregiver's permission, a questionnaire was also sent to a secondary caregiver (90% fathers). The questionnaire sent to a secondary caregiver was a shortened version of the primary caregiver questionnaire, thus, not all variables are available from both caregivers. Whenever the variable was available for both caregivers, data are analyzed at the mother and father level. Otherwise, primary caregiver reports are used. Data to be included in the present study are mothers' and fathers' reports of color-blind racial attitudes and parental warmth, assessment of primary parent implicit racial attitudes, primary parent reports of warmth, demographics and racial/ethnic diversity of children's friendships and caregivers, and direct assessment of children's implicit and explicit racial attitudes and social desirability. Families at both sites were compensated $40 for the campus visit and $10 upon submission of the secondary caregiver questionnaire. Children were also given small prizes throughout the assessment.

Measures

Parents' Reports

Primary caregivers' reports of demographic information such as education, income, and child age/sex were used as covariates. Mother education and father education were reported on an 8-point scale (1 = some high school, no diploma; 2 = high school diploma or GED; 3 = some college but no degree; 4 = high school diploma plus technical training; 5 = two year degree; 6 = Bachelor's Degree; 7 = Master's Degree; 8 = PhD, MD, JD, or other doctorate). Family income was reported on a 7-point scale (1 = less than $15K; 2 = $15-30K; 3 = $30-45K; 4 = $45-60K; 5 = $60-75; 6 = $75-100K; 7 = over $100K). Both income and education variables were treated as separate continuous variables in the analyses.

Color-Blind Racial Attitudes. Mothers' and fathers' color-blind racial attitudes were measured using the 20-item Color-Blind Racial Attitudes Scale (CoBRAS; Neville et al., 2000). Parents selected how much they agreed with a series of statements on a 6-point Likert scale, with higher values indicating stronger agreement. The present study utilized three subscales of the questionnaire which tap different dimensions of unawareness: Unawareness of Blatant Racial Issues (6 items; α = .81 - .83 ; e.g., "racial problems in the U.S. are rare, isolated situations"), Unawareness of Institutional Discrimination (7 items; α = .84 - .86; e.g., "English should be the only official language in the U.S."), and Unawareness of Racial Privilege (7 items; α=.88 - .90; e.g., "White people in the U.S. have certain advantages because of the color of their skin"). In previous research, higher levels of color-blind racial ideology have been related to higher levels of racial intolerance and prejudice, demonstrating validity of the measurement (Neville et al., 2013; Neville et al., 2000).

Implicit Racial Attitudes. Primary caregivers' implicit racial attitudes were measured using the computerized Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998). Participants were seated in front of a computer and shown a total of five blocks of stimuli. In the first block, participants were asked to categorize words as either positive or negative using two different keys on the keyboard. Next, participants were asked to categorize pictures of adult faces as either White or Black using the same two keyboard keys. In the third block, participants were asked to categorize both words and faces such that they pressed the same key for positive words and White faces and a different key for negative words and Black faces (i.e., the stereotype congruent condition). The fourth block presented just faces again, but the response keys were reversed as compared to the first three blocks. The final block presented both faces and words again but this time one key was for positive words and Black faces and the other was for negative words and White faces (i.e., stereotype incongruent condition). Stereotype congruent and incongruent conditions were counterbalanced across participants. Latency to correct categorization was recorded for each trial. The final IAT score was calculated using the improved scoring paradigm as reported in Lane, Banaji, Nosek, & Greenwald (2007) and reflects a latency difference for the stereotype congruent and stereotype incongruent conditions such that a more positive value indicates a higher preference for Whites.

Children's Cross-Race Friends and Pre-K Caregivers. Primary caregivers' reports were used to assess racial/ethnic diversity in children's friendships and previous caregivers. Following an approach that has been used in previous work, the primary caregiver was prompted to think of up to four of the child's closest friends and report on each friend's race/ethnicity (Eisenberg et al., 2009). This method of collecting information about children's friends and

relationships is widely used and considered to yield more accurate estimates than asking directly about the number of outgroup friends (Davies et al., 2011). Primary caregivers were also asked to use a Likert scale to report approximately how many of their child's non-relative caregivers before Kindergarten (e.g., regular babysitters, nannies, preschool teachers) were of a different race/ethnicity than their child. The response options for this one item ranged from 1 (very few/almost none) to 4 (more than half/most). Both of these variables were highly zero-inflated with 41% of children having no non-White friends and 58% of children having very few/almost no non-White pre-K caregivers. Because the highly skewed variables violated key assumptions of the analyses, these variables were dichotomized such that each variable had two values. For friends, the two dichotomized groups were: no non-White friends versus at least one non-White friend. For caregivers, the two dichotomized groups were: almost no non-White caregivers versus few or more non-White caregivers.

Parental Warmth. Parental warmth was assessed for mothers, fathers, and primary caregivers using the 11-item Warmth Subscale of the Parenting Styles and Dimensions Questionnaire (PSDQ; α = .80 - .82; Robinson, Mandleco, Olsen & Hart, 2001). Parents were asked to rate how often they exhibit a series of behaviors on a scale of 1 (Never) to 5 (Always). Example items include, "I give comfort and understanding when my child is upset" and "I am responsive to my child's feelings or needs."

Parental Social Desirability. Parents' social desirability was measured for mothers, fathers, and primary caregivers using an adapted, 10-item version of the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1964; Eisenberg, Fabes et al., 1989; Eisenberg, Schaller, et al., 1988). Parents were asked to respond (yes = 1; no = 0) to a series of statements (e.g., "I

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have never intensely disliked everyone). Parents' responses were averaged across all statements with a higher composite score indicating higher levels of social desirability ($\alpha = .71$).

Child Direct Assessment

Explicit Racial Bias. Children's explicit racial bias was measured using videos and a computer-based task.

Social Inclusion Bias. Children's explicit social inclusion racial bias was measured by asking children to watch two sets of short video clips depicting a mild injustice toward a Black or White child. Presentation of each of the four videos was separated by other study tasks with videos within a set being separated by one or two tasks and the two sets being separated by more tasks. The two videos in each set differed from each other slightly but were scripted to be matched for emotional content. The first set of videos included "Art Project" and "Uh Oh OJ". In "Art Project," a child shows a peer his/her art project to be displayed at a school art show. Another child, overhearing the conversation, teases the child and ruins the project by pouring milk on it. A similar film, "Uh Oh OJ" depicts a child having lunch with a peer. Another child, overhearing their conversation, teases the child and pours orange juice on the child's shirt. The second set of films included "New Shirt" and "Haircut." In these films, a child is teased by two children for wearing an unusual shirt ("New Shirt"), and a child is teased by another child about his/her new haircut ("Haircut"). In response to the injustices in all of the films, the victim in the film expressed sadness.

The perpetrator of the injustice in each video was always White, and only race of the victim varied. Sex of all actors in the videos was matched to that of the study child. There were multiple child actors used across each video set. That is, for set 1, we used 6 male actors and 6

female actors (3 black, 3 white) and for set 2, we used 5 male actors and 5 female actors (2 black, 3 white). Given the number of actors used, we reduced the concern that results were due to individual differences in attractiveness of the actors. Further, children viewed counterbalanced orders of videos to minimize the potential effect of actor characteristics. To control for order effects, the presentation of the Black and White clips and the presentation of storylines were counterbalanced across all participants; thus, there were four possible orders in which the children watched the videos.

Following the presentation of each video, 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 in the video, how much they want to sit next to the victim, and how much they want to play with the victim. To assist children in using this scale, smiley faces were used as a reference for each of the possible response options (ranging from a frowny face to a large smiley face) and children were shown a photograph of the victim to remind them of the individual.

Before bias scores were calculated, preliminary analyses were conducted to assess whether the videos were equivalent as expected and whether there were potential order effects. Paired samples *t*-tests were used to examine whether means for each social inclusion variable (i.e., play, sit, like) were the same across paired videos for each of the two sets, collapsing across race of the victim. There were no mean differences on any of the six variable pairs tested, supporting the assumption that the paired videos were indeed equivalent.

Social inclusion bias scores were computed for each item (e.g., sit, play, like) by subtracting child ratings of the Black victim from child ratings of the White victim. The three difference scores were averaged together for each set of videos to create two overall social

inclusion bias scores (video set 1, video set 2) which reflect White preference in social inclusion. Paired samples *t*-tests indicated that there were no significant mean differences in bias scores based on which race of victim the child saw first or based on the order of storylines presented.

Positive and Negative Behavioral Attributions. Children's behavioral attributions were examined using a computerized task (Dunham, Baron, & Carey, 2011). Children saw a series of pairs of children: one White child and one Black child. Children were told that they, "would hear about something that somebody did" and their job was to determine which child did it. The child then was presented with a set of six statements about children's behaviors. Half of the statements were positive behaviors (e.g., "Who helped their friend at school) and the other half were negative behaviors (e.g., "Who broke their friend's toy on purpose?"). There were also neutral distractor statements dispersed throughout. Scores were created to reflect the percentage of positive and negative attributions made to Black children. Gender of the target children in each pair was completely randomized. Because this task was the most explicit racial attitude assessment in our battery, it was administered last for every child. In the original study (Dunham et al., 2011), children's positive group evaluations of their own group were positively correlated with two other measures of explicit attitudes, although this study was designed to compare minimal group affiliations and not race.

Implicit Racial Bias. Children's implicit racial bias was measured using a direct assessment game-like task and the computerized implicit association test.

Social Distance. Child social distance preference 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 nine houses in a straight line with the

middle house shaded blue and labelled "your house." Children were then given a set of pictures of families that are 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 from the child's house was calculated. A social distance bias score was calculated by subtracting average distance of the White families from the average distance of the Black families such that a higher bias score indicates a larger preferred social distance for Black families.

Researchers using this measure have found that racial/ethnic majority children place families of their own race/ethnicity closer than families of minority racial/ethnic groups (Griffiths & Nesdale, 2006). Additionally, in adult samples, distance was related to components of participants' racial/ethnic identity such that majority-group participants who had a stronger preference for their own group placed families of their own race/ethnicity closer than families of other races/ethnicities (Valk & Karu, 2001).

Implicit Association Test. A child-adapted version of the adult IAT was administered to children as a measure of implicit racial attitudes (Dunham et al., 2006, 2008, 2011). The child IAT was administered at a computer, and children were trained to use two color-coded response buttons to categorize what they see. Initial trials taught children to categorize children's faces as Black or White and to categorize smiley faces and sad faces. After children learned to categorize Black and White faces and smiley faces, the paired trial blocks begin. These trial pairs involved categorizing Black faces and sad faces by using a single left response button and White faces and smiley faces using a single right response button. In the second trial block, the images were

switched so that Black faces and smiley faces were paired together and White faces and sad faces are paired. The assumption was that the preferred pairings would result in faster and more accurate responses. The effect size (D) is the standardized difference in the response latencies across the two test trials and is thought to be a measure of the strength of the implicit bias such that a higher score represents higher White preference.

Social Desirability. Children's social desirability was measured using 14-items of a larger child social desirability scale (Crandall et al., 1965). This shortened version has been successfully used in prior studies with children of this age (Eisenberg, Fabes et al., 1989; Eisenberg, Schaller et al., 1988). Children were read a series of statements and told that for each one they can reply yes or no. Children were given the option of replying verbally or pointing to a green checkmark labeled "yes" or an empty red box labeled "no." Examples of items are, "have you ever felt like saying unkind things to a person" and, "do you sometimes feel like making fun of other people." Items were scored such that a more socially desirable answer received a value of 1 and a less socially desirable response received a 0. Scores across all 14 items were averaged together, $\alpha = .71$.

Results

Data Screening

Means, standard deviations, and minimum and maximum values for each continuous variable were examined and are presented in Table 1 along with frequencies for categorical variables. Skew values ranged from -.92 to .83 and kurtosis values from -1.06 to 4.96; thus, all variables were within normal bounds (Chou & Bentler, 1995; Curran, West, & Finch, 1996). A screen was conducted to identify outliers for all continuous variables. Outliers were defined as

individual values that differed from the overall mean by +/- 3.29 standard deviations. One outlier

existed for both the primary parent and child IAT variables and the blatant racism subscale of the

CoBRAS for both mothers and fathers. Variables with outliers were transformed using

winsorization in which outlier values were adjusted to be less extreme while maintaining the

rank order of the scores (Reifman & Keyton, 2010) and sensitivity analyses were conducted at all

steps of analyses. Sensitivity analyses indicated no change in patterns among variables or

significant change in fit when using the winsorized rather than the original variables; thus, the

reported analyses include the original, untransformed variables.

Preliminary Analyses

Gender Mean Differences

Gender differences among study variables were examined using independent samples t-

tests for continuous variables and chi-squared tests for categorical variables. Reported t-test

values were adjusted as appropriate for violation of the assumption of equality of variances as

indicated by Levene's test. Girls and boys significantly differed from each other only for social

inclusion bias (video set 2). Specifically, boys demonstrated a higher level of same-race social

inclusion preference ($M = .25$, $SD = .75$) than did girls ($M = -.06$, $SD = .74$), $t(185) = -2.80$, p

$<.01$.

Site Mean Differences

Data collection location (i.e., site) differences among study variables were examined

using independent samples t-tests for continuous variables and chi-squared tests for categorical

variables. Reported t-test values were adjusted as appropriate for violation of the assumption of

equality of variances as indicated by Levene's test. Significant site differences were found for

social distance bias and for both intergroup contact variables. Specifically, children in the Southwest location had significantly higher levels of social distance bias (M = .36 SD = .86) than did children in the Northeastern location (M = -.48, SD = 1.02), $t(167) = 6.00$, p <.001. There was also a significant association between site and children's non-white friends such that children in the Southwest had a higher likelihood of having at least one non-White friend [$X^2(1)$> = 7.50, p = 0.01] and more non-White pre-K caregivers [$X^2(1)$> = 6.90, p = 0.01] than did children in the Northeast.

Grade Mean Differences

Grade differences among categorical variables were examined using chi-squared tests and for continuous study variables using one-factor ANOVAs and Tukey HSD post-hoc analyses where significant differences emerged. There was a significant grade effect for child social desirability (F = 23.0, p < .001). Specifically, social desirability significantly differed at the p < .001 level among each grade pair, with children in higher grades demonstrating lower levels of social desirability than children in lower grades (Ms=.74, .63, .52, for Kindergarten, 1st, and 2nd grades, respectively). Additionally, there was a marginal grade effect for children's positive attributions toward Black children (F = 2.69, p = .07), such that second graders attributed a marginally higher percentage of positive attributions to Black children (M = .39, SD = .25) than did 1st graders (M = .48, SD = .23; p = .07).

Mean Differences between Mothers and Fathers

Mean differences between mother and father variables were examined using independent samples t-tests for continuous variables and chi-squared tests for categorical variables. Fathers reported significantly higher levels of color-blind racial attitudes than mothers on all three

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subscales of the CoBRAS. Specifically, fathers scored significantly higher on the denial of blatant racism subscale ($M = 2.50$, $SD = .88$) than did mothers [$M = 2.03$, $SD = .79$; $t(148) = -6.79$, $p < .001$]. Fathers also scored significantly higher on the denial of institutional discrimination sub-scale ($M = 3.57$, $SD = .98$) than did mothers [$M = 2.91$, $SD = .94$; $t(147) = -8.92$, $p < .001$]. Finally, fathers scored significantly higher on the denial of racial privilege sub-scale ($M = 3.73$, $SD = 1.19$) than did mothers [$M = 3.39$, $SD = 1.13$; $t(148) = -3.91$, $p < .001$]. Fathers also reported significantly lower levels of parental warmth than did mothers [$M_{father} = 4.00$; $M_{mother} = 4.26$, $t(150) = 5.93$, $p < .001$].

Correlations

Zero-order correlations among all study variables were examined and are presented in Table 2.

Correlations among Parental Predictors. All three subscales of the CoBRAS were significantly positively correlated within reporter [$r(184) = .70$ to $.71$ for mothers and $r(149) = .73$ to $.75$ for fathers] and between mothers and fathers [$r(146) = .48$ to $.58$]. Primary parent IAT score was also positively related to all CoBRAS subscales such that that more White preference in primary parent implicit attitudes was related to higher levels of color-blind racial attitudes for both mothers [$r(166) = .23$ to $.28$] and fathers [$r(134) = .21$ to $.29$].

Correlations among Child Outcomes. Children's social inclusion bias in the first and second set of videos were positively related to each other [$r(181) = .19$]. No other measures of child racial attitudes (e.g., behavioral attributions, social distance bias, IAT) were significantly correlated with each other.

Correlations between Parental Predictors and Child Outcomes. Study children's

social inclusion bias in the first set of video scenarios was positively related to all three subscales

of mothers' CoBRAS [$r(180) = .16$ to .25] and fathers' CoBRAS [$(146) = .19$ to .33]. Children's

social inclusion bias in the second set of video scenarios was significantly positively correlated

only with mothers' denial of institutional discrimination [$r(181) = .15$] and denial of racial

privilege [$r(181) = .17$] subscales of the CoBRAS. Neither mother nor fathers' CoBRAS scores

were significantly related to other aspects of children's racial bias. Primary parent IAT score was

significantly related to children's negative attributions toward Black children [$r(170) = -.17$] but

no other child racial attitude outcome variables.

Correlations between Covariates and Primary Study Variables. Child social

desirability was significantly positively related to child IAT scores [$r(186) = .15$] such that more

White favoritism on the IAT was related to higher levels of social desirability. Child social

desirability was also significantly negatively related to child age [$r(186) = -.43$]. Contrary to

expectations, mothers' social desirability was significantly related to scores on the denial of

racial privilege subscale of the CoBRAS [$r(184) = .16$]) and to mothers' reports of their own

maternal warmth [$r(186) = .24$]. Fathers' social desirability was unrelated to any variables of

interest. Mother education was negatively related to all three subscales of the CoBRAS for

mothers [$r(183) = -.16$ to $-.30$] and father education was negatively related to the denial of racial

privilege [$r(150) = -.24$] subscales for fathers. Family income was unrelated to any variables of

interest.

Missing Data

All subsequent analyses were conducted in *Mplus* 8. The amount of missing data for

mother and child variables was at most 3%. Data missing for these variables was due to individual participant non-response to items or child refusal to participate in certain assessments. Because missing data for mother and child variables was so low, no further missing data analyses were conducted on these variables, data were considered missing completely at random (MCAR), and full information maximum likelihood estimation (FIML) was used to account for missing data wherever it was possible (i.e., in the main effects and multiple-group analyses). Primary parent IAT was missing for 9% of participants due to equipment failure that affected assessments at random. Independent sample t-tests indicated that primary caregivers who were missing IAT scores did not systematically differ on demographic or other study variables. Thus, I proceeded with the assumption that data were MCAR and full information maximum likelihood estimation (FIML) was used to account for missing data for all IAT models (Enders, 2010).

Missing data for father variables was between 18-20%. Data for fathers were missing due to paternal non-response to electronic questionnaires sent to participants' personal email addresses or in cases where mothers did not provide father contact information. Independent sample t-tests indicated that fathers who were missing data had children with significantly higher social inclusion bias in the first set of videos ($M_{missing} = .20, M_{notmissing} = -.09; t(184) = -2.22, p = .03$). Fathers who were missing data also had significantly lower levels of education ($M_{missing} = 5.26, M_{notmissing} = 6.01; t(45.3) = 2.54, p = .01$; reported t-test parameter adjusted for Levene's test for equality of variances). Because fathers' data was systematically related to other variables in the dataset, data are not missing completely at random. Although there is no systematic test for the assumption, because data were related to a complete variable in the dataset, (MAR; Enders, 2013; Rubin, 1976), the related variable was included in all analyses, and FIML was used to

account for missing data. Main effects and multiple-group analyses were conducted using both FIML and listwise deletion and the pattern of effects as well as significance of parameters remained unchanged.

Although FIML was used in main effects and multiple-group analyses, models that included latent-variable interactions do not have FIML available as an estimation strategy and, for these, listwise deletion is used for all missing data. This decision applies to analyses of moderation of relations between parental color-blind attitudes and child attitudes by parental warmth and by child age.

Color-Blind Racial Attitudes Measurement Models

Color-blind racial attitudes measurement models were estimated for mothers and fathers separately. First, a 3-factor solution was tested in which each of the 20 items of the CoBRAS loaded onto their respective latent factors for the three known subscales of the CoBRAS assessment. Model fit was evaluated using the chi-square tests of model fit, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root-mean-square residual (SRMR). Models were considered acceptable if they had non-significant chi-squared test values, CFI values greater than .95, RMSEA less than .06, and SRMR values below .08 (Browne & Cudeck, 1993; Hu & Bentler, 1999). Model fit for the 3-factor solution was not acceptable for either the mother model [χ^2 (167) = 413.4, $p < .001$; CFI = 0.87; RMSEA = .09, 90% CI [.08, .10]; SRMR = .06] or father model [χ^2 (167) = 376.9, $p < .001$; CFI = 0.88; RMSEA = .09, 90% CI [.08, .10]; SRMR = .07]. Poor model fit in this case might be in part due to the amount of indicators and the relatively low sample size; thus, models with fewer indicators were evaluated next.

Next, a 1-factor measurement model was estimated in which each of the three subscales of the CoBRAS were indicators of one single latent factor. A 1-factor latent variable with three indicators is just identified and there are no fit indices for this model. The measurement model was also estimated with the one latent factor and covariances with all other variables to be included in the final model. This measurement model demonstrated good model fit for both mothers [χ^2 (20) = 25.1, p = .20; CFI = 0.98; RMSEA = .04, 90% CI [.00, .08]; SRMR = .04] and fathers [χ^2 (20) = 25.5, p = .18; CFI = 0.98; RMSEA = .4, 90% CI [.00, .08]; SRMR = .03]. Because these two models demonstrated good global and local fit, all subsequent analyses with CoBRAS data used the one-factor latent variable model.

Finally, measurement invariance across groups was established for the three dichotomous moderators used in the analysis (i.e., non-white friends, non-white caregivers, and child sex) to ascertain if the color-blind racial attitudes latent variables represent the same construct across groups. This was done in order to ensure that for the moderators the latent factor equally represented the same underlying construct in each of the groups before testing for structural differences between groups. The previously established measurement model was estimated with each grouping variable specified and all loadings and intercepts unconstrained (baseline, configural model). The configural model was then compared with a model in which all factor loadings were constrained across groups (metric model). Satorra-Bentler chi-squared difference testing was used to compare difference in fit between the two models, with a non-significant chi-squared test indicating that the more restrictive model is appropriate for the data and that factor loadings operate similarly across groups (weak factorial invariance). Next, a scalar model in which intercepts of the latent indicators were constrained to be equal across groups was

compared to the metric model. If the chi-squared difference test comparing the metric and scalar models was not significant, the model demonstrated strong factorial invariance, suggesting that the latent factor represents the same underlying constructs across groups and that moderation by group can be tested. Strong factorial invariance was established for all three dichotomous moderators of interest (see Table 3 for comparisons of model fit).

Direct Relations between Parental Color-blind Attitudes and Child Racial Attitudes

Next, direct relations between mothers' and fathers' color-blind attitudes and child racial attitudes were assessed in two separate models by fitting structural paths from the color-blind racial attitudes latent variable to all six observed child outcomes individually. Control variables (parental education, income, child social desirability, parental social desirability, data collection site, order of videos) were added to the model by first specifying all control variables onto each relevant variable in the model, and then, for parsimony, retaining only those which were at least marginally significant. The resulting models demonstrated excellent model fit for both mothers: χ^2 (48) = 51.1, p = .35; CFI = .99; RMSEA = .00, 90% CI [.00, .05]; SRMR = .04 and fathers: χ^2 (48) = 50.4, p = .38; CFI = .99; RMSEA = .02, 90% CI [.00, .05]; SRMR = .04.

The maternal model (Figure 2) accounted for 9% of the variance in social inclusion bias in the first set of videos, 3% of the variance in social inclusion bias in the second set of videos, <.1% of the variance in negative attributions toward black children, .1% of the variance in positive attributions toward Black children, 18% of the variance in social distance bias, and 2% of the variance in child IAT score; these corresponded with small or very small effect sizes. The paternal model (Figure 3) accounted for 11% of the variance in social inclusion bias in the first set of videos, 3% of the variance in social inclusion bias in the second set of videos, .4% of the

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variance in negative attributions toward black children, 1% of the variance in positive

attributions toward Black children, 18% of the variance in social distance bias, and 2% of the

variance in child IAT score, corresponding to small or very small effect sizes.

Children's social inclusion bias in the first set of videos was positively predicted by both

mother color-blind racial attitudes ($\beta = .27$, $p < .001$) and father color-blind racial attitudes ($\beta =$

.31, $p < .001$). Mothers' color-blind racial attitudes also marginally predicted children's social

inclusion bias in the second set of videos ($\beta = .13$, $p = .08$). No other direct relations among

parental color-blind attitudes and child racial attitudes were significant.[1] To address issues of

potential low power due to a complex model and a relatively small sample size, analyses were

also conducted with each child outcome separately; patterns of significance for mother and father

models remained identical to those of the full model.

Direct Relations between Primary Parent IAT and Child Racial Attitudes

Direct relations between primary parent IAT score and child racial attitudes were

assessed using a path model with structural paths from parent IAT to all six observed child

outcomes individually. As before, significant and marginally significant control variables were

retained in the final model (see Figure 4). The model had good fit $\chi^2 (19) = 12.6$, $p = .86$; CFI =

1.00; RMSEA = .00, 90% CI [.00, .04]; SRMR = .03 and accounted for 2% of the variance social

inclusion bias in the first set of videos, 4% of the variance in social inclusion bias in the second

set of videos, 3% of the variance in negative attributions toward black children, <.1% of the

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[1] Due to potential bias in results due to sibling pairs, analyses were conducted both with the full sample
(N = 190), and with a sample that includes only one child per family (N = 171; randomly selected).
Patterns of effects were unchanged when siblings were removed, although the significance of some
marginal findings did change. Results presented here are those of the full sample, to maximize power and
retain as much data as possible.

variance in positive attributions toward Black children, 18% of the variance in social distance bias, and 2% of the variance in child IAT score; these corresponded with small or very small effect sizes. Primary parent IAT significantly predicted children's negative attributions toward Black children (β = -.16, p = .03) and was marginally related to social inclusion bias in the second set of videos (β = -.14, p = .08). No other direct relations among primary parent IAT and child racial attitudes were significant.

Two additional post hoc analyses were conducted. First, to address issues of potential low power due to a complex model and a relatively small sample size, analyses were also conducted with each child outcome separately. When outcomes were examined individually, primary caregiver implicit white preference significantly negatively predicted children's social inclusion bias in the second set of videos (β = -.16, p = .04). All other patterns of significance remained the same as in the full model. Second, post-hoc analyses explored prediction by using only mothers' (rather than primary parent) implicit racial attitudes (N = 161) and found identical patterns of significance as with prediction by the full sample of primary caregivers.

Moderation by Non-White Child Friends and Pre-K Caregivers

Moderation of the relations between parental attitudes and children's racial attitudes by whether a child had non-white friends or pre-K caregivers was assessed using a series of multiple-group models. The base models for these multiple-group analyses were those established in the direct-effects analyses using a latent color-blind racial attitudes variable predicting all six child outcomes simultaneously. Satorra-Bentler chi-squared difference testing was used to compare difference in fit between a model in which all structural paths were unconstrained across the groups of interest and a nested model in which all structural paths of

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interest were constrained. In cases in which the constrained model demonstrated a significant overall worsening of fit, paths were freed one at a time and improvement in fit over the fully constrained model was evaluated to investigate which paths might differ by the moderator.

Maternal Color-Blind Racial Attitudes Moderation

When comparing the constrained and unconstrained models, the constrained model did not show a significant worsening in fit over the model with unconstrained paths for either of the moderators as measured by a chi-squared difference test [child non-white friends: $\triangle\chi^2$ (6) = 3.14, p = .79; non-white pre-K caregivers: $\triangle\chi^2$ (6) = 3.14, p = .79].

Post hoc analyses explored moderation by whether study children had at least one Black friend. Only 36 study children had at least one Black friend; thus, the following analyses should be interpreted with great caution. Additionally, due to the small sample size and uneven group sizes, multiple group models on the whole model with all six child outcomes did not converge. Instead, moderation of relations was examined for child outcomes individually in a series of multiple-group models following the same steps described previously. In this series of analyses, the constrained model was marginally or significantly worse than the unconstrained model for relations between maternal color-blindness and four out of the six child outcomes.

First, the constrained model fit marginally worse than the unconstrained model in predicting social inclusion bias in the first [$\triangle\chi^2$ (1) = 2.89, p = .09] and second set [$\triangle\chi^2$ (1) = 3.83, p = .05] of videos. The unconstrained models suggest that mother color-blind racial attitudes significantly positively predicted social inclusion bias in the first (β = .29, p < .001) and second set (β = .24, p = .03) of videos only when children did not have any Black friends, but maternal color-blindness was unrelated to children's social inclusion bias when children had at

least one Black friend ($\beta = .04$, $p = .15$; $\beta = -.18$, $p = .32$, in the first and second sets of videos, respectively).

Second, the constrained model fit at least marginally worse than the unconstrained model in predicting both positive [$\triangle\chi^2$ (1) = 3.90, $p = .04$] and negative [$\triangle\chi^2$ (1) = 3.39, $p = .07$] attributions toward Black children. The unconstrained models suggested that mother color-blind racial attitudes significantly negatively predicted positive attributions ($\beta = -.32$, $p = .05$) and significantly positively predicted negative attributions ($\beta = .32$, $p = .05$) toward Black children only when children had at least one Black friend, but maternal color-blindness was unrelated to children's positive ($\beta = .07$, $p = .43$) and negative ($\beta = -.03$, $p = .71$) attributions when children had no Black friends.

Paternal Color-Blind Racial Attitudes Moderation

When comparing the constrained and unconstrained models for the model grouping by children's non-white friends, the constrained model did not show a significant worsening in fit over the model with unconstrained paths: $\triangle\chi^2$ (6) = 2.13, $p = .91$. However, when comparing the constrained and unconstrained models for non-white pre-K caregivers, the constrained model showed a significant worsening in fit over the model with unconstrained paths $\triangle\chi^2$ (6) = 12.9, $p = .04$. Follow-up analyses freeing one path at a time suggested that relations between fathers' color-blind racial attitudes and children's social inclusion bias in the first set of videos and children's IAT scores varied as a function of whether children had non-white pre-K caregivers. Specifically, father color-blind attitudes positively predicted children's social inclusion bias in the first set of videos when children had almost no non-White pre-K caregivers ($\beta = .43$, $p < .001$) but not when children had few or more non-White pre-K caregivers ($\beta = .13$, $p = .42$).

Conversely, father color-blind attitudes negatively predicted children's implicit association test score when children had few or more non-White pre-K caregivers ($\beta = -.28$, $p = .03$) but not when children had almost no non-White pre-K caregivers ($\beta = .05$, $p = .63$). The final partially constrained model (see Figure 5) had good fit: $\chi^2 (104) = 119.0$, $p = .15$; CFI = .96; RMSEA = .04, 90% CI [.00, .07]; SRMR = .08.

As with the mother models, follow-up post hoc analyses explored moderation by whether study children had at least one Black friend. Again, due to model non-convergence, moderation of relations was examined for child outcomes individually in a series of multiple-group models. In this series of analyses, the constrained model was marginally significantly worse than the unconstrained model for relations between paternal color-blindness and one child outcome. Specifically, the constrained model fit marginally worse than the unconstrained model in predicting social inclusion bias in the first set of videos [$\triangle\chi^2 (1) = 2.88$, $p = .09$]. As with the mother model, father color-blind racial attitudes significantly positively predicted social inclusion bias in the first set of videos ($\beta = .34$, $p < .001$) only when children did not have any Black friends, but paternal color-blindness was unrelated to children's social inclusion bias when children had at least one Black friend ($\beta = .02$, $p = .92$).

Primary Caregiver IAT Moderation

When comparing the constrained and unconstrained models, the constrained model did not show a significant worsening in fit over the model with unconstrained paths for child non-white friends [$\triangle\chi^2 (6) = 3.45$, $p = .75$] or non-white pre-K caregivers [$\triangle\chi^2 (6) = 5.24$, $p = .51$]. Post-hoc analyses explored prediction by only mothers' implicit racial attitudes (N = 161) and also found no evidence of moderation by child non-white friends or pre-K caregivers.

As with the parental color-blindness models, additional post hoc analyses explored moderation by whether study children had at least one Black friend. Again, due to model non-convergence, moderation of relations was examined for child outcomes individually in a series of multiple group models. In this series of analyses, the constrained model was marginally significantly worse than the unconstrained model for relations between primary caregiver implicit White preference and three child outcomes. Specifically, the constrained model fit marginally worse than the unconstrained model in predicting both positive [$\triangle\chi^2$ (1) = 3.62, p = .06] and negative [$\triangle\chi^2$ (1) = 2.86, p = .09] attributions toward Black children. The unconstrained models suggested that primary caregivers' implicit White preference significantly positively predicted positive attributions (β = .34, p = .03) and significantly negatively predicted negative attributions (β = -.20, p = .01) toward Black children only when children had at least one Black friend, but primary caregiver implicit White preference was unrelated to children's positive (β = -.03, p = .76) and negative (β = -.04, p = .23) attributions when children had no Black friends. Additionally, the constrained model fit worse than the unconstrained model in predicting children's implicit white preference [$\triangle\chi^2$ (1) = 2.93, p = .09]. In this case, primary caregiver implicit White preference significantly negatively predicted child implicit White preference (β = -.32, p = .04) only when children had at least one Black friend, but primary caregiver implicit White preference was unrelated to children's implicit White preference (β = .01, p = .90) when children had no Black friends. Further analyses explored prediction of individual outcomes by only mothers' implicit racial attitudes (N = 161) and also found identical patterns of moderation by child Black friends.

Moderation by Parental Warmth

      Moderation of the relations between parental attitudes and children's racial attitudes by parental warmth was evaluated by adding an interaction term to each direct effects model. For the maternal and paternal color-blind racial attitudes models, a latent interaction term was calculated using the latent moderated structural equations method (LMS; Klein & Moosbrugger, 2000) utilizing the XWITH command in *Mplu*s 8 to multiply the latent color-blind attitudes variable by mean centered mother or father warmth (as appropriate for the respective models). The LMS method does not produce traditional global model fit indices thus as recommended (Maslowsky et al., 2015), fit was first assessed for the model including the predictor and the moderator but no interaction. Fit for this baseline model was good for both mothers [χ^2 (54) = 58.6, p = .31; CFI = .99; RMSEA = .02, 90% CI [.00, .05]; SRMR = .04] and fathers [χ^2 (54) = 67.5, p = .10; CFI = .96; RMSEA = .04, 90% CI [.00, .06]; SRMR = .06].

      To test the interaction, child racial attitude outcomes were predicted from the mother/father color-blind racial attitudes latent variable, centered mother/father warmth, and the interaction between the two. Significant and marginal control variables were retained. For the moderation of the association between primary caregiver IAT score and child racial attitudes, all variables were first mean centered, then an interaction term was computed by multiplying centered primary caregiver IAT with primary caregiver warmth. The interaction term and centered primary caregiver IAT score were added to the model and significant and marginal control variables were retained. Fit indices suggest that this model demonstrated good global fit: χ^2 (24) = 20.4, p = .68; CFI = 1.00; RMSEA = .00, 90% CI [.00, .05]; SRMR = .03.

Maternal Color-Blind Racial Attitudes Moderation

The maternal model (Figure 6) accounted for 11% of the variance in child social

inclusion bias in the first set of videos, 3% of the variance in child social inclusion bias in the

second set of videos, 2% of the variance in negative attributions toward black children, .2% of

the variance in positive attributions toward Black children, 24% of the variance in social distance

bias, and 5% of the variance in child IAT score; these corresponded with small or very small

effect sizes. Parameter estimates suggested that there is a significant interaction between

mothers' color-blind attitudes and warmth in predicting children's social distance bias ($\beta = .21$, p

$= .001$) and a marginal interaction predicting social inclusion bias in the first set of videos ($\beta =$

$.13$, p $= .09$)[2]. No other interactions were significant. Simple slopes (Figure 7) were probed for

the significant interaction at 1 standard deviation above and below mean levels of maternal

warmth. Maternal color-blind attitudes significantly predicted child street bias at low ($\beta = -.29$, p

$< .001$), but not average ($\beta = -.08$, $p = .23$) or high ($\beta = .14$, $p = .17$) levels of maternal warmth.

At high levels of maternal warmth, children's level of social distance bias was relatively higher

than other children's, regardless of maternal color-blind ideology. Maternal warmth significantly

predicted higher levels of children's social distance bias ($\beta = .36$, $p < .001$) and marginally

significantly predicted lower levels of children's implicit White preference ($\beta = -.19$, $p = .07$).

Paternal Color-Blind Racial Attitudes Moderation

The paternal model (Figure 8) accounted for 11% of the variance in child social inclusion

bias in the first set of videos, 12% of the variance in child social inclusion bias in the second set

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[2] Exploratory follow-up analyses (Figure 15) indicated that maternal color-blind attitudes significantly predicted social inclusion bias in the first set of videos at average ($\beta = .28$, $p < .001$) and high ($\beta = .41$, p $<.001$) levels of maternal warmth but only marginally predicted ($\beta = .13$, $p = .09$) at low levels of maternal warmth.

of videos, 1% of the variance in negative attributions toward black children, 2% of the variance in positive attributions toward Black children, 23% of the variance in social distance bias, and 5% of the variance in child IAT score; these corresponded with small or very small effect sizes. Parameter estimates suggested that there is a significant interaction between fathers' color-blind attitudes and warmth in predicting children's social inclusion bias in the second set of videos (β = -.20, p = .004). No other interactions were significant. Simple slopes (Figure 9) were probed for the significant interactions at 1 standard deviation above and below mean levels of paternal warmth. Fathers' color-blind attitudes significantly predicted child social inclusion bias in the second set of videos at low (β = .41, p = .002) and average (β = .21, p = .01) and but not high (β = .01, p = .92) levels of fathers' warmth. As with mothers' warmth, at high levels of father warmth, children's social inclusion bias was relatively higher than children whose fathers had average or low levels of warmth. There were no significant direct effects of paternal warmth on child outcomes.

Primary Caregiver IAT Moderation

The primary caregiver IAT model (Figure 10) accounted for 2% of the variance in child social inclusion bias in the first set of videos, 5% of the variance in child social inclusion bias in the second set of videos, 3% of the variance in negative attributions toward black children, 2% of the variance in positive attributions toward Black children, 20% of the variance in social distance bias, and 3% of the variance in child IAT score; these corresponded with small or very small effect sizes. No interactions were significant but there was a marginal interaction between primary caregivers' implicit racial attitudes and warmth in predicting children's social inclusion

bias in the second set of videos (β = .14, p = .08).[3] Primary caregivers' warmth directly predicted higher levels of child social distance bias (β = .15, p = .02).

Post-hoc analyses explored prediction of child outcomes by only mothers' implicit racial attitudes (N = 161) as moderated by maternal warmth. In this model, the interaction between mother IAT and mother warmth was significant in predicting children's social inclusion bias in the second set of videos (β = .20, p = .02) and children's positive attributes toward Black children (β = .17, p = .04). Mother's IAT score significantly predicted lower levels of social inclusion bias in the second set of videos when mother's warmth was low (β = -.30, p = .005) but not average (β = -.12, p = .18) or high (β = .06, p = .63). Conversely, mother's IAT score marginally predicted children's positive attributes toward Black children when mother's warmth was high (β = .22, p = .06) but not when mother's warmth was low (β = -.09, p = .39) or average (β = .07, p = .40).

Moderation by Child Age

As with moderation by warmth, moderation of the relations between parental attitudes and children's racial attitudes by child age was also evaluated by adding an interaction term to each direct effects model using the latent moderated structural equations method (LMS; Klein & Moosbrugger, 2000) for mother and father color-blind attitudes models and an observed interaction term of centered variables for the IAT model. Fit for the baseline models (without the latent interaction term) for color-blind attitudes fit well for mothers [χ^2 (53) = 53.0, p = .48; CFI = 1.00; RMSEA = .00, 90% CI [.00, .05]; SRMR = .04] and fathers [χ^2 (53) = 51.9, p = .52; CFI

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[3] Exploratory follow-up analyses (Figure 16) indicated that primary parent IAT significantly negatively predicted child social inclusion bias in the second set of videos at low (β = -.25, p = .01) but not average (β = -.12, p = .14) or high (β = .01, p =.94) levels of primary caregiver warmth.

= 1.00; RMSEA = .00, 90% CI [.00, .04]; SRMR = .04]. Fit for the IAT interaction model was also good [χ^2 (23) = 13.0, p = .95; CFI = 1.00; RMSEA = .00, 90% CI [.00, .00]; SRMR = .03].

Maternal Color-Blind Racial Attitudes Moderation

The maternal model (Figure 11) accounted for 9% of the variance in child social inclusion bias in the first set of videos, 4% of the variance in child social inclusion bias in the second set of videos, 1% of the variance in negative attributions toward black children, 2% of the variance in positive attributions toward Black children, 20% of the variance in social distance bias, and 3% of the variance in child IAT score; these corresponded with small or very small effect sizes. No interactions were significant but there was a marginal interaction between mothers' color-blind attitudes and age in predicting children's social distance bias (β = -.12 p = .08). [4]

Paternal Color-Blind Racial Attitudes Moderation

The paternal model (Figure 12) accounted for 15% of the variance in child social inclusion bias in the first set of videos, 4% of the variance in child social inclusion bias in the second set of videos, 2% of the variance in negative attributions toward black children, 4% of the variance in positive attributions toward Black children, 19% of the variance in social distance bias, and 3% of the variance in child IAT score; these corresponded with small or very small effect sizes. No interactions were significant but there was a marginal interaction between

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[4] Exploratory follow-up analyses (Figure 17) indicated that maternal color-blind attitudes significantly negatively predicted child social distance bias at high (β = -.22, p =.004) levels of child age, marginally predicted social distance bias at average (β = -.11, p = .08) child age, and did not predict social distance bias at low (β = .01, p = .93) levels of child age.

fathers' color-blind attitudes and age in predicting positive attributions toward Black children (β = -.11 p = .07). [5]

Primary Caregiver IAT Moderation

The primary caregiver IAT model (Figure 13) accounted for 5% of the variance in child social inclusion bias in the first set of videos, 4% of the variance in child social inclusion bias in the second set of videos, 4% of the variance in negative attributions toward black children, 1% of the variance in positive attributions toward Black children, 18% of the variance in social distance bias, and 2% of the variance in child IAT score; these corresponded with small or very small effect sizes. Parameter estimates suggested that there is a significant interaction between primary caregivers' implicit racial attitudes and warmth in predicting children's social inclusion bias in the first set of videos (β = -.16, p = .03). No other interactions were significant. Simple slopes (Figure 14) were probed for the significant interactions at 1 standard deviation above and below mean levels of child age. Primary caregivers' IAT scores significantly predicted child social inclusion bias in the first set of videos at low (β = .25, p = .02) but not average (β = .07, p = .34) or high (β = -.10, p = .38) levels of child age. Post-hoc analyses explored prediction of child outcomes by only mothers' implicit racial attitudes (N = 161) as moderated by child age. In this model, there were no significant interactions.

Moderation by Child Sex

To evaluate possible moderation by child sex, multiple group analyses were conducted with child sex as the grouping variable. The fit of a model in which all structural paths were

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[5] Exploratory follow-up analyses (Figure 18) indicated that paternal color-blind attitudes significantly negatively predicted child positive attributions toward Black children at high (β = -.22, p =.02) levels of child age but not at average (β = -.11, p = .15) or low (β = .01, p = .97) levels of child age.

constrained to be equal across groups was compared to a model in which all parameters were freely estimated across groups. The fully unconstrained model did not show a significant improvement in fit over the fully constrained model as measured by a chi-squared difference test for mothers' color-blind attitudes [$\Delta\chi^2$ (6) = 2.96, p = .81], fathers' color-blind attitudes [$\Delta\chi^2$ (6) = 7.88, p = .25], or primary caregiver IAT [$\Delta\chi^2$ (6) = 7.42, p = .28]. Thus, there was no evidence that relations between parental attitudes and children's racial attitudes varied as a function of child's sex and no further differences were probed. Post-hoc analyses explored prediction of child outcomes by only mothers' implicit racial attitudes (N = 161) as moderated by child sex; the fully unconstrained model did not show a significant improvement in fit over the fully constrained model as measured by a chi-squared difference test [$\Delta\chi^2$ (6) = 7.98, p = .24].

Summary of Results

Both mothers' and fathers' color-blind racial attitudes were positively related to children's social inclusion bias for the first set of videos and mothers' color-blind racial attitudes were also positively related to children's social inclusion bias for the second set of videos, when controlling for maternal warmth. Children's exposure to diverse caregivers moderated prediction by fathers' but not mothers' color-blind attitudes. For fathers, color-blind racial attitudes were predictive of children's social inclusion bias only when children had almost no non-White pre-K caregivers. Additionally, higher levels of fathers' color-blind attitudes were related to lower levels of White preference in children's implicit racial bias only when children had few or more non-White pre-K caregivers. Parental warmth moderated prediction by both mothers' and fathers' color-blind attitudes. For mothers, higher levels of color-blind attitudes significantly

predicted lower levels of children's social distance bias only when mother's warmth was low. For fathers, higher levels of color-blind attitudes positively predicted children's social inclusion bias in the second set of videos when father warmth was average and low.

Higher levels of primary caregiver implicit White preference predicted lower levels of children's negative attributions for Black children. Additionally, primary caregiver White preference positively predicted child social inclusion bias for the first set of videos only when children's age was lower than average for the sample.

Discussion

This study aimed to examine a) direct relations between parents' color-blind racial ideology and implicit racial attitudes and their children's racial bias, and b) potential moderation of these relations by diversity in children's friends and caregivers, parental warmth, child age, and child sex. Results supported relations between parent racial attitudes and some child racial bias variables in expected directions, especially under conditions of high White homogeneity of children's caregivers, low parental warmth, and younger child age. These results were in part aligned with theories of racial socialization and the study hypotheses but also point to the need for more research to disentangle relations among parent and child racial attitudes and the mechanisms by which these attitudes become shared.

Direct Effects of Mothers' and Fathers' Color-Blind Ideology

Both mother and father color-blind racial ideology (CBRI) significantly predicted children's social inclusion preference bias as measured by one set of video stimuli. When parents endorsed higher levels of denial of systemic racism, denial of racial privilege, and denial of blatant racial issues (i.e., color-blind ideology), children demonstrated a higher social inclusion

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preference (i.e., how much they like, want to play with, and want to sit next to) for a White child as compared to a Black child who was depicted in a video as having personal belongings destroyed at school (video stimuli set 1). This result supported our hypothesis and is aligned with research that finds similarity between parent and child racial attitudes (Degner & Dalege, 2013). This finding is also aligned with the idea that White parents' color-blind ideology does indeed reinforce systems of White power and privilege and reinforces racial prejudice not only among adults but also by adults passing down racial biases to their children (Bonilla-Silva, 2015; Frankenberg, 1989; Neville et al., 2013).

Moderation of Relations between Caregiver IAT and Child Racial Bias by Child Age

Child age moderated the relations between primary caregiver's implicit racial attitude scores (as measured by the implicit association test; IAT) and children's social inclusion bias in the first set of videos. Only for younger children, higher levels of primary caregivers' implicit White preference were related to children's higher social inclusion preference for a White child as compared to a Black child who was depicted in a video as having personal belongings destroyed at school (video stimuli set 1). Thus, it appears that parental implicit racial attitudes are positively related to their children's social inclusion racial bias only for younger children in the sample (approximately 6 years old), whereas parental explicit color-blind racial attitudes are related to higher levels of children's social inclusion racial bias for children of all ages in the sample (5-7 years). There was no moderation by child age for any relations between mothers' or fathers' CBRI and child outcomes.

One possible explanation for this pattern of results is that parental socialization may become increasingly explicit as children become older. Adults' implicit racial attitudes and

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explicit *socialization practices* are likely to not completely align. In the absence of explicit

discussion about parents' beliefs, children may infer parents' implicit racial attitudes based on

what is communicated solely through non-verbal means. Indeed, when asked about their parents'

racial attitudes, preschool-age children often report attitudes that are not aligned with parents'

reported explicit attitudes, but may very well be aligned with their parents' implicit attitudes that

have not been verbally communicated (Aboud & Doyle, 1996; Pahlke et al., 2012). Although

White parents avoid explicit racial socialization in general, this avoidance is particularly

exacerbated when parents believe their children are too young to understand issues of race

(Vittrup, 2016). As children grow older, parents may think that explicitly talking about their

racial attitudes is more important and developmentally appropriate and the impetus to talk about

race might come up more frequently. As parents' explicit communication about racial beliefs

increases, children may focus more on what parents are explicitly saying rather than just what

they are nonverbally implying and the primacy of parents' implicit attitudes may weaken. In

order to better understand these processes, it will be important to further explore the socialization

mechanisms by which parental implicit and explicit attitudes are transmitted to their children.

Moderation of Fathers' CBRI and Child Racial Bias by Racial Diversity in Children's

Friends and Pre-K Caregivers

Racial composition of children's non-relative pre-K caregivers moderated the association

between fathers' color-blind racial ideology and both children's social inclusion bias and

children's implicit White preference. Specifically, fathers' higher levels of color-blind ideology

predicted higher levels of children's White-preference in social inclusion only when children had

almost no non-White caregivers. This result indicated that when caregivers were homogenously

White, children's attitudes more closely reflected those of their father. In contrast, only when children had few or more non-White caregivers, fathers' higher levels of color-blind racial ideology related to lower levels of children's implicit White preference. This finding indicated that when a child's caregiver context was more racially diverse, children's racial biases diverged from their fathers' attitudes.

These results supported the hypothesis that children's non-White caregivers may buffer the effects of fathers' CBRI on children's racial bias. This result was likely in part because meaningful contact with individuals of other races can enable children to hear counter-narratives which challenge stereotypes and can challenge the belief systems espoused by parents. When a child grows up with mostly White caregivers, in the absence of meaningful relationships with people of color, parents' racial beliefs may go unchallenged and are more likely to contribute to children's racial attitude development. A similar pattern emerged with moderation by whether children had at least one Black close friend, although these findings were exploratory and should be interpreted with caution. Specifically, higher levels of fathers' CBRI were related to higher levels of White preference in children's social inclusion bias only when children had no Black friends. Fathers' CBRI and child social inclusion bias were unrelated when children had at least one Black close friend. Again, this finding aligns with research that indicates the importance of cross-race friends for reduction of children's racial bias, likely by challenging stereotypes and providing meaningful contact with families with backgrounds and experiences that are different than one's own (Gaias et al., 2018).

Unexpectedly, I found moderation by diversity of children's friends and caregivers only for prediction by fathers' CBRI, and not mothers' CBRI or primary caregivers' IAT. Given that

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primary caregivers were also mostly mothers, it appears that links between father and child racial attitudes varied as a function of racial diversity in children's other socializing contexts, but links between mother and child racial attitudes did not. This finding may indicate that the way in which mothers communicate their racial attitudes is more robust and more resilient to buffering from other socializers. This also may suggest that mothers are a more salient socializer than fathers in relation to the development of racial attitudes for children in early elementary school. An alternative possibility is that fathers may not socialize as explicitly as do mothers around topics of race.

Moderation of Mothers' CBRI and Child Racial Bias by Mothers' Warmth

Mothers' warmth moderated the association between mothers' CBRI and children's social distance bias (i.e., less preferred closeness for White families as compared to Black families using a hypothetical scenario of families moving into the study child's neighborhood). Only when mothers' warmth was low for the sample, mothers' higher CBRI was associated with a tendency for children to show less White favoritism in social distance preference. Thus, it appears that when mothers had low levels of warmth, their higher levels of racially biased attitudes were inversely related to their children's social distance biases, potentially suggesting that when mother warmth is low children are rejecting their mothers' attitudes. This finding is aligned with the idea that lower parental warmth is related to lower levels of parent-child identification (Grusec et al., 2000; Hoffman, 1979) and, in turn, with research finding that when children do not identify strongly with their parents, parental prejudice negatively relates to children's explicit racial bias (Sinclair, Dunn, & Lowery, 2005). When maternal warmth was at high and average levels for the sample, mothers' CBRI was unrelated to their children's social

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distance bias. At high levels of mothers' warmth, children demonstrated relatively higher levels of social distance bias, regardless of mothers' CBRI. In this sample, it appears that social distance bias is unrelated to mothers' CBRI, unless mothers demonstrate low levels of warmth, in which case children may actively reject mothers' attitudes.

Unexpectedly, no other associations between mothers' CBRI and child racial attitudes were moderated by mothers' warmth; thus, higher levels of mothers' CBRI were related to higher levels of children's social inclusion bias in both sets of videos regardless of mothers' warmth. In this sample, the mean of mothers' warmth was high, and the range of mother warmth was relatively restricted to the higher end of the warmth scale. Thus, it is possible that the analysis lacked the power to find interaction effects that might exist in the population.

Moderation by Child Sex

Child sex did not moderate any relations between parent and child outcomes. In this sample, it appears that the same patterns of similarity between parent and child attitudes was observed for both boys and girls. This research aim was exploratory because existing literature is mixed and sparse. Some existing research suggests that, regarding externalizing behavior and peer acceptance outcomes, boys are more susceptible to maternal socialization behavior than are girls (Davidov & Grusec, 2006; Rothbaum & Weisz, 1994). Other researchers found that children receive socialization messages most strongly from the parent who is the same sex as them, at least when related to the development of children's sympathy (Eisenberg et al., 1991). None of the previous research examined these associations in the context of White parents' racial socialization messages and their children's racial attitudes. The present findings provide

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emerging evidence that when it comes to young elementary school children, both boys' and girls' racial attitudes are related to those of their parents in similar patterns.

Unexpected Findings

One unexpected finding was the lack of correlation among child outcomes and the differential associations among parent predictors and child outcomes. Among child outcomes, only social inclusion bias for the two sets of videos was correlated. Moreover, social inclusion bias in the first set of videos was the only outcome that was consistently related to all three parental predictors. Social inclusion bias in the second set of videos was only related to mother CBRI when controlling for mother warmth and positively related to father CBRI only when father warmth was low. Social distance bias was only related to mother CBRI inversely and under conditions of low maternal warmth. Children's implicit White preference was similarly inversely related to fathers' CBRI when children had higher numbers of non-White caregivers. Children's positive attributions toward Black children were unrelated to parent predictors under any conditions and children's negative attributions were only related to primary caregiver IAT in the opposite direction than expected.

There are several possible explanations for these findings. The first is that each of these child outcomes truly does capture a distinct aspect of child racial attitudes which are unrelated to the others and that these distinct facets are differentially related to parental attitudes. For example, in this study, it appears that the social indicators of children's bias (e.g., social inclusion, social distance) were more consistently related to parents' attitudes than were children's explicit racial stereotypes or implicit racial preference. In this case, it will be important to understand how these child-level biases underlie child discriminatory behaviors and

prejudiced beliefs as well as to examine other parental and contextual predictors for the child attitudes for which I did not find correlates.

An alternative explanation is that some of the child measures used in the present study are not capturing the same underlying construct and that some measures have more error than others. The attributions task, for example, was developed in the context of the minimal groups paradigm (Dunham, Baron, & Carey, 2011) and it is less clear how bias in that context corresponds with bias toward already existing social groups. Furthermore, it is possible that differences in the function of outcomes are related to the form of the measurement. Specifically, for some outcomes (such as the attributions task), children were presented a forced choice between a Black and a White child and choosing one meant not being able to choose the other. For other outcomes (such as the social inclusion task), children would have theoretically been able to express equal preference for both the Black and White child. Future research should examine how these different features of the measures themselves may be related to the underlying constructs captured. Finally, it is also possible that the constructs captured by these various child racial attitudes measures are more valid when children are older than for young elementary schoolers. More research is needed to validate measures assessing bias in social groups and in different samples of children of different ages.

Another unexpected finding was that higher levels of primary caregiver implicit preference for Whites was related to lower levels of children's negative attributions toward Black children. This contradicts the work of other researchers who, using a different attributions measure, found that mothers' higher implicit White preference is related to higher levels of children's negative attributions toward Black children (Castelli et al., 2009). The finding also

contradicts theoretical frameworks which suggest that one mechanism by which children's racial attitudes are formed is by absorbing non-verbal messages from their parents (Allport, 1954). The attributions task outcomes (positive and negative attributions toward Black children) were not related to parental predictors other than this one negative association with the IAT. As previously noted, there is a possibility that this particular task is not highly valid when used to assess attitudes toward existing social groups or with children of this age. Additionally, there were only three items for each positive and negative attributions, which may be too low to adequately capture this construct and the images presented in the task were not matched based on child sex. Thus, it was possible that the study child was making a forced-choice attribution between a White child of one sex and a Black child of a different sex, further complicating the in-group/out-group dichotomy and weakening the validity of the measure.

Another unexpected finding was the pattern by which fathers' warmth moderated the association between fathers' CBRI and children's social distance bias. Only when fathers' warmth was low or average for the sample, fathers' higher CBRI was associated with a tendency for children to show more social inclusion preference for a White child as compared to a Black child who was teased at school for their new shirt or haircut (video set 2). This finding does not support the original hypotheses. As previously mentioned, the mean of parental warmth was high in this sample and variability was low; thus, the range of father warmth represents the higher end of the warmth scale. Fathers' who had relatively lower levels of warmth in this sample still were considerably warm parents. It is possible that at levels of warmth that are relatively high but not the most extreme, children are most receptive and eager to please parents. On the other hand, perhaps when fathers are extremely warm, children do not feel as strong of a need to please the

parent because they more consistently expect warm caregiving. It is also important to consider

the other contextual factors that co-exist with father warmth. For example, perhaps when fathers

are less warm, mothers participate more actively in child socialization and, because mother and

father CBRI is correlated, what we see is actually a mother effect. Alternatively, perhaps when

father warmth is lower, father attitudes are also communicated more strongly, assertively, and

with less room to question the attitudes potentially leading to greater child adherence to fathers'

beliefs.

Implications

The present study has important and immediate implications for work with White

families. First, it is important to explicitly counter the persistent narrative that raising children in

a racially color-blind context will foster egalitarian attitudes. In contrast to this common

paradigm, the findings in this study provide evidence that parents' color-blind racial ideology is

not neutral but, rather, is linked to higher levels of children's racial bias in favor of Whites. It

will be useful to engage families in conversations about these findings as many White families

find it counterintuitive.

Second, although White parents are largely silent when it comes to issues of race and

racism (Bartoli et al., 2016; Hagerman, 2014; Katz, 2003; Pahlke et al., 2012) their own racist

attitudes seem to be reflected in their young children's racial biased attitudes, at least in some

contexts. The implication here is that even if we encourage White families to start talking about

race and racism, if we do not first address adults' own implicit and explicit racial attitudes, our

intentions may backfire. Indeed, some researchers have found that when parents who have higher

levels of their own racial bias talk about race, their children have higher levels of racial bias

themselves (Katz, 2003). Color-blind racial ideology and individuals' implicit white preference are part of the current face of racism, which operate in part by maintaining deeply embedded systems of White power and privilege though denial, inaction, and unconscious discrimination (Bonilla-Silva, 2015; DiAngelo, 2018; Kendi, 2019). Before encouraging families to have discussions about race, we first need to address parents' own racial attitudes, including their understanding of White privilege and understanding of systemic racism.

Finally, the results in this study provide further support pointing to the importance of diverse caregivers and friends in children's lives. In addition to the extant research noting the importance of cross-race friendships for racial bias reduction (Gaias et al., 2018), our results highlight the potential for meaningful relationships with diverse pre-K caregivers and child friends to buffer the transmission of bias from White fathers to their children. Engaging parents around these findings will have to be done thoughtfully. White parents have a propensity to "pass the buck" when it comes to racial socialization, for example, by endorsing the belief that racial socialization will happen at school through exposure to diverse individuals (Hamm, 2001). In family engagement programs, it will be important to highlight the positive role that diverse caregivers and friends have while also guiding parents in examining their own racial attitudes and understanding the centrality of their own role in their children's racial socialization.

Strengths and Limitations

The present study contributes significantly to academic understanding of parental transmission of racial attitudes in White families with young children. Specifically, the majority of extant research describes White parents' silence and avoidance of racial socialization as color-blind, but this is the first study, to my knowledge, to demonstrate an association between White

parents' color-blind racial *ideology* and their children's racial bias. Additional strengths of the study include the use of a latent variable approach in modeling parents' color-blind racial ideology (thereby reducing measurement error), the use of multiple directly assessed child outcomes, the use of data collected through multiple methods from multiple reporters, and the examination of both mothers and fathers as separate contributors to children's racial attitudes.

Despite the notable strengths of the study, there are also some limitations that are important to note. First, the study is situated in a Black-White binary (Gines, 2013). The demographics in the United States are diverse and although Whites remain the majority racial-ethnic group who benefit from power and privilege, marginalized racial-ethnic groups are far more diverse. Marginalized racial-ethnic groups include Latinos and Latinas, Native Americans, Asian Americans, and multiracial individuals. All people of color experience the effects of discrimination and prejudice but the racialized histories and experiences of individuals are diverse among and within these racial groups. Due to the nascency of research on parental correlates of racial biases for young White children, the present study focused on a straightforward and narrow slice of racial attitude formation (i.e., attitudes toward Blacks). However, in order to reduce experiences of racism for all marginalized people, it will be critical for future research to examine the development of these attitudes toward all people of color.

Another limitation of the present study was the low number of children who had non-White friends and caregivers, limiting the power of moderation analyses and necessitating a moderation analysis which dichotomized the moderator variable. We were therefore unable to capture nuanced estimates of the interaction effect. Moreover, despite persistence, we did not receive survey data from approximately 20% of fathers. We cannot rule out the possibility that

fathers with particularly high levels of CBRI did not respond to the questionnaire, thereby introducing a potential bias in the collected data despite the use of modern missing data techniques. Finally, the demographics of the families in the present study represent a highly well-educated and wealthy subset of the population. Although even in this sample we were able to depict a relatively wide distribution of parental and child racial attitudes, we certainly did not capture the entire spectrum. Moreover, the mechanisms by which parental and child attitudes become shared and the strengths of those associations likely vary as a function of many sociopolitical factors including income, region of the country, and political affiliation. The findings of the present research are only generalizable to well-educated, middle to upper income Whites living in mid-sized moderate-conservative urban and suburban communities.

Future Directions

As noted before, research on racial socialization in White families is only emerging; as such, there is a need for an abundance of further research. First, it is imperative that future research examines the mechanisms by which parental racial attitudes are transmitted to their children. Capturing socialization mechanisms in White families continues to be challenging in light of Whites' general silence on racial issues. However, parents' socialization practices are likely more varied than avoidance of conversations about race and it is imperative that we develop measures and methods to capture the breadth of these practices.

Moreover, it is important to examine the extent to which White parents' socialization practices, including silence about race, are or are not related to parents' actual color-blind racial ideology and other implicit and explicit racial attitudes. Motivation for parents' racial socialization practices are likely varied; for example, teaching children that race is not a factor in

how people are treated today is likely strongly tied to parents' own beliefs that racism is no longer a societal factor (i.e., minimization of racism). Silence about race, however, may or may not be related to parents' own color-blind racial ideology and implicit White preference as parents can understand the impact of systemic racism but may not have the skills and self-efficacy necessary to speak to their children about it. As we characterize the mechanisms of White parents' socialization practices it is important to avoid conflating White silence with color-blindness and to differentiate between practices that truly are motivated by color-blind ideology and those that are motivated by other attitudes and beliefs.

Future research also must examine similarities between parent and child attitudes and socialization practices in a variety of sociopolitical contexts. The socialization practices by which parent racial attitudes are transmitted to their children are very likely related to the social influences that families are situated within. Whereas in more educated and progressive contexts discussing race is often considered taboo, the extent to which it is socially acceptable to speak explicitly about one's racial attitudes and biases likely varies as a function of one's social circle, religious institutions, and political beliefs. Moreover, although color-blind racial ideology is the predominant racist framework in the United States today (Bonilla-Silva, 2018), racism based on explicit prejudice and based in other ideologies (e.g., biological racism) is also present. It is likely that some White parents do talk explicitly and negatively about race and utilize explicit racist socialization strategies with their children. Future research must examine the breadth of socialization practices as well as how the strength of the associations between parent and child racial attitudes vary across social contexts as a function of those socialization practices. Moreover, future research must examine these processes and associations regarding Whites'

attitudes outside the Black/White binary toward all people of color including Latinx, Asian, Native American, and multi-racial communities.

Finally, more research is needed in order to elucidate the mixed patterns of relations we characterized regarding individual child outcomes. Necessary further research includes validating existing measures through work relating child attitude measures to child naturalistic discriminatory behaviors. Future research also must include longitudinal work to understand the development of child racial attitudes over time as well as the appropriateness of different racial attitude measures for children of different ages.

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APPENDIX A

TABLES & FIGURES

Figure 1

Larger Heuristic Framework for Parental Predictors of Child Racial Attitudes

B. **Parents' Own Attitudes**
- Implicit racial bias
- Explicit racial bias
- Color-blind Racial Ideology
- Beliefs about children's awareness of race
- Openness to diversity

A. **Parent Predictors**
- Parent Ethnic/racial homogeneity of environment
- Parent cross-race friends

C. **Parents' Socialization Behaviors**
- Race-related discussions
- Egalitarian parenting
- Encouragement of children's cross-racial friendships
- Modeling of own cross-racial friendships
- Provide opportunities to learn about other cultures

D. **Child Moderators**
- Ethnic/racial homogeneity of child's environment
- Parent-child relationship

E. **Children's Racial Bias**
- Implicit racial bias
- Explicit racial bias

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Table 1

Descriptive Statistics

Continuous Variable Name	N	Min	Max	Mean (*SD*)
Mother CBRI Blatant Racial Issues	186	1.00	5.33	2.03 (.78)
Mother CBRI Institutional Discrimination	186	1.00	5.57	2.91 (.95)
Mother CBRI Racial Privilege	186	1.00	5.86	3.40 (1.1)
Father CBRI Blatant Racial Issues	152	1.00	5.50	2.51 (.89)
Father CBRI Institutional Discrimination	152	1.00	5.57	3.57 (1.0)
Father CBRI Racial Privilege	152	1.00	6.00	3.73 (1.2)
Primary Parent IAT	172	-1.54	1.65	.30 (.51)
Social Inclusion Bias – Video Set 1	186	-3.00	3.00	-.04 (.71)
Social Inclusion Bias – Video Set 2	187	-3.00	3.00	.11 (.76)
Positive Attributions toward Black Children	190	.00	1.00	.42 (.24)
Negative Attributions toward Black Children	190	.00	1.00	.57 (.23)
Social Distance Bias	185	-2.00	2.00	-.03 (1.0)
Child IAT	190	-.57	.54	-.09 (.15)
Child Social Desirability	188	.07	1.00	.64 (.20)
Mother Social Desirability	186	.00	1.00	.54 (.23)
Father Social Desirability	155	.10	1.00	.54 (.22)
Mother Education	190	2.00	8.00	6.07 (1.4)
Father Education	189	1.00	8.00	5.88 (1.5)
Family Income	190	2.00	7.00	5.99 (1.3)
Mother Warmth	186	3.00	5.00	4.26 (.39)
Father Warmth	155	2.82	5.00	4.00 (.44)
Primary Caregiver Warmth[a]	190	3.00	5.00	4.26 (.39)
Child Age	190	5.40	8.91	7.09 (.94)
Child Intergroup Contact	189	1.00	4.00	2.05 (.68)

	Frequencies	
	Boy	Girl
Child Sex	103	87
	All White	One or More Non-White
Race of Child's Friends	78	110
	Almost No Non-White	Few or More non-White
Race of Child's Pre-K Caregivers	111	64

Note: [a] Primary caregiver warmth was only used for moderation of primary caregiver implicit racial attitudes.

Table 2

Bivariate Correlations among Continuous Study Variables

	1	2	3	4	5	6	7	8
1. Mother CoBRAS - Blatant Racial Issues	—							
2. Mother CoBRAS - Institutional Discrimination	.70**	—						
3. Mother CoBRAS - Racial Privilege	.71**	.70**	—					
4. Father CoBRAS - Blatant Racial Issues	.49**	.51**	.54**	—				
5. Father CoBRAS - Institutional Discrimination	.51**	.58**	.53**	.73**	—			
6. Father CoBRAS - Racial Privilege	.48**	.52**	.56**	.74**	.75**	—		
7. Primary Parent IAT	.23**	.28**	.27**	.29**	.21*	.21*	—	
8. Social Inclusion Bias – Video Set 1	.16*	.24**	.25**	.25**	.19*	.33***	.08	—
9. Social Inclusion Bias – Video Set 2	.03	.15*	.17*	.11	.07	.14+	-.15+	.19*
10. Positive Attributions toward Black Children	-.04	.01	-.06	-.03	-.09	-.14	.02	-.07
11. Negative Attributions toward Black Children	.03	-.04	.05	-.13	-.02	-.06	-.17*	-.07
12. Social Distance Bias	-.09	-.07	-.09	.02	-.07	.07	.07	.06
13. Child IAT	.06	-.05	.02	-.10	-.12	-.05	-.04	-.02
14. Child Social Desirability	.11	.07	.13+	-.02	.00	.10	-.02	-.03
15. Mother Social Desirability	.09	.00	.16*	.05	.10	.05	-.10	.07
16. Father Social Desirability	.06	-.02	.14+	.01	-.02	-.05	-.20*	.02
17. Mother Education	-.16*	-.26**	-.30**	-.21**	-.15+	-.18*	-.10	-.05
18. Father Education	-.09	-.17*	-.19**	-.14+	-.09	-.24**	-.11	-.02
19. Family Income	-.09	-.08	-.12	-.06	.02	-.06	-.06	-.01
20. Mother Warmth	-.08	-.07	-.02	.06	-.01	.05	.01	-.07
21. Father Warmth	-.14+	-.05	-.09	-.22**	-.27**	-.20*	-.08	-.12
22. Primary Caregiver Warmth	-.08	-.07	-.03	.02	-.03	.02	-.01	-.06
23. Child Age	.02	.06	.07	.04	.05	.04	-.01	.02

	9	10	11	12	13	14	15	16	17
9. Social Inclusion Bias – Video Set 2	-								
10. Positive Attributions toward Black Children	.08	-							
11. Negative Attributions toward Black Children	.03	-.10	-						
12. Social Distance Bias	.11	.01	-.01	-					
13. Child IAT	.06	-.03	.11	-.04	-				
14. Child Social Desirability	.04	-.09	.09	-.09	.15*	-			
15. Mother Social Desirability	.07	-.04	.04	-.08	.13+	.15*	-		
16. Father Social Desirability	-.02	-.03	.02	-.01	-.13	-.08	-.01	-	
17. Mother Education	.02	-.09	.06	.11	-.03	-.09	-.04	.06	-
18. Father Education	-.02	.11	.03	.06	-.02	-.02	.13+	-.12	.41***
19. Family Income	-.02	-.03	-.03	.06	.02	.02	-.16*	-.06	.34***
20. Mother Warmth	.03	-.01	.02	.14+	-.07	-.07	-.07	.09	.24**
21. Father Warmth	.10	.14+	.07	.06	-.07	.06	.06	-.01	.02
22. Primary Caregiver Warmth	.02	.01	.01	.14+	-.07	.06	.09	.12	.22**
23. Child Age	.11	.11	-.10	.01	.01	-.43**	.01	.09	-.05

	18	19	20	21	22	23
18. Father Education	-					
19. Family Income	.33**	-				
20. Mother Warmth	-.01	.04	-			
21. Father Warmth	.13	.05	.13	-		
22. Primary Caregiver Warmth	.00	.05	.99***	.14+	-	
23. Child Age	-.03	-.04	-.03	-.02	-.02	-

Note. *** $p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

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Table 3

Measurement Invariance Tests

Mother Color-Blind Measurement Models

Child Non-White Friends	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	45.2	40			0.98	0.04	0.05
Metric (loadings constrained)	46	42	0.8	0.67	0.99	0.03	0.05
Scalar (intercepts constrained)	47.1	45	1.9	0.86	0.99	0.02	0.05

Child Non-White Pre-K Caregivers	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	40.3	40			1	0.01	0.05
Metric (loadings constrained)	42.5	42	2.2	0.33	1	0.01	0.05
Scalar (intercepts constrained)	48.6	45	8.3	0.14	0.99	0.03	0.05

Child Sex	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	51.4	40			0.96	0.06	0.05
Metric (loadings constrained)	55.6	42	4.2	0.12	0.96	0.06	0.06
Scalar (intercepts constrained)	57.6	45	6.2	0.29	0.96	0.05	0.06

Father Color-Blind Measurement Models

Child Non-White Friends	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	48	40			0.97	0.05	0.05
Metric (loadings constrained)	48.5	42	0.5	0.78	0.98	0.04	0.05
Scalar (intercepts constrained)	49.5	45	1.5	0.91	0.98	0.03	0.05

Child Non-White Pre-K Caregivers	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	41.8	40			0.99	0.02	0.04
Metric (loadings constrained)	46.7	42	4.9	0.086	0.98	0.04	0.06
Scalar (intercepts constrained)	53	45	11.2	0.05	0.97	0.05	0.07

| Child Sex	χ2	df	△χ2	*p*-value △χ2	CFI	RMSEA	SRMR
Configural	45.8	40			0.96	0.06	0.05
Metric (loadings constrained)	46.3	42	0.5	0.78	0.96	0.06	0.06
Scalar (intercepts constrained)	46.4	45	0.6	0.99	1	0.02	0.05

Figure 2

Direct Relations between Mothers' Color-Blind Attitudes and Children's Racial Attitudes
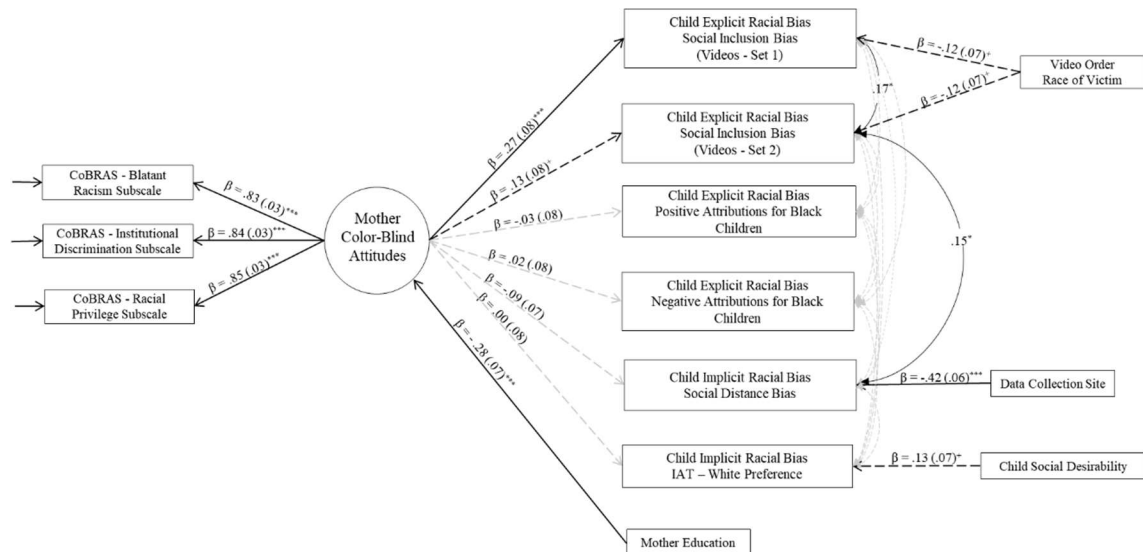
Note. Reported parameters are all standardized estimates. ***$p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.
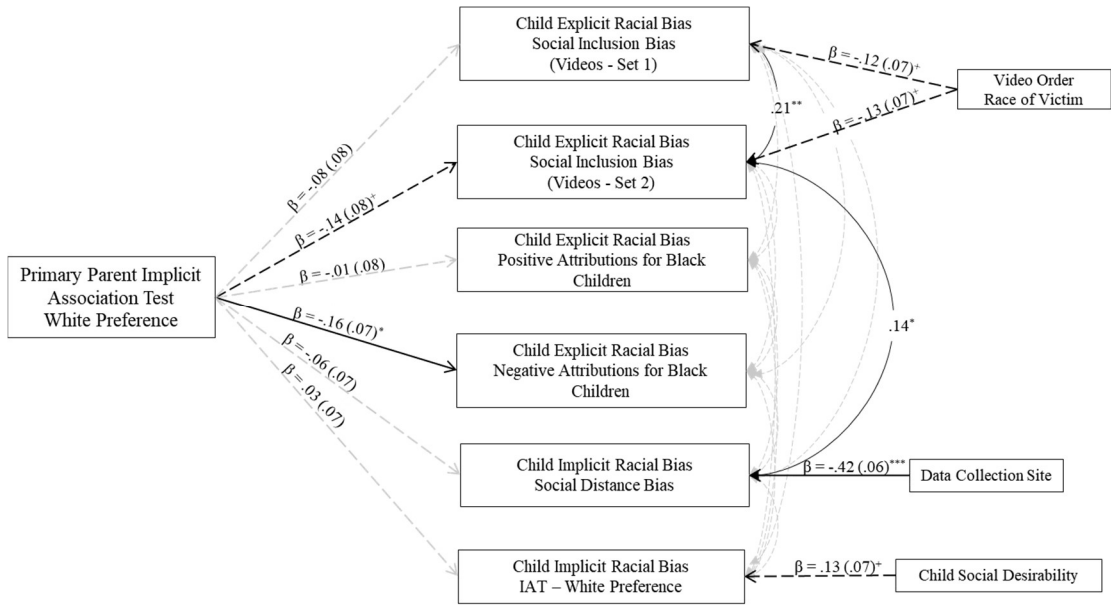
Figure 3

Direct Relations between Fathers' Color-Blind Attitudes and Children's Racial Attitudes
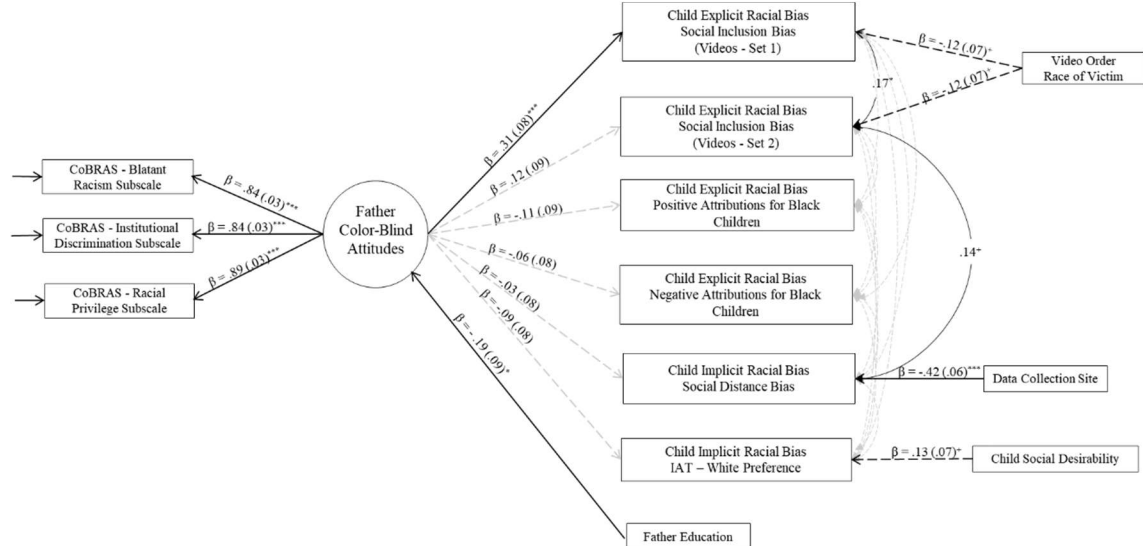
Note. Reported parameters are all standardized estimates. ***$p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.
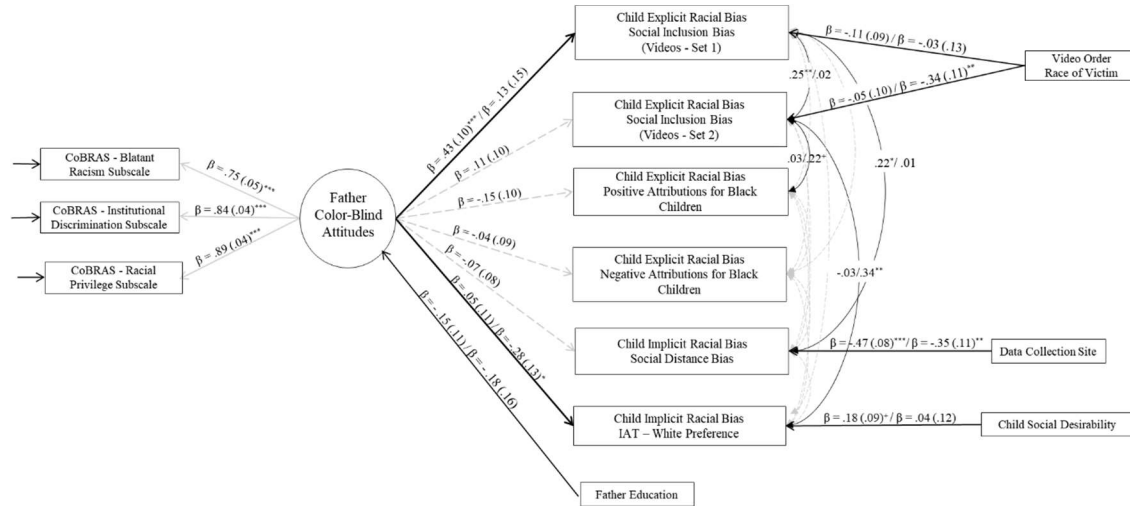
Figure 4

Direct Relations between Primary Caregivers' IAT and Children's Racial Attitudes

Note. Reproduced parameters are all standardized estimates. $^{***}p < .001.$ $^{**}p < .01.$ $^{*}p < .05.$ $^{+}p < .10.$
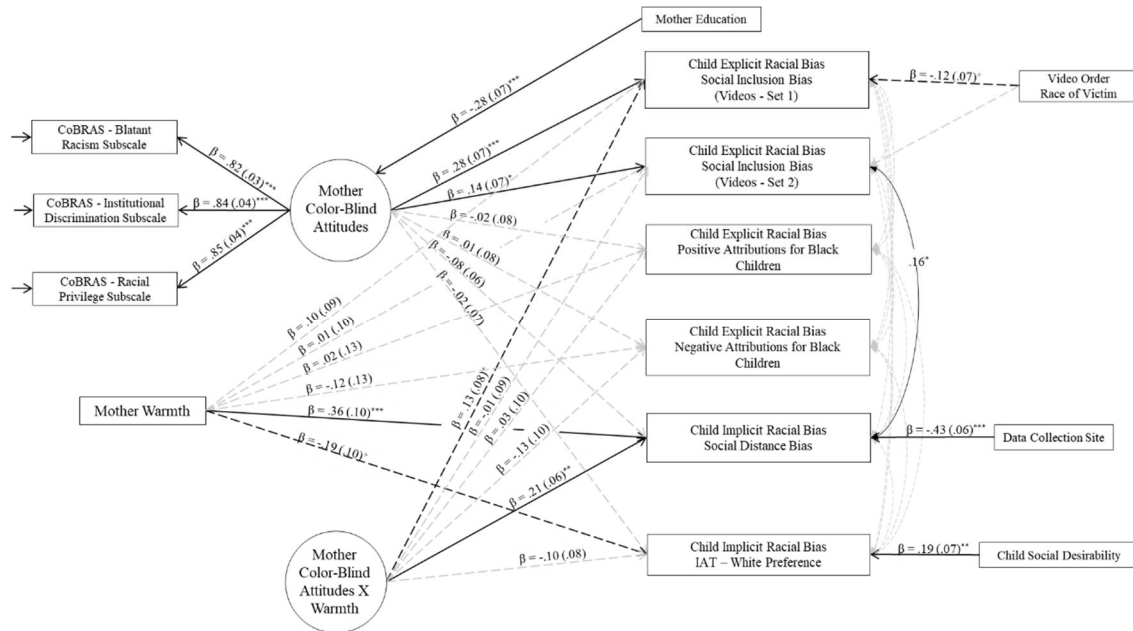
Figure 5

Partially Constrained Multiple-Group Model Non-White Pre-K Caregivers: Fathers' Color-Blind Attitudes and Children's Racial Attitudes

Note: Bolded paths were freely estimated between the two groups. Parameter estimates are presented as almost no non-White pre-K caregivers/few or more non-White pre-K caregivers. Standardized parameter estimates are presented.
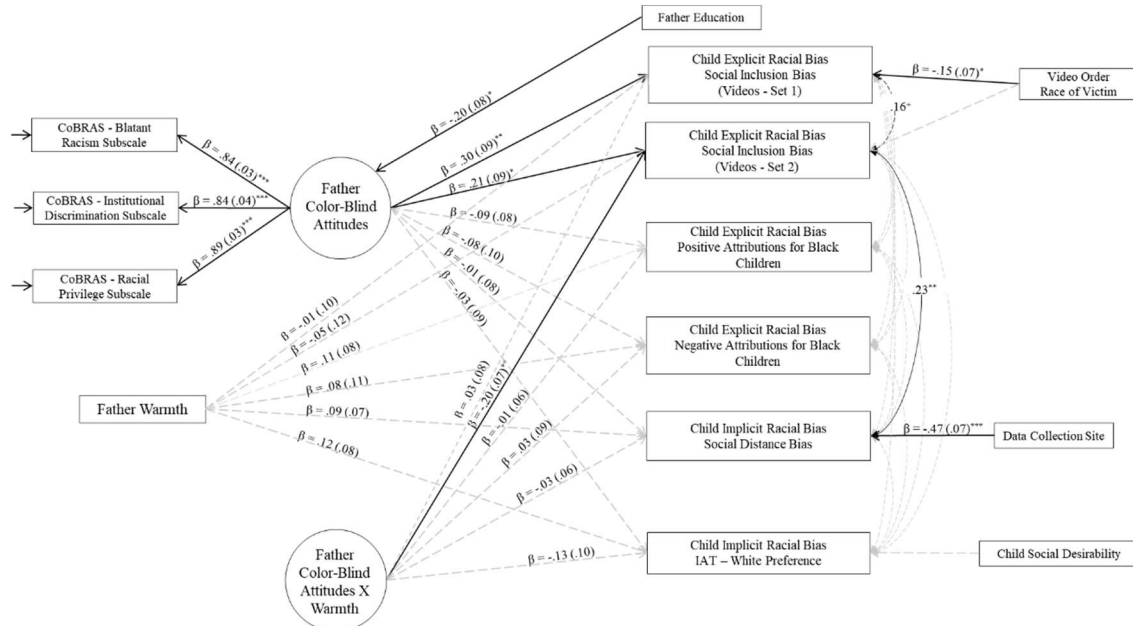*** *p* < .001. ** *p* < .01. * *p* < .05. + *p* < .10.

Figure 6

Moderation of Mothers' Color-Blind Attitudes and Children's Racial Attitudes by Maternal Warmth
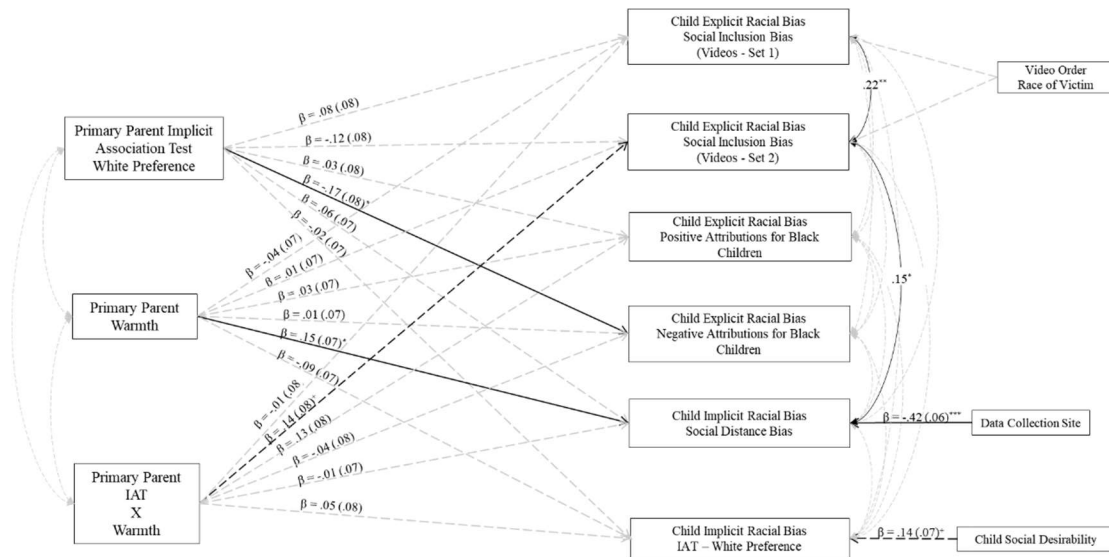

Note. Reported parameters are all standardized estimates. ***$p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.

Figure 7

Moderation of Fathers' Color-Blind Attitudes and Children's Racial Attitudes by Paternal Warmth

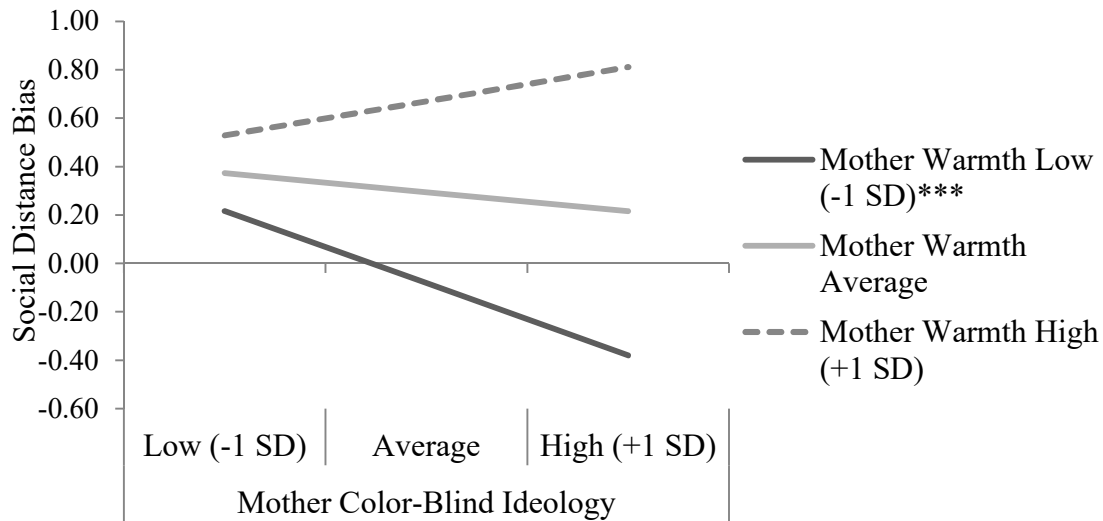*Note.* Reported parameters are all standardized estimates. ***$p < .001$. **$p < .01$. *$p < .05$. +$p < .10$.

Figure 8

*Moderation of Primary Caregivers' IAT and Children's Racial Attitudes by Primary Caregiver Warmth*

Child Explicit Racial Bias
Social Inclusion Bias
(Videos - Set 1)

Video Order
Race of Victim

Primary Parent Implicit
Association Test
White Preference

Child Explicit Racial Bias
Social Inclusion Bias
(Videos - Set 2)

β = .08 (.08)

β = -.12 (.08)

β = .03 (.08)

β = -.17 (.08)*

β = .06 (.07)

Child Explicit Racial Bias
Positive Attributions for Black
Children

β = -.02 (.07)

β = -.04 (.07)

β = .01 (.07)

β = .03 (.07)

Primary Parent
Warmth

Child Explicit Racial Bias
Negative Attributions for Black
Children

.22**

.15+

β = .01 (.07)

β = .15 (.07)*

β = -.09 (.07)

Child Implicit Racial Bias
Social Distance Bias

β = -.42 (.06)***   Data Collection Site

β = -.01 (.08)

β = .14 (.08)*

β = .13 (.08)

β = -.04 (.08)

Primary Parent
IAT
X
Warmth

β = -.01 (.07)

β = .05 (.08)

Child Implicit Racial Bias
IAT – White Preference

β = .14 (.07)+   Child Social Desirability

Note. Reported parameters are all standardized estimates. ***p < .001. **p < .01. *p < .05. +p < .10.

Figure 9

Relation of Mother Color-Blind Ideology and Child Social Distance Bias at Levels of Mothers' Warmth
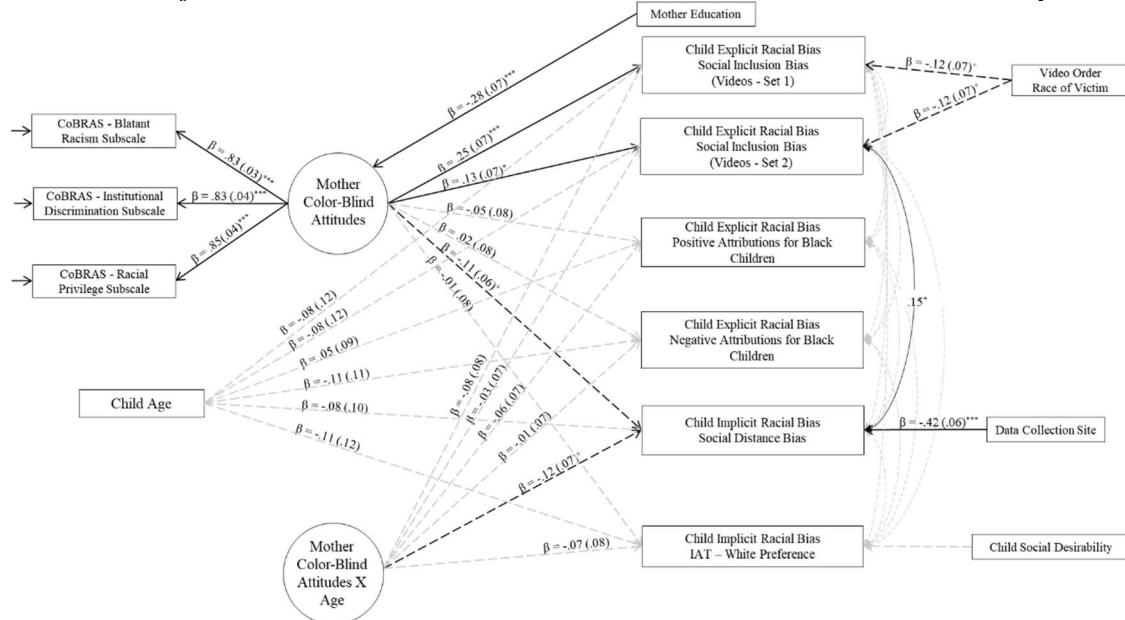

Note. p < .001. ** p < .01. * p < .05. + p < .10.

Figure 10

Relation of Father Color-Blind Ideology and Child Social Inclusion Bias (Video Set 2) at Levels of Fathers' Warmth
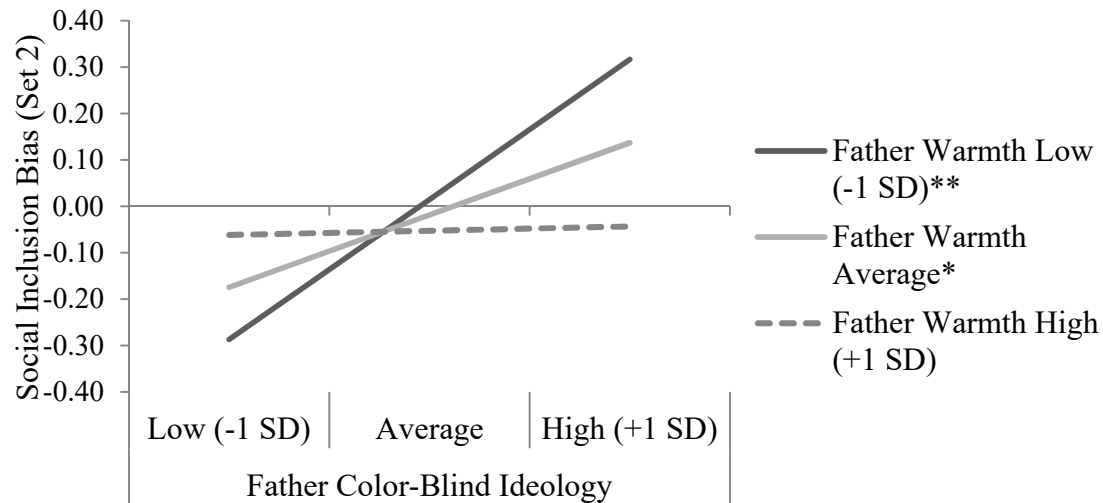
Note. p < .001. ** p < .01. * p < .05. + p < .10.

Figure 11

Moderation of Mothers' Color-Blind Attitudes and Children's Racial Attitudes by Child Age

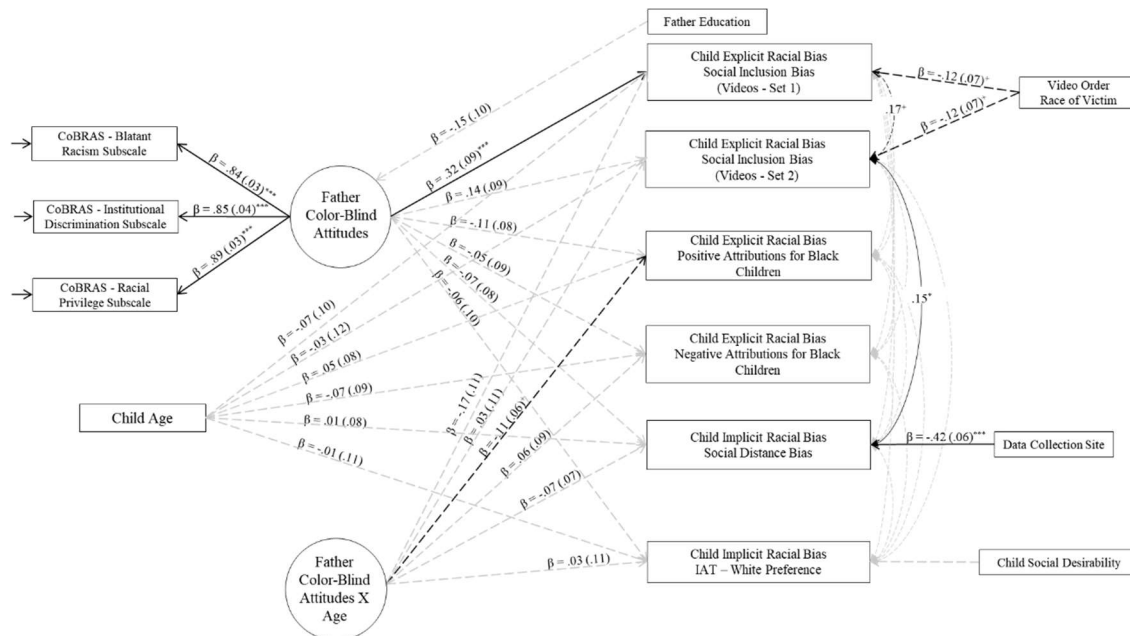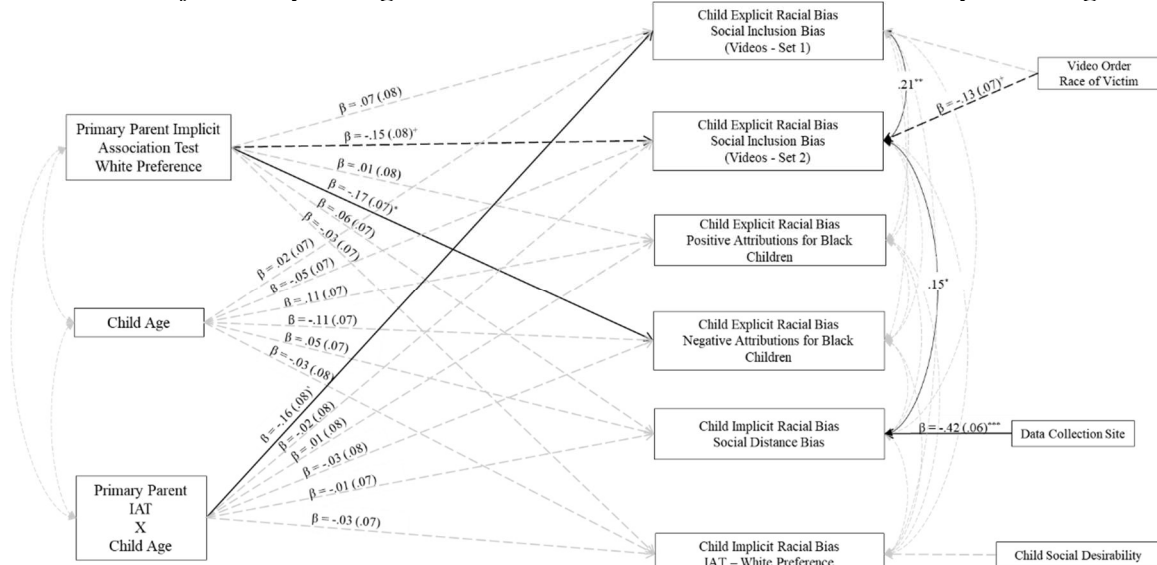*Note.* Reported parameters are all standardized estimates. ***$p < .001$. **$p < .01$. *$p < .05$. +$p < .10$.

Figure 12

Moderation of Fathers' Color-Blind Attitudes and Children's Racial Attitudes by Child Age

Father Education

Child Explicit Racial Bias
Social Inclusion Bias
(Videos - Set 1)

Video Order
Race of Victim

$\beta = -.12 (.07)^+$

$.17^+$

$\beta = -.12 (.07)^+$

CoBRAS - Blatant
Racism Subscale

$\beta = -.15 (.10)$

Child Explicit Racial Bias
Social Inclusion Bias
(Videos - Set 2)

$\beta = .84 (.03)^{***}$

$\beta = .32 (.09)^{**}$

Father
Color-Blind
Attitudes

CoBRAS - Institutional
Discrimination Subscale

$\beta = .85 (.04)^{***}$

$\beta = .14 (.09)$

$\beta = -.11 (.08)$

$\beta = .89 (.03)^{***}$

Child Explicit Racial Bias
Positive Attributions for Black
Children

$\beta = -.05 (.09)$

CoBRAS - Racial
Privilege Subscale

$\beta = -.07 (.08)$

$\beta = -.06 (.10)$

$.15^+$

$\beta = -.07 (.10)$

$\beta = -.03 (.12)$

Child Explicit Racial Bias
Negative Attributions for Black
Children

$\beta = .05 (.08)$

$\beta = -.07 (.09)$

Child Age

$\beta = .01 (.08)$

$\beta = -.01 (.11)$

$\beta = -.17 (.11)$

$\beta = .03 (.11)$

$\beta = -.11 (.06)$

Child Implicit Racial Bias
Social Distance Bias

$\beta = -.42 (.06)^{***}$

Data Collection Site

$\beta = .06 (.09)$

$\beta = -.07 (.07)$

Father
Color-Blind
Attitudes X
Age

$\beta = .03 (.11)$

Child Implicit Racial Bias
IAT – White Preference

Child Social Desirability

Note. Reported parameters are all standardized estimates. ***$p < .001$. ** $p < .01$. * $p < .05$. + $p < .10$.
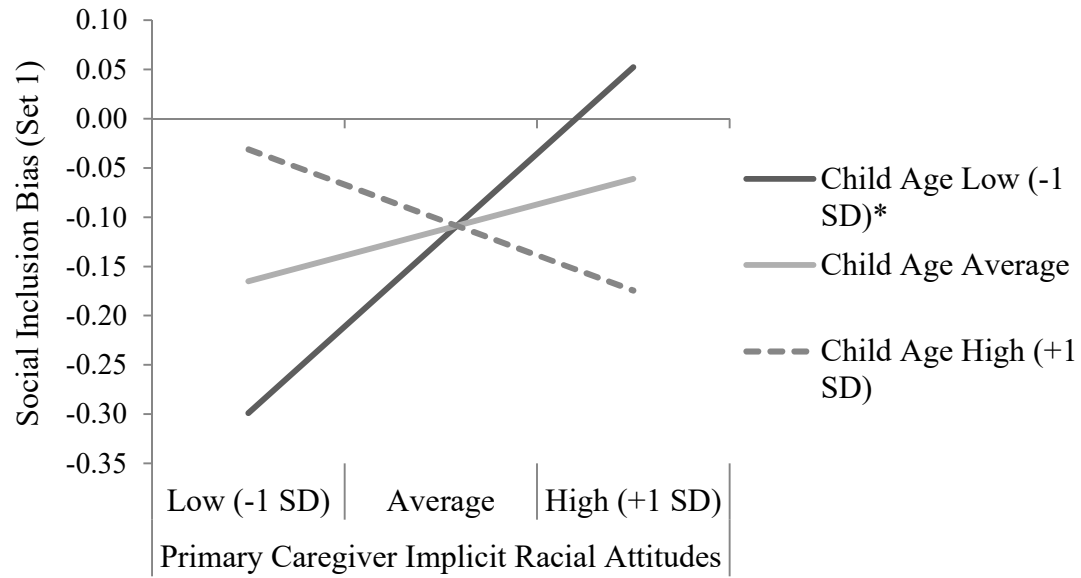
Figure 13

Moderation of Primary Caregivers' IAT and Children's Racial Attitudes by Child Age

Note. Reported parameters are all standardized estimates. ***$p < .001$. **$p < .01$. *$p < .05$. +$p < .10$.

Figure 14

Relation of Primary Caregiver Implicit Racial Attitudes and Child Social Inclusion Bias (Video Set 1) at Levels of Child Age
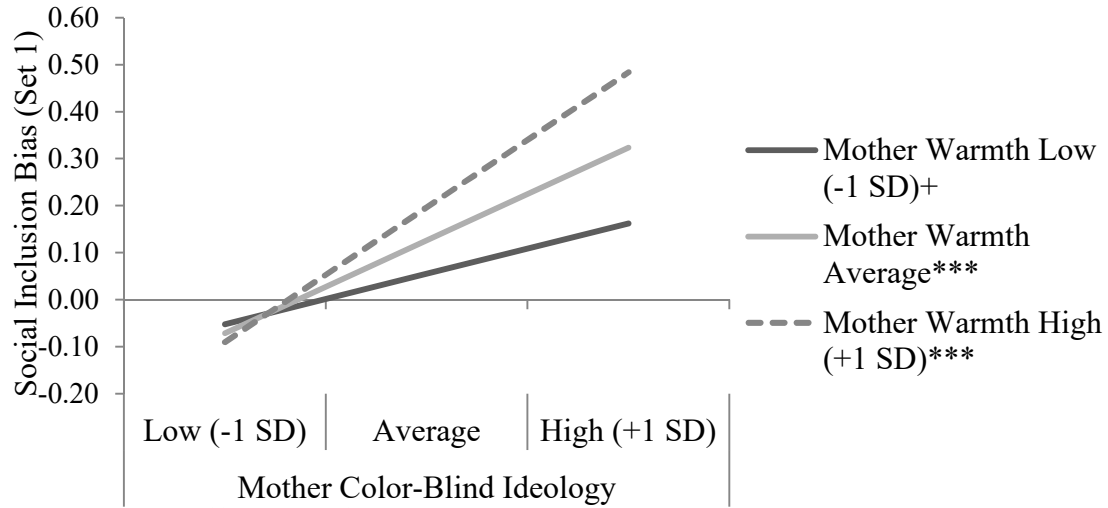

Note. $p < .001.$ ** $p < .01.$ * $p < .05.$ + $p < .10.$

APPENDIX B

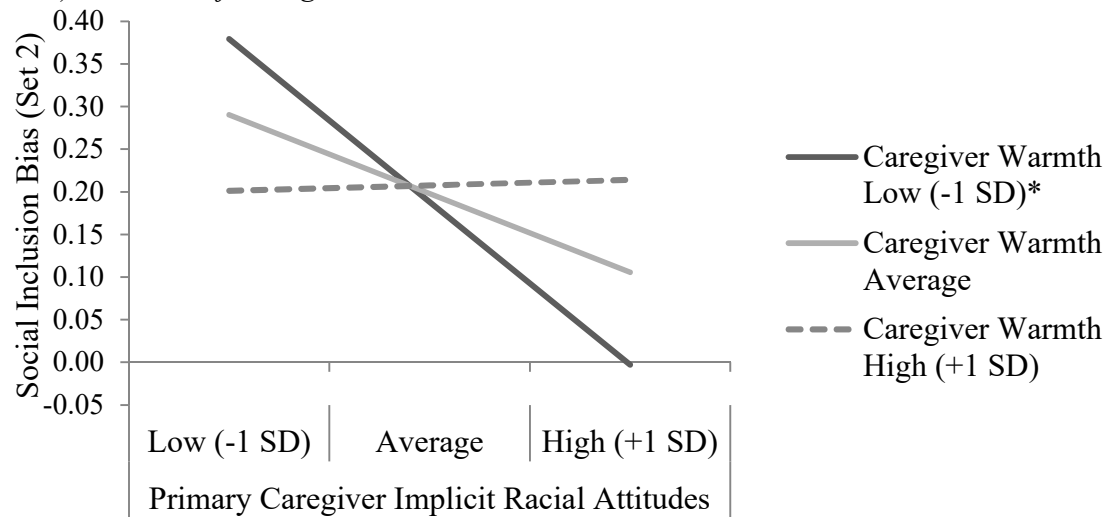FIGURES FOR MARGINALLY SIGNIFICANT FINDINGS

Figure 15

Relation of Mothers' Color-Blind Racial Attitudes and Child Social Inclusion Bias (Video Set 1) at Levels of Mother Warmth

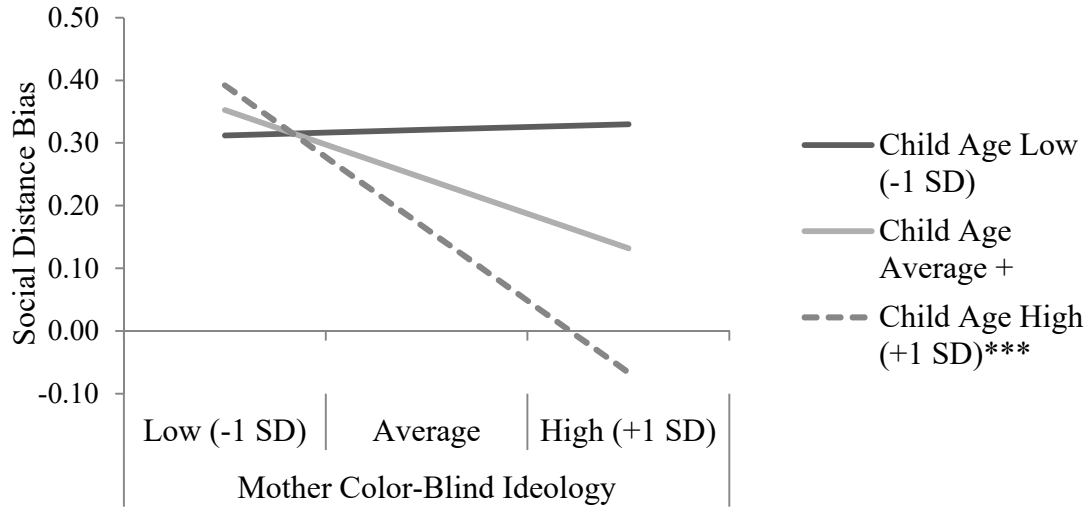*Note. p < .001. ** p < .01. * p < .05. + p < .10.*

Figure 16

Relation of Primary Caregivers' Implicit Racial Attitudes and Child Social Inclusion Bias (Video Set 2) at Levels of Caregivers' Warmth

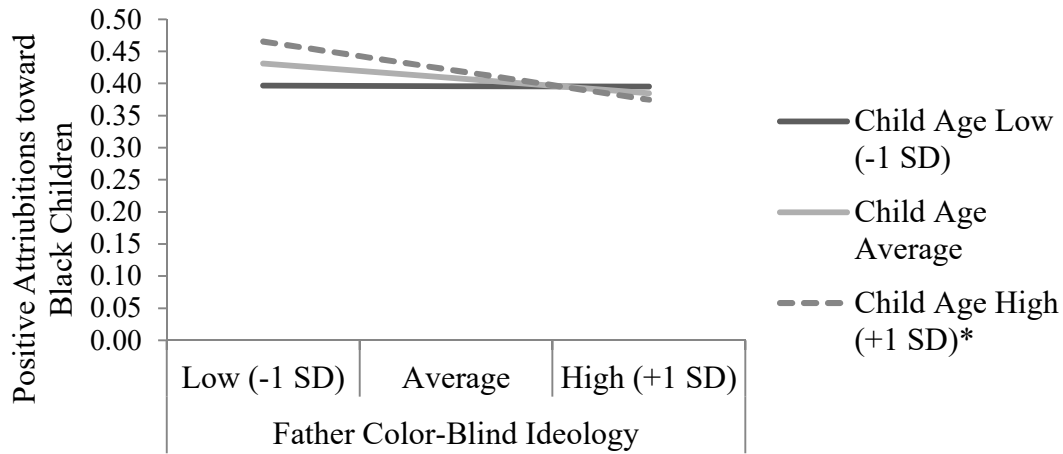*Note. p < .001. ** p < .01. * p < .05. + p < .10.*

Figure 17

Relation of Mothers' Color-Blind Racial Attitudes and Child Social Distance Bias at Levels of Child Age

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

Figure 18

Relation of Fathers' Color-Blind Racial Attitudes and Child Positive Attributions toward Black Children at Levels of Child Age

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

APPENDIX C

UNIVERSITY APPROVAL FOR HUMAN SUBJECTS TESTING

APPROVAL: EXPEDITED REVIEW

Tracy Spinrad
Social and Family Dynamics, T. Denny Sanford School of (SSFD)
480/727-7925

tspinrad@asu.edu

Dear Tracy Spinrad:
On 9/29/2016 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	The Emergence of Children's Attitudes and Prosocial Tendencies Toward Outgroup Members: Pilot Study
Investigator:	Tracy Spinrad
IRB ID:	STUDY00004912
Category of review:	(6) Voice, video, digital, or image recordings, (7)(b) Social science methods, (7)(a) Behavioral research
Funding:	Name: ISSR - Research Support Team
Grant Title:	
Grant ID:	
Documents Reviewed:	• Child Observational Question Items, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Parent Consent, Category: Consent Form; • Extensivity_IRB_application revision1.docx, Category: IRB Protocol; • Questionnaires, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Seed Funding Application_ISSR_March8.pdf, Category: Sponsor Attachment; • Scripts for Recruitment/screening, Category: Recruitment Materials; • Recruitment Flyer, Category: Recruitment Materials; • Screening Form--AKA "Parent Interest Form", Category: Screening forms; • Teacher Letter, Category: Consent Form;

	• Child Assent, Category: Consent Form;
	• Script for Laboratory visit, Category: Participant materials (specific directions for them);

The IRB approved the protocol from 9/29/2016 to 9/28/2017 inclusive. Three weeks before 9/28/2017 you are to submit a completed Continuing Review application and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of 9/28/2017 approval of this protocol expires on that date. When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc:
  Nancy Eisenberg
  Hui ZHANG
  Diana Gal
  Xinyue Xiao