The Denial of Innocence: Implicit Racial Biases and Judgments of Child Behavior based on Brief Observations

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The Denial of Innocence:

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Abstract

Studies on racial bias highlight disparities in negative judgments faced by People of Color (Hinton, 2017) as compared to their White counterparts, and some disparities may be apparent even in childhood. The present study employed an experimental design to examine the impact of child race on participant judgments of child behavior based on brief observations. Students participated and were randomly assigned to one of two conditions involving brief video observations. In the first condition, the target child was Black and in the second, the target was White. Targets were matched in terms of age, socioeconomic status, and expert-rated level of problem behavior. After watching the brief video, participants provided ratings of child behavior using the Conners Teacher Rating Scale-Revised (CTRS-R). A MANCOVA that included participant demographic covariates indicated a statistically significant impact of condition on behavior ratings. Univariate tests and descriptive statistics suggested that the ratings of participants who viewed a Black child were higher for overall problem behavior and for oppositional behavior. The covariate of participant race/ethnicity also statistically predicted ratings, with Black/African American status predicting lower overall problem behavior ratings. Implications concern understanding the impact of implicit racial biases for Children of Color, and furthering efforts to end racism and promote social justice.
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Introduction

Racial disparities mark our 21st Century society, with People of Color in the United States facing disparities in quality education (Monahan, 2014), healthcare (Johnson 2017), and treatment by the criminal justice system (Poe-Yamagata & Jones, 2007; Young & Gainsborough, 2000). Recent scholarly attention has focused on the impact of racial stereotypes and biases on the everyday judgments of people in the United States (Hinton, 2017). Racial stereotypes may influence the decisions people make, who they interact with, and subconscious comfort levels with individuals (Lhamon, 2005). Such judgements may negatively influence social, academic, and economic opportunities for persons from racial and ethnic minority groups, with potential influences beginning even in childhood (Sanders-Phillips, 2009). The present study examines the impact of child race on observer judgements of child behavior based on brief video observations. Implications concern the impact of racism on judgments about young children, and the steps that are needed to reduce racial bias, with a long-term goal of ending racism.

Racial Bias

Racial biases refer to prejudicial ideas about people purely based on their perceived race (Ghani, 2008). Racial biases about People of Color in the United States, who are part of racial and ethnic minority groups, are typically negative ones (NAACP Legal Defense & Educational Fund, 2017). For example, when Fazio et al. (1995) asked participants associate adjectives (e.g., “pleasant” or “awful”) to faces of Black or White undergraduates, he found that the participants, on average, were more likely to associate negative adjectives to Black faces compared with White faces. (Fazio, 1995). The study further found that, for the participants, the Black faces
were associated with prompt association with negative adjective responses as compared with delayed association with positive adjective responses (Fazio, 1995).

Research suggests racial biases result in disparities in how People of Color versus White people are treated. For example, in a study conducted by Bertrand and Mullainathan (2004), the researchers responded to 4,870 job ads in the Chicago and Boston areas with similar applications, and randomly assigned names to the applications that were either stereotypically Black or stereotypically White (Bertrand & Mullainathan, 2004). The research team found that applications with stereotypically White names were 50% more likely to receive callbacks for interviews than those with stereotypically Black names (Bertrand & Mullainathan, 2004).

Those who are White and of European descent, are privileged in terms of race/ethnicity and do not face this same risk of negative treatment due to racial biases (Kwate, 2014). Indeed, the biases associated with people from the majority racial and ethnic groups in the United States would tend to confer privilege rather than disadvantage (Wildman and Davis, 1995). Those who are in this privileged position might lack the personal experience to understand the full impact of racial biases for People of Color (Baldwin, 2016). Given this, White people in particular, might assume that racially biased judgments might be limited to a narrow range of situations or targeted only at adults. Although some might want to believe that the innocence of childhood would protect Children of Color from negative racial biases, unfortunately this does not seem to be the case (Priest, 2018).

**Stereotype**

Understanding several critical concepts will be important for further consideration of the impact of racial biases, and we will define here “stereotypes,” “implicit biases,” and “thin slice
judgments.” In the scope of social psychology, the term “stereotype” can be understood as a relatively fixed, overgeneralized belief about people from a particular group, which may be based on information that is untrue or only partly true (Cardwell, 1996; Priest, 2018). It is an expectation that every person of a particular group acts in a similar manner. This expectation is not limited to just behaviors and may also extend to an expectation about the group members’ abilities, personalities, or preferences (Liberman, 2017). Stereotypes have been found to encourage prejudice, separation, and harm, fostering an “us vs them” mentality, which can be toxic to society and therefore is an important topic of further evaluation and research (Lhamon, 2005). Stereotypes hold importance for the present study because they relate to implicit biases.

**Implicit Biases**

Implicit biases are attitudes that affect our actions, decisions and immediate understanding in an unconscious manner (Chapman, 2013). Whereas explicit biases refer to conscious and clear prejudicial attitudes, and intentionally prejudicial behavior (Brown, 2008), implicit biases, in contrast, are typically not in an individual’s awareness and may even conflict with stated attitudes or intention (Greenwald, 1995). These biases, which include assessments that may be favorable as well as unfavorable, are activated unconsciously or without an individual’s intentional control (Greenwald, 1995). Even those who hold goals of equity can unknowingly act in ways that reflect their implicit biases (Sabin, 2009). On the whole, these biases can have a substantial impact on our everyday decision making (Staats, 2014). They may predict behavior particularly when individuals are in a new situation or encounter an unfamiliar person (Capatosto, 2015).
“Thin-Slice” Judgements

Coined by scholars Nalini Ambady and Robert Rosenthal in 1992, the term thin-slice judgements refers to judgements made based on short, narrow, or minimal experience or information, typically with the judges (individuals observing the thin slices) having zero connection to the observed (Ambady & Rosenthal, 1992). These thin slice judgments are thought to be largely based on implicit knowledge/biases held by the judges themselves. When individuals make thin-slice judgments, they may be particularly likely to draw upon stereotypes, leading to biased judgments, even when the observed behaviors are nonverbal (Richeson & Shelton 2005). For example, a study by Dovidio, Kawakami, & Gaertner (2002) examined how participants assessed perceived ‘friendliness’ of individuals based on brief 3-minute interracial interactions that were similar both in topic and in how the confederates, either White or Black, engaged in the conversation. Findings suggested that, overall White participants were biased to perceive the Black confederates as less friendly (Dovidio et al., 2002).

In some cases, clinicians rely on thin-slice information as a basis for making behavioral evaluations (Halfon et al., 2011). Their observations of a limited slice of behavior, and perhaps only or mostly nonverbal behavior, can influence critical decisions such diagnosing disorders, influencing medication and implementation of life saving measures (Slepian, 2014). From a business standpoint, it could be efficient and cost-effective to briefly observe a target and base diagnostic criteria on brief behavioral encounters (Slepian, Bogart, & Ambady, 2014). Yet research has indicated that a paucity of data can lead to inaccurate judgments. For example, a study by Tom (2009) demonstrated that ratings of a teacher’s skillset based on a 30 second short clip were less accurate compared with those whose evaluations were based on an entire semester. Raters may recognize this limitation. In research on trait judgments that were based on 60
second video clips, Ames (2010) found that raters reported a lack of confidence in their judgments. Unfortunately, if clinicians or others in positions of power make judgments based on thin-slice information, the impact of stereotypes and biases may be magnified, with negative consequences for those in the target group and with a possibility of reinforcing for others the existing stereotypes and biases held against people from certain socioeconomic classes, and racial groups (Abreu, 1999).

The extant literature includes studies focusing on thin-slice judgments in situations that threaten the observer (Klapatch, 2014), for mental diagnostics of adult patients (Slepian, 2014), and for rating skillsets in professional settings (Wood, 2014), as well as a range of other scenarios that involve adults. Few studies, however, have examined thin-slice judgments of young children’s behavior.

**Children of Color and Racial Bias**

Children are generally understood as a specific group relating to humans who are of a principle young age and display certain characteristics of development (Giroux, 2000; Haslam, Rothschild, & Ernst, 2000; Hendrick, 2003; Kitzinger, 2003). Children, as a group, are generally perceived as innocent (Haslam, Rothschild, & Ernst, 2000). However, this general perception may be limited for Children of Color, who may face effects of negative racial stereotypes from a young age. Implicit, negative racial biases targeting Children of Color have been documented for healthcare professionals (Correll, 2009), law enforcement officers, (Sabin, 2009) and even individuals whose careers require a sworn duty to neutrality, such as judges (Rachlinski, 2009).

For example, in a recent study that measured implicit bias of pediatricians towards Children of Color, the results found that trainees exhibited levels of implicit racial bias that were similar to the levels demonstrated with respect to Adults of Color (Johnson, 2017). Johnson
(2017) found there was no significant difference between Adult and Child Race (IAT) scores in the Implicit Association Test. This suggests that, like Adults of Color, Children of Color may face negative effects of racial biases exhibited by their health care professionals (Johnson 2017). Physician racial biases, whether exhibited by physicians in training or pediatric residents, could contribute to health care disparities for Communities of Color (Smedley, 2002; Johnson, 2017). Disparities in health and healthcare relative to White populations have been extensively and consistently documented for African Americans, as well as to some extent for other racial/ethnic minority groups (Ryn, 2015).

_Education_

Unfortunately, teachers and other educators are also susceptible to the influence of implicit racial biases (Staats, 2014). Okonofua and Eberhardt (2015) explain that teachers may be especially likely to respond harshly to a Student of Color misbehaving over time, compared with a White student, because the Students of Color are frequently stereotyped as troublemakers in school contexts. Their (2015) study examined K-12 teachers presented with information about mock students who committed the same minor infractions (e.g., class disruption, excessive noise). Across most age groups of children, teachers reported feeling significantly more “troubled” by the mock Students of Color who committed these infractions than by the mock White students who did the same (Okonofua & Eberhardt, 2015). In addition, results suggested the teachers would seek harsher disciplinary action against the Student of Color, even though the infractions were of equal magnitude. In relation to infraction terms such as "disruptive behavior," "disrespect," and "excessive noise," which are somewhat ambiguous and dependent on context, Okonoufa and Eberhardt (2015) found that teachers were significantly more likely to imagine themselves suspending the Students of Color in the future compared with the White students.
These are significant ethical issues for our society: Once stereotypes come into play and influence which students the teacher decides to punish and how severe the punishment can be, Children of Color may no longer be just recipients of discipline, and rather may become “victims of the school systems” (NAACP Legal Defense & Educational Fund, 2017).

A comprehensive 2017 report by the NAACP Legal Defense and Educational Fund (LDEF) found that, according to U.S. Department of Education data from 2012, Students of Color, who made up 16% of students in the United States, accounted for 42% of out-of-school suspensions. Students of Color were over three times more likely than White students to be suspended or expelled from school. This report noted the potential implications in terms of entrapment in a cycle of disproportionate discipline, as a student who is suspended once is more likely to get suspended again (NAACP LDEF, 2017). Monahan (2014) similarly noted the problematic consequences of suspensions, explaining that once a Student of Color is suspended, the chances that they will drop out of school, become unemployed or underemployed, and enter the criminal justice system, rise dramatically.

Biased judgments of Students of Color may prompt further biased judgments of them by others in positions of power, and may also trigger self-judgments that perpetuate disparities (Bonefield, 2018). A robust literature documents the existence of self-fulfilling prophecies, or the ways in which individuals tend to conform to the expectations for their behavior. Research has shown that teachers’ expectations predict the way students perform and affect academic success, in part due to self-fulfilling prophecies (Bonefield, 2018; Rosenthal and Jacobson, 1968; Jussim and Harber, 2005).

Disparities in behavioral and educational outcomes for Children of Color versus White Children are apparent beginning even in early childhood educational settings. According to the
NAACP Legal Defense & Educational Fund (2017), Boys of Color represent 19% of male preschool enrollment, but 45% of male preschool children receiving one or more out-of-school suspensions. Girls of Color represent 20% of female preschool enrollment, but 54% of female preschool children receiving one or more out-of-school suspensions (2017).

Although there is good reason to believe that racial biases contribute to disparate outcomes for Children of Color as early as the preschool years, there are few experimental studies of implicit biases and judgments of child behavior in preschool, and there is much to be learned about the circumstances in which racial biases operate. The research on thin-slice judgments (Slepian, Bogart, & Ambady, 2014) suggests that such biases may be particularly influential when judges have limited information about a target child. The present study probes the potential impact of implicit racial biases on thin-slice judgments of child behavior, comparing Black versus White preschool children.

**Present Study**

The purpose of the present research was to examine the potential impact of racial biases on ratings of preschool children based on thin-slice information that included brief video observations. We focused on preschool children because of the limited information about the impact of implicit biases for this age group, and the importance of understanding how racism may influence children’s early education. For this initial investigation of an understudied topic, we focused on Black versus White boys. This focus made sense as a starting point given the historical and present realities of racism for Black people in the US (Sears, 2003), and the relatively strong research base specifically comparing biases against Black versus White adults (Harris & Lieberman, 2013), as well as the important intersection of race and gender in terms of disparities in behavioral outcomes (Bécares & Priest, 2015). We located the study at a State
university where students in an introductory psychology class served as participants. The
University is widely known for its focus on training teachers as well as psychology
professionals, and the judgments of the student participants might provide some insight into the
potential impact of racial biases for individuals whose current and future judgments are likely to
hold real world significance.

Method

Participants

Participants were 388 undergraduates at a State University in the Mid-Atlantic Region of
the US. Participants were recruited for a study on “Brief Observations of Children’s Behavior”
via introductory psychology courses that included psychology majors as well as non-majors. Of
the participants, 71% identified as female and 21% as male, and 72% reported being in their first
year of college. Their mean age was 18 years and 11 months ($SD = 1$ year and 7 months). In
terms of race/ethnicity, 75.16% of the participants identified as White/European American,
17.42% Black/African American, 3.2% Asian American, .3% Hispanic/Latinx American, and
3.92% multiracial/multiethnic. According to their reports about parental education levels and
employment during their childhood, approximately 80.7% of the participants had been raised in
middle or upper SES families and 19.3% had been raised in lower SES families. About 57% of
the participants reported prior work experience with children.

Procedure

Ethical standards were followed in this research and all procedures were approved by the
appropriate institutional review boards (IRBs). Participants were students in introductory
psychology classes who were given information about a research participation or alternative assignment and had the opportunity to select one of several studies to sign up for if they opted for research participation. Those who opted to sign up for the present study, titled, “Judgments of Child Behavior Based on Brief Observations,” were greeted, brought into a quiet lab room, and asked to sit at a desk in front of a computer at their designated sign-up time. After being read an overview of the study (Appendix A), potential participants were given the opportunity to sign to indicate informed consent for their participation. As is common procedure in experimental studies of racial biases, some deception was used, in that participants were told the study was to assess how accurately university undergraduates could judge the behavior of preschool children based on brief observations, but were not told that a focus was implicit racial biases, or that they would be randomly assigned to a condition observing a Black child or a condition observing a White child.

For those students signed informed consent (Appendix A) and elected to participate, the research assistant (RA) discretely referenced a list for the random assignment of the participant to one of two video clips (children playing with blocks or children painting) and then to either the condition observing a Black child or the condition observing a White child. Correspondingly, the RA placed the condition-appropriate fake “class list” sheet of paper on the desk, and said to the participant, either, “I think I am going to have you observe Calif (Kah-leaf) today” (a Black child) or, “I think I am going to have you observe Cooper today,” (a White child), “Let me pull up that video.” [The RA used the name “Calif” or “Cooper” throughout the study when referencing the target child for every participant.] The race of the child was not mentioned before the observation portion began. The research assistants started the five minute video clip, pointed to the target, and provided a standard description of the outfit the child was
wearing so the participants would know which child to focus on, before leaving the room and closing the door so that the participant could watch on their own.

At the completion of the viewing, the participant filled out the Conners Teacher Rating Scale (CTRS-R) (Appendix B) about the target child. After this questionnaire was collected, they filled out a second demographic questionnaire about themselves providing information including: age, gender, race, year in school, SES, experience working with children, and time spent with children. The participants also were asked to write a brief paragraph about what they thought the purpose of this study was.

Finally, the research assistants debriefed the participants. The focus of the study on implicit racial biases was explained (see Appendix C). Participants were asked to keep information about the study confidential. They were thanked and awarded credit for participation via the University’s online participant database.

**Stimulus Materials**

The five minute video clips used in the present study were drawn from multiple hours of filming at a local Head Start preschool, and focused on 4-year-old male children from low-SES backgrounds either painting or playing in the “block area” of a single preschool classroom, with two other male peers. Specifically, the painting video showed three male peers quietly painting, exhibiting little to no disruptive or off task behaviors. The block area video showed the same three male peers playing with blocks and building a structure together also with little to no disruptive or off task behaviors. The filming of children for this purpose was approved by the appropriate IRBs and parents provided informed consent for the filming of their children for the purpose of this study. Teachers at the preschool provided overall ratings of child behavior based
on the Conners Teacher Rating Scale, and a pool of Black and White male children were selected as potential targets based on teacher ratings that suggested similarly low levels of problem behavior. Of this pool, videos of children who were observed to have periods of play with one another, and with a common third male peer, were watched by clinical psychology graduate students, who then used the Conners Teacher Rating Scale to provide ratings of the problem behaviors that these children demonstrated during various, 5min observation periods.

The clips that were ultimately selected as stimulus materials included three male peers: one Black/African American, one White/European American, and one Asian American, all of whom received the same numerical rating from teachers judging overall levels of problem behavior as well as from graduate students judging demonstrated problem behavior during the 5min observation periods. All of the children were judged by graduate students to be of their parent-identified racial/ethnic group. Participants were randomly assigned to a condition that told them to focus on the behavior of either the Black child “Calif” or the White target child “Cooper,” and to one of two clips: blocks or painting. Both clips included discussion among the children of what they were building or what they were painting. Both included matched instances of teacher praise and teacher reprimands for the target children. The names Calif and Cooper were chosen because they had appeared multiple times on the collaborating preschool’s class lists in prior years, with a consistent association with Black or White child race, yet were not the names of any children presently attending the preschool.

**Demographic Covariates**

A standard demographic interview provided information about potential covariates including participants’ age, gender, race/ethnicity, years of experience working with children,
and childhood SES, which was coded based on Hollingshead-type (Hollingshead, 1975) categorization of parental education levels and jobs as lower SES or middle/upper SES.

**Dependent Measures**

Ratings of child problem behavior on the Conners Teacher Rating Scale- Revised (CTRS-R; Conners, 1997) served as the dependent measure (see Appendix B). This measure corresponds to DSM-IV diagnostic criteria for ADHD, and there are two versions: a long form with 59 items and a short form with 28 items. The short form was used for the present study. The 28 items on the short form support three subscales corresponding to symptoms of ADHD as well as an overall ADHD index. Three of the scales include items measuring the following respective dimensions of child behavior that related to the diagnosis of ADHD: oppositional behavior/defiance (e.g., “Defiant, refuses to comply with adult requests”), cognitive functioning/inattention (e.g., “Inattentive, easily distracted,”) and hyperactivity (e.g., “Restless, excitable, impulsive”). The fourth scale comprises an overall ADHD index, which corresponds to the DSM’s criteria for ADHD at the time the measure was developed. The standard version of the measure instructions ask raters to consider, “How much has this been true for this child in the last month?” and to provide ratings on a Likert-type scale from 0 to 3, with 0 being “not at all” and 3 being “very much.” In the present study, participants were asked just to consider, “How much is this true for this child?” Whereas the video clips provided information to support answering most items, there were 3 items for which the videos provided no opportunity for observation: “Poor with letters,” “Poor with numbers,” and “Not reading up to par.” Participants in the present study were instructed to take their best guess if they were not sure about an item.

The original form of the CTRS (Connors, 1969) was normed to determine the standardized scores by using a large representative sample of 1,702 schoolchildren, ranging from
3 to 17 years old with an equal ratio of male to female and a median income comparable to the 1993 census (Conners, 1998). Normative data was collected from 200 different sites covering 49 U.S. states along with all 10 provinces in Canada (Conners, 1998). A smaller sample from a single metropolitan area was used for the 1997 revision (Erford, 1998).

The CTRS has been widely used, and has shown good reliability and validity. For example, a one-week test-retest reliability study by Edelbrock, Greenbaum & Conovier (1984) reported coefficients of .88 to .96 for the identified factors. Edelbrock and Reed (1984) further compared the CTRS to other similar scales such as the Child Behavior Checklist – Teacher Response Form (CBCL-TRF) and reported moderate to high correlations, suggesting good convergent validity. Edelbrock et al. (1985) also reported good convergent validity when they compared the CTRS-28 to the Teacher Version of the Child Behavior Profile (CBP).

Erford (1998) compared the CTRS-R with other scales such as the ADD Comprehensive Teacher Rating Scale (ACTeRS), School Stations Questionnaire (SSQ) for problem behavior (Barkley, 1987), and Disruptive Behavior Rating Scale-Teacher Version (DBRS-T), which were designed to measure similar constructs, and concluded that the CTRS-R displayed adequate face, construct, and criterion-related as well as convergent validity, with correlations ranging from .52 to .72 between subscales on the CTRS-R and those on the DBRS-T that were designed to measure similar constructs. Erford (1998) reported internal reliability coefficient alphas for the CTRS-R ranging from .73 to .95 for males and .76 to .94 for females. In the present study, Cronbach’s alpha was .93 for the overall measure, suggesting high internal consistency.

Results

Results included a zero-order correlational analysis to assess the relations among variables of interest and a Multivariate Analysis of Covariance (MANCOVA) used to assess the
impact of child race on participants’ ratings, with controls for key participant variables of gender, race/ethnicity, and experience working with children. Table 1 displays results of the correlational analysis. Results indicated statistically significant zero-order correlations between condition (which corresponded to child race, dichotomously coded such that 1 = Black) and participant ratings of oppositional behavior ($r = .124, p = .010$) as well as the overall ADHD index ($r = .138, p = .004$). The correlation between participant gender (dichotomously coded such that 1 = male) and ratings of oppositional behavior was also statistically significant ($r = .096, p = .046$).

Multivariate tests ($df = 383$) revealed a significant main effect for participant condition or observation a Black versus White child (Wilks’ Lambda = .960, $F = 3.930, p = .004$, $\eta^2_p = .04$, power = .902) as well as for the covariate of participant race/ethnicity dichotomously coded such that 1 = Black/African American (Wilks’ Lambda = .972, $F = 2.699, p = .030$, $\eta^2_p = .028$, power = .747). Main effects were not statistically significant for participant gender dichotomously coded such that 1 = male (Wilks’ Lambda = .981, $F = 1.867, p = .115$, $\eta^2_p = .019$, power = .565) or for experience working with children (Wilks’ Lambda = .990, $F = .909, p = .459$, $\eta^2_p = .010$, power = .289).

Tests of between-subjects effects (see Table 2) showed statistically significant effects of participant condition of observing a Black versus White child on the CTRS-R subscale of oppositional behavior/defiance ($F = 5.993, p = .015$, power = .685) and the overall ADHD index ($F = 4.952, p = .027$, power = .602). Tests of between-subjects effects also showed statistically significant effects of participant race/ethnicity on all three CTRS-R subscales: oppositional behavior ($F = 9.264, p = .002$, power = .859), cognitive functioning/inattention ($F = 5.396, p = .021$, power = .640), and hyperactivity ($F = 8.539, p = .004$, power = .830), as well as on the overall ADHD index ($F = 7.098, p = .008$, power = .757).
Descriptive statistics (Table 3) and univariate statistics confirmed that the problem behavior ratings of participants randomly assigned to observe a Black child were statistically higher \((M = 61.89, SD = 11.59, p = .015)\) than those of participants assigned to observe a White child \((M = 59.06, SD = 11.63)\) for the CTRS-R subscale of oppositional behavior, and the overall ADHD index \((M = 60.42, SD = 7.59, p = .027)\), for those assigned to observe a Black child versus \((M = 58.94, SD = 5.97)\) for those assigned to observe a White child.

Descriptive statistics with independent samples t-tests (Table 4) also showed that participants who identified as Black/African American provided problem behavior ratings that were lower than participants from White/European American and other racial/ethnic groups for all three CTRS-R subscales: oppositional behavior \((t = 3.048, p = .003)\), cognitive functioning/inattention \((t = 2.461, p = .016)\), and hyperactivity \((t = 3.191, p = .002)\), and for the overall ADHD index \((t = 2.741, p = .007)\). Although participants who identified as Black/African American provided problem behavior scores that were lower overall, the scores were statistically lower just for the condition observing a White child (with the exception of hyperactivity, which did not meet the threshold for statistical significance), whereas scores were not statistically lower than those provided by participants who were White/European American or of other racial/ethnic backgrounds for the condition observing a Black child (see Table 4).

**Discussion**

Racial disparities are apparent in most institutions of U.S. society (NAACP Legal Defense & Educational Fund, 2017). Racial biases contribute to disparate outcomes for People of Color, with biases influencing treatment and outcomes even for Children of Color (Hall, 2015). Few studies have examined the impact of implicit racial biases on judgments of young children, and the present study was designed as an initial effort to address this gap. For an initial
investigation into this area, we designed an experiment in which participants watched brief video clips and then rated child behavior, with random assignment of participants to observe and then rate the behavior of either a Black or White male child, who showed the same level of expert-rated problem behaviors. Understanding the impact of racial biases for young children is important for efforts to reduce the impact of negative biases and promote equitable treatment.

We hypothesized that participants assigned to observe a Black child would provide ratings that, on average, indicated higher levels of problem behavior, compared with those assigned to view a White child. The results supported this hypothesis, with a statistically significant main effect of participant condition on behavior ratings, and higher average problem behavior ratings provided by participants assigned to view the Black as compared with White child. This matches literature suggesting that racial biases influence judgments of the behavior of older children (Goff, 2014), adolescents (Monahan, 2014), and adults (Johnson 2017). Findings of the present study build on the extant literature and document the impact of racial biases on ratings of even young children’s behavior. Although we hypothesized that this effect would be present, it is disheartening to find that racial biases influence judgments of children even in the preschool years, when many would assume that children would be able to operate free from such biases.

In addition to an overall effect of condition on behavior ratings, we found that ratings of behavior problems were statistically higher for the Black target child as compared with the White target child for the subscales measuring oppositional behavior as well as the overall ADHD index. The findings for the overall ADHD index are aligned with evidence suggesting that racial biases lead Black males to be judged as having more problematic behavior (Morgan, 2013). Notably, even with biased judgments of behavior, African American boys are less likely than
their White counterparts to receive a diagnosis of ADHD (Morgan, 2013) an apparent paradox that deserves further study. The present findings for oppositional behavior also align with past literature suggesting Black people, and Black males in particular may be stereotyped as “angry” or “oppositional” (Teplin, 2002). The present findings support past literature in suggesting that such stereotypes may be activated even when a target does not display behaviors that warrant them (Judd, 1993), and suggest that these stereotypes may be applied even to young, Black males.

Ratings of problem behavior for the Black versus White males were not statistically different for the subscales measuring cognitive problems/inattention or hyperactivity. At least two possibilities could explain the lack of statistically significant findings for these subscales. One is that such aspects of behavior are less strongly linked to stereotypes of Black males than those related to oppositional behavior (Hurwitz, 1997). Another is that the sample size and power did not support documenting significant effects of racial bias on these subscales, even though some effects may have been operating. These possibilities are not mutually exclusive.

Present findings suggested a statistically significant effect of participants’ own race/ethnicity on their ratings of child behavior based on brief observations. Participants who self-identified as Black/African American provided child problem behavior ratings that were lower on average than the ratings provided by participants from other racial/ethnic groups. There are multiple possible reasons for this finding, and we will mention two that are not mutually exclusive. One is that Black/African American participants were prepared to provide more accurate ratings: In general, their ratings were more similar to those provided by expert raters (teachers and graduate students), who were from varied racial/ethnic backgrounds. Although we controlled for participants’ age and years of experience working with children,
these controls may not have fully captured experiences that could lead to greater accuracy in judging child behavior for Black/African American participants in the present study. Another possibility is that Black/African American students have greater tolerance for or leniency in terms of judgments of problem behavior and are less likely to view as problematic those behaviors that afford multiple interpretations. Although there could be multiple reasons for such leniency, one could be that Black/African American students might be more likely to have had their own behavior judged harshly and might not want to judge children harshly themselves.

Although Black/African American participants provided ratings of child problem behavior that were lower overall than those provided by participants who were White/European American or from other racial/ethnic groups, when broken down by condition, the ratings were statistically lower just for the condition observing a White child (for oppositional behavior and inattention subscales, and the overall ADHD index), whereas there was no evidence of statistical difference for the condition observing a Black child (for any subscales). Although cell sizes did not support testing the impact of condition for just the subset of Black/African American participants, and the MANCOVA did not support conclusions about interaction effects, descriptive statistics indicated that the general finding of higher problem behavior scores assigned to Black children held up for Black as well as for White participants.

The reasons for this finding are interesting to consider. There is a possibility that Black/African American participants were reluctant to judge White children as having problem behaviors because they might have feared repercussions for negative judgments of White people, particularly in the context of a majority White institution (Steele, 1997). There is also a possibility that the behaviors exhibited by the White child were interpreted via a cultural lens and thought by Black/African American participants to be common for White children (Hardin,
Whereas the judgments of White participants are thought to reflect conditioning of racism, those of Black participants may reflect conditioning of racism and internalized racism (Campón, 2015). A recent comparative study by Molina & James (2016) defines internalized racism as “the acceptance of negative attitudes, beliefs, ideologies, and stereotypes perpetuated by the White dominant society as being true about one’s racial group,” and noted that internalized racism may function to perpetuate and maintain racism.

On the whole, the present study extends the literature on the impact of racial biases by showing the potential for such biases to influence ratings of young children’s behavior in a preschool setting. The disproportionately high rate of preschool suspensions for Black males, who represent 19% of male preschool enrollment but 45% of those males receiving one or more out of school suspensions (NAACP Legal Defense & Educational Fund, 2017), suggests the importance of further inquiry into the impact of racial biases on judgments of young children’s behavior. Findings for older children and adolescents also suggest the importance of further study, as Children of Color are 18 times more likely than white children to be tried and sentenced as adults because they are seen as more problematic, and as exhibiting significantly more oppositional behavior to authority (Poe-Yamagata & Jones, 2007). The present results echo findings from healthcare research that have shown that pediatrician trainees show similar levels of implicit biases against Children of Color as against Adults of Color (Johnson, 2017). The present results suggest that young Children of Color do not escape negative racial biases about their behavior and suggests the importance of further study of this topic.

The study also extends the literature on thin-slice judgments. Past literature suggests that biases may be most likely to operate in situations when judges have little opportunity to observe or gain information about a target (Ambady & Rosenthal, 1992). The present study demonstrates
the potential for racial biases to influence ratings of child behavior when observers have access only to thin-slice information. Unfortunately, there are many real-world situations in which professionals in education, psychology, and related disciplines may judge child behavior based on thin-slice information (Okonofua & Eberhardt, 2015; Slepian, 2014). Thus, the present findings may hold real world relevance.

The present study has implications for the identification or diagnosis of child behavior problems and for the training of professionals working with children. Without programs to increase awareness of racial biases and promote their modification or reduced impact, racial biases may affect judgments of child behavior by educators, social workers, psychologists, physicians, and other child behavior specialists. Such biased judgments could result in inappropriate responses to children’s displayed behavior, including within-school and out-of-school consequences imposed on perceived behavioral infractions, and in misdiagnoses of behavioral issues such as ADHD or oppositional defiant disorder (ODD).

The present study suggests that students in university settings hold racial biases that could affect their pre-professional and professional competency and imply the potential importance of including anti-bias training as part of coursework as well as extracurricular programming. This may be particularly relevant for universities training pre-service teachers, social workers, counselors, psychologists, and other child behavior specialists and healthcare workers.

It’s important to acknowledge that reducing implicit racial bias is easier said than done. A meta-analysis conducted in 2019 found that implementing anti-racial bias training or education into different cultures alone may be insufficient to translate into the real world and may even have the opposite intended effects (Fitzgerald, 2019). Still, some programs are empirically
indicated to decrease racial bias. For example, the multifaceted prejudice habit-breaking program, which focuses on motivating individuals to replace biased responses when the individual is aware and concerned about the consequences of their bias, has been implemented in the education setting and has been shown to decrease their implicit racial bias as measured by Black–White IAT (Devine, 2012). Also the Counter-prejudicial training program, which focuses on implicit racial bias, has been implemented in a laboratory setting and has been shown to decrease the activation of biased associations and enhances response monitoring when compared to those who received pro-prejudicial or no training, as measured by the IAT (Calanchini, 2013). Further resources might be put into the study and development of these and other programs for decreasing implicit biases.

**Limitations**

The present study represents an initial investigation into an understudied area of the impact of racial biases on thin-slice judgments of child behavior, and is limited in its design. Limitations include those related to the sample of participants, the procedure, the stimulus material, and the problem behavior measure chosen for the present study.

College students taking introductory psychology classes at a State university served both as a convenience sample and as one that would provide a window into implicit biases for pre-professionals with a fairly high likelihood of future work with children. Although there were strengths to this sampling choice, there were also limitations. Key among these was the limited diversity of the sample, with 71% of the participants identifying as White/European American, 80.7% classified as having been raised in middle or upper SES households, and 72% reporting first year college student status. Future studies would benefit from a more diverse sample of
participants and one that is more representative of the U.S. population. Also, if future studies chose to sample pre-professionals, it might be useful to sample students at different years during their college or graduate school training, and to gauge the impact of college coursework on judgements of the behavior of children from different racial backgrounds. The geographic location of the present study in the Mid-Atlantic region of the US was useful for understanding possible biases of pre-professionals in this region, but results might not be generalizable to other geographic areas in this country, or to other countries. Future studies might benefit from sampling participants in varied geographic locations.

In terms of the procedure, the sample may have been further because potential participants were given choices that included several different studies for which they could receive credit for a course assignment, as well as an alternate assignment. The present study was the only one of the choices that focused on children, and those who chose to participate may have had a level of interest in children that was higher than average for students in introductory psychology courses, perhaps with greater than average past experience with children, or future interest in working with children. It would be interesting to test for potential differences in implicit biases in ratings of child behavior for those with different levels of interest in working with children, or with different majors and career goals.

Random assignment of participants to observe a Black versus White preschool child kept this initial experiment simple in terms of design and execution. However, the importance of studying how racial biases may influence different racial/ethnic groups should not be underestimated. Given differences in stereotypes of those from different groups (for example, the stereotype of Asian Americans as being a “model minorities” who show model behavior and academic achievement (Kitano, 1973; Trytten, 2012)), different results might be expected if a
study were to focus on different racial/ethnic groups. We hope the present study acts as a steppingstone for a future studies into the topic of racial biases in judgments of child behavior; ones including children of additional racial and ethnic backgrounds, skin colors, ages, gender identities, and socioeconomic statuses, as well as in different contexts (e.g., preschool versus home), engaged in different activities, interacting with different peers, and displaying different levels of expert-rated problem behavior.

Experimenter gender and/or race may have also played a role in influencing the results. The past literature suggests that experimenter demographics may be associated with differential participant responses, particularly depending on the match or mismatch with participant demographics (Marx, 2005). Past literature examining the influence of experimenter race and gender on pain reporting, for example, found self-reported pain unpleasantness and intensity scores were higher among African American participants compared to White participants only when pain was reported to a female experimenter (Weisse, 2015). In the present study, four of five experimenters were White and three were female. Cell sizes did not support examining potential interactions with experimenter race or gender, but these variables may have influenced results.

In terms of the stimulus material, it is particularly important to note that only male children were used in the videos. This simplified the study design: given the impact of the intersection of race and gender, any variation in target child gender or peer gender would have warranted experimental control. Yet Black females often are understudied (Annamma, 2016), and it would be important for future studies to examine the potential for implicit racial biases to impact ratings of the behavior of Black girls as well as Black boys. Although we chose preschool children because this group is understudied with respect to this topic, studies of the impact of
racial biases on judgments of older children also are limited, and future studies across age groups would be beneficial.

The video clips chosen either displayed children painting or playing with blocks. These activities were chosen because they seemed like ones that would allow for some peer interaction and behavioral variation (more so than activities such as circle time or story time) while maintaining some consistency in child behavior and avoiding the wide range of variation that might be apparent at recess or in sociodramatic play or certain other activities. Still, future studies should probe a wider range of child activities to understand the range of situations in which racial biases may come to bear. Moreover, we focused on children who had been rated by teachers as showing overall low levels of problem behavior. This was important for examining the potential for racial biases to influence judgments about even Children of Color who displayed very few behavior problems. Yet the Children of Color who might face the most serious consequences of racial biases might be those who display subclinical levels of problem behaviors and are at risk for misdiagnosis, or those who display clinical levels and might be at risk for facing severe consequences rather than receiving appropriate treatment.

One of the biggest limitations of the present study was the inclusion of just a single Black target child and a single White target child. Although we controlled for key variables such as child age, SES, and expert-rated level of problem behavior, we could not control for every aspect of these children’s ethnic heritage, identity, appearance, or behavior, and unmeasured variables could explain the demonstrated results. For example, it could be that the children differed slightly in height and that participants judged child behavior based on child height and perceived age. Future studies with multiple targets of a given racial background would be important for confidently reporting the impact of racial biases. Additionally, although the script that was read
to participants noted that the children were in preschool, the age of the children was never explicitly mentioned. Past research has demonstrated that students who judge Black boys not only overestimate their age, but also view them as less innocent, with a lower association to the idea of “childhood” when compared to their White peers who are of the same age (Goff, 2014). Judgments of the Black child may have differed because participants assigned to focus on that child believed the child to be older.

Notably, the mock names assigned to the target children (“Calif” for the Black child and “Cooper” for the White child) were intentionally chosen to enhance the salience of race/ethnicity. The names had appeared multiple times on prior class lists from the collaborating preschool and were consistently associated with Black or White racial background, respectively, and thus were thought to confer authenticity as well as perhaps prime racial stereotypes. Prior evidence suggests that names that are stereotypical for a particular race may elicit a bias on their own without other stimuli present (Bertrand & Mullainathan, 2004). Implicit biases apparent in the present study might be limited to cases comparing children with stereotypical "Black" names versus those with stereotypical “White” names, and future studies on this topic might assign a common name (e.g., “David”) to both participants to disentangle effects of perceived race ethnicity based on physical features versus effects of race-stereotypical names.

Using video clips instead of live observations was important not only for convenience sake for the researchers (e.g., not needing to transport children to a lab or undergraduate participants to a preschool), but also for maintaining consistency in behavior that was being observed and rated. Children may show wide variability in their behavior and even the slightest change in time, hunger levels, and/or environment could have an impact on child behavior, even if children were asked to serve as actors and to display particular behaviors. Yet observations of
children in person might differ from those of children in video recordings. Furthermore, brief clips provided for only a limited amount of information to be presented about the children, and thereby allowed for a study of thin-slice judgments. Yet here in lies the strength and weakness of the study, as the observers did not get to see everything that might be required for an accurate rating, thus leaving the judge with no choice but to guess how the child may act in situations not depicted. Future studies might additionally investigate the potential impact of racial biases in situations in which a judge has a fuller range of information available.

Inevitably in a laboratory study such as the present, there is the possibility that participants behave differently than they would in real life. Participants in the present study might have put less effort into their ratings of child behavior than they would have if asked to rate children in a professional situation, because they might have assumed their ratings did not have real world consequences. At a future point, laboratory studies of racial bias should be supplemented by studies conducted in the community, in situations where participants perceive there to be real consequences of their ratings. There was also the ever looming potential that participants, who completed the study, to disclose to other classmates the true purpose of the study. This variable was accounted for by implementing a question at the end of the demographics questionnaire that asked the question, “What do you think was the purpose of this study?” The responses of participants included in the present study did not indicate knowledge of the true purpose to assess potential racial biases.

In terms of the child behavior measure, a strength of the present study is the use of a measure that is standardized and used in real world educational and psychological settings. Yet the use of a single measure of child behavior is a limitation, and it would be useful for future studies to include multiple measures. Additionally, the present study assumed a focus on
“implicit racial biases” yet may also have captured the impact of explicit racial biases. Future studies might include measures of implicit bias such as the IAT (Greenwald et al., 1998) as well as measures of explicit biases such as the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960; Paulhus, 1991) or Modern Racism Scale (McConahay, 1986; McConahay et al., 1981) to disentangle these effects.

**Future Directions**

Overall, the study of how implicit biases may influence judgments of children is in its infancy, and our hope is that the present study will inspire future work in this area. In addition to future studies of racial bias, future investigations might probe additional issues such as gender bias or stigma associated with mental health problem diagnoses, and the intersection of these issues. Most educators today are women, and if there is an intra-gender bias in favor of girls over boys, it could lead to harsher ratings of boys’ behavior and possibly to harsher consequences or misdiagnoses. Alternatively, internalized sexism could lead female teachers to judge more harshly the behavioral infractions of girls as compared with boys, and this would be important to know also. In terms of stigma associated with diagnosis of psychological disorders or developmental disabilities, it could be interesting to see how individuals rate children with diagnoses such as ADHD or Autism Spectrum Disorder (ASD) vs no diagnosis. Biases due to diagnostic status is of growing concern in psychology and education and understanding the impact of such biases as well as how to combat them would be useful.
Summary and Implications

The present study probed the impact of implicit racial biases on ratings of child behavior based on brief observations. For an initial investigation into this area, we randomly assigned a sample of college students to rate the behavior of Black versus White boys in preschool context. Results indicated an impact of racial biases on the ratings of child behavior, with participants randomly assigned to judge a Black target child providing problem behavior ratings that were, on average, higher than those provided by those assigned to judge a White target child. These results suggest the potential for racial biases to influence judgments of child behavior, even for preschool age children. Implications concern the importance of efforts to increase awareness of racial biases, as well as reduce biases and their impact. Long term implications concern ending racism and promoting social justice.
References


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Appendix

**Table 1**
Zero-Order Correlations among Participant Demographics, Experimental Condition, and Child Behavior Ratings ($N = 388$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Opp. Def.</th>
<th>Cog./Inatt.</th>
<th>Hyper-activity</th>
<th>Gen. ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age</td>
<td>$r$</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-.045</td>
<td>-.052</td>
<td>-.083</td>
<td>-.073</td>
</tr>
<tr>
<td>2. Year</td>
<td>$r$</td>
<td>.50**</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.010</td>
<td>-.040</td>
<td>.005</td>
<td>-.027</td>
</tr>
<tr>
<td>3. Experience $^c$</td>
<td>$r$</td>
<td>-.017</td>
<td>-.074</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td>-.46</td>
<td>-.038</td>
<td>-.041</td>
<td>-.039</td>
</tr>
<tr>
<td>4. Gender $^a$</td>
<td>$r$</td>
<td>.10*</td>
<td>.16**</td>
<td>-.204**</td>
<td>–</td>
<td></td>
<td></td>
<td>.096*</td>
<td>.054</td>
<td>.067</td>
<td>.060</td>
</tr>
<tr>
<td>5. SES $^b$</td>
<td>$r$</td>
<td>.15**</td>
<td>.043</td>
<td>-.056</td>
<td>.013</td>
<td>–</td>
<td></td>
<td>-.015</td>
<td>.008</td>
<td>.002</td>
<td>-.017</td>
</tr>
<tr>
<td>6. Race/ethnicity $^d$</td>
<td>$r$</td>
<td>.141**</td>
<td>.086</td>
<td>.002</td>
<td>-.009</td>
<td>.193**</td>
<td>–</td>
<td>-.027</td>
<td>-.086</td>
<td>-.070</td>
<td>-.044</td>
</tr>
<tr>
<td>7. Condition (Child Race) $^e$</td>
<td>$r$</td>
<td>-.003</td>
<td>-.007</td>
<td>.017</td>
<td>-.072</td>
<td>.033</td>
<td>-.003</td>
<td>-.124**</td>
<td>.090</td>
<td>.052</td>
<td>.138**</td>
</tr>
</tbody>
</table>

$^a$ 0 = Female, 1 = Male

$^b$ 0 = Middle/High SES, 1 = Low SES

$^c$ 0 = No experience, 1 = Experience

$^e$ 0 = White, 1 = Black

$^d$ 0 = White/European American, Asian American, Hispanic/Latinx American, or Multiracial/multiethnic, 1 = Black/African American.

$^*$Correlation is significant at the 0.05 level (2-tailed).

$^{**}$Correlation is significant at the 0.01 level (2-tailed).
Table 2
MANCOVA Results for Between-Subjects Effects of Experimental Condition on Child Behavior Ratings \((N = 388)\)

<table>
<thead>
<tr>
<th>Source</th>
<th>Behavior Subscales (CTRS)</th>
<th>df</th>
<th>(F)</th>
<th>(p)</th>
<th>Partial (\eta^2)</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age(^a)</strong></td>
<td>Oppositional Defiance</td>
<td>1</td>
<td>.029</td>
<td>.865</td>
<td>.000</td>
<td>.053</td>
</tr>
<tr>
<td></td>
<td>Cognitive Deficit</td>
<td>1</td>
<td>.106</td>
<td>.744</td>
<td>.000</td>
<td>.062</td>
</tr>
<tr>
<td></td>
<td>Hyperactive</td>
<td>1</td>
<td>1.429</td>
<td>.233</td>
<td>.004</td>
<td>.222</td>
</tr>
<tr>
<td></td>
<td>ADHD Index</td>
<td>1</td>
<td>1.026</td>
<td>.312</td>
<td>.003</td>
<td>.173</td>
</tr>
<tr>
<td><strong>Gender(^b)</strong></td>
<td>Oppositional Defiance</td>
<td>1</td>
<td>.292</td>
<td>.589</td>
<td>.001</td>
<td>.084</td>
</tr>
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<td>Cognitive Deficit</td>
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<td>3.116</td>
<td>.078</td>
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<td>.421</td>
</tr>
<tr>
<td></td>
<td>Hyperactive</td>
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<td>.048</td>
<td>.826</td>
<td>.000</td>
<td>.056</td>
</tr>
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<td>ADHD Index</td>
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<td>.631</td>
<td>.427</td>
<td>.002</td>
<td>.124</td>
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<tr>
<td><strong>Participant Race/eth(^c)</strong></td>
<td>Oppositional Defiance</td>
<td>1</td>
<td>9.264</td>
<td>.002**</td>
<td>.024</td>
<td>.859</td>
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<tr>
<td></td>
<td>Cognitive Deficit</td>
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<td>5.396</td>
<td>.021*</td>
<td>.014</td>
<td>.640</td>
</tr>
<tr>
<td></td>
<td>Hyperactive</td>
<td>1</td>
<td>8.539</td>
<td>.004**</td>
<td>.022</td>
<td>.830</td>
</tr>
<tr>
<td></td>
<td>ADHD Index</td>
<td>1</td>
<td>7.098</td>
<td>.008**</td>
<td>.018</td>
<td>.757</td>
</tr>
<tr>
<td><strong>Experience(^d)</strong></td>
<td>Oppositional Defiance</td>
<td>1</td>
<td>.319</td>
<td>.573</td>
<td>.001</td>
<td>.087</td>
</tr>
<tr>
<td></td>
<td>Cognitive Deficit</td>
<td>1</td>
<td>.551</td>
<td>.458</td>
<td>.001</td>
<td>.115</td>
</tr>
<tr>
<td></td>
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<td>.488</td>
<td>.485</td>
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<td>.107</td>
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<tr>
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<td>ADHD Index</td>
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<td>.008</td>
<td>.928</td>
<td>.000</td>
<td>.051</td>
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<tr>
<td><strong>Child Race/eth(^e)</strong></td>
<td>Oppositional Defiance</td>
<td>1</td>
<td>5.993</td>
<td>.015*</td>
<td>.015</td>
<td>.685</td>
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<td>3.576</td>
<td>.059</td>
<td>.009</td>
<td>.471</td>
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<tr>
<td></td>
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<td>.002</td>
<td>.129</td>
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<tr>
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<td>ADHD Index</td>
<td>1</td>
<td>4.952</td>
<td>.027*</td>
<td>.013</td>
<td>.602</td>
</tr>
</tbody>
</table>

**Note.**
\(^a\): Age is in years.
\(^b\): 0 = Female, 1 = Male
\(^c\): 0 = White/European American, Asian American, Hispanic/Latinx American, or Multiracial/multiethnic, 1 = Black/African American
\(^d\): 0 = No prior experience working with children, 1 = Prior experience working with children
\(^e\): 0 = White, 1 = Black
*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
Table 3
MANCOVA Results for Mean Child Behavior Ratings Overall and by Experimental Condition (N = 388)

<table>
<thead>
<tr>
<th>Behavior Scale Condition</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>( F )</th>
<th>( p )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oppositional Defiance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>198</td>
<td>59.06</td>
<td>11.63</td>
<td>5.99*</td>
<td>.015</td>
</tr>
<tr>
<td>Black</td>
<td>190</td>
<td>61.89</td>
<td>11.59</td>
<td>11.63</td>
<td>.115</td>
</tr>
<tr>
<td>Total</td>
<td>388</td>
<td>60.47</td>
<td>11.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Deficits/Inattention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>198</td>
<td>56.40</td>
<td>10.79</td>
<td>3.57</td>
<td>.059</td>
</tr>
<tr>
<td>Black</td>
<td>190</td>
<td>58.45</td>
<td>12.12</td>
<td>12.12</td>
<td>.059</td>
</tr>
<tr>
<td>Total</td>
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<td>57.43</td>
<td>11.49</td>
<td></td>
<td></td>
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<tr>
<td>Hyperactivity</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>59.80</td>
<td>7.10</td>
<td>.669</td>
<td>.414</td>
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<tr>
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<td>60.39</td>
<td>8.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>388</td>
<td>60.09</td>
<td>7.65</td>
<td></td>
<td></td>
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<tr>
<td>General ADHD/ADHD Index</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>White</td>
<td>198</td>
<td>58.94</td>
<td>5.97</td>
<td>4.95*</td>
<td>.027</td>
</tr>
<tr>
<td>Black</td>
<td>190</td>
<td>60.42</td>
<td>7.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>388</td>
<td>59.68</td>
<td>6.85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. Condition (target child race) was coded as: 0 = White, 1 = Black

\*p<.05. **p<.01.
Table 4
Descriptive Statistics and $t$-tests for Mean Child Behavior Ratings for the two Experimental Conditions, Overall and by Participant Race/Ethnicity ($N = 388$)

<table>
<thead>
<tr>
<th>Behavior Scale</th>
<th>Condition</th>
<th>Participants</th>
<th>$N$</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oppositional Defiance</strong></td>
<td>White Child</td>
<td>NonBlack</td>
<td>164</td>
<td>60.03</td>
<td>11.75</td>
<td>2.95**</td>
<td>.005</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>34</td>
<td>54.35</td>
<td>9.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>198</td>
<td>57.19</td>
<td>10.81</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Black Child</td>
<td>NonBlack</td>
<td>155</td>
<td>62.56</td>
<td>11.39</td>
<td>1.61</td>
<td>.114</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>35</td>
<td>58.94</td>
<td>12.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>190</td>
<td>60.75</td>
<td>11.77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>NonBlack</td>
<td>319</td>
<td>61.26</td>
<td>11.63</td>
<td>3.05**</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>69</td>
<td>56.68</td>
<td>11.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>388</td>
<td>59.52</td>
<td>11.44</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Cognitive Deficits/Inattention</strong></td>
<td>White Child</td>
<td>NonBlack</td>
<td>164</td>
<td>57.02</td>
<td>10.89</td>
<td>1.90</td>
<td>.063</td>
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<tr>
<td></td>
<td>Black</td>
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<td>9.88</td>
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<td></td>
<td>Total</td>
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<td>55.21</td>
<td>10.38</td>
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<tr>
<td></td>
<td>Black Child</td>
<td>NonBlack</td>
<td>155</td>
<td>59.11</td>
<td>12.18</td>
<td>1.65</td>
<td>.106</td>
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<tr>
<td></td>
<td>Black</td>
<td>35</td>
<td>55.51</td>
<td>11.55</td>
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<tr>
<td></td>
<td>Total</td>
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<td>57.31</td>
<td>11.86</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Overall</td>
<td>NonBlack</td>
<td>319</td>
<td>58.03</td>
<td>11.57</td>
<td>2.46*</td>
<td>.016</td>
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<tr>
<td></td>
<td>Black</td>
<td>69</td>
<td>54.48</td>
<td>10.73</td>
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<td>388</td>
<td>56.25</td>
<td>11.15</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Hyperactivity</strong></td>
<td>White Child</td>
<td>NonBlack</td>
<td>164</td>
<td>60.62</td>
<td>6.85</td>
<td>3.61**</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>55.85</td>
<td>7.04</td>
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<td>6.94</td>
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</tr>
<tr>
<td></td>
<td>Black Child</td>
<td>NonBlack</td>
<td>155</td>
<td>60.64</td>
<td>8.49</td>
<td>1.020</td>
<td>.312</td>
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<td>6.73</td>
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<td></td>
</tr>
<tr>
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<td>59.96</td>
<td>7.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall</td>
<td>NonBlack</td>
<td>319</td>
<td>60.63</td>
<td>7.68</td>
<td>3.19**</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Black</td>
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<td>57.59</td>
<td>7.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td>59.11</td>
<td>7.36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General ADHD Index</td>
<td>White Child</td>
<td>NonBlack</td>
<td>Black</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------</td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>164</td>
<td>34</td>
<td>198</td>
<td>59.49</td>
<td>56.32</td>
<td>57.90</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black Child</td>
<td>NonBlack</td>
<td>155</td>
<td>35</td>
<td>190</td>
<td>60.75</td>
<td>58.94</td>
<td>59.84</td>
</tr>
<tr>
<td>Overall</td>
<td>NonBlack</td>
<td>319</td>
<td>69</td>
<td>388</td>
<td>60.10</td>
<td>57.65</td>
<td>58.87</td>
</tr>
</tbody>
</table>

*Note. Participant race/ethnicity was coded as: 0 = NonBlack (White/European American, Asian American, Hispanic/Latinx American, or Multiracial/multiethnic), 1 = Black (Black/African American) Condition (target child race) was coded as: 0 = White, 1 = Black.

*p<.05. **p<.0
Appendix A

INFORMED CONSENT FOR RESEARCH PARTICIPATION

Project Title: Assessments of Children’s Behavior Based on Brief Observations
Investigator: Dr. Ellie Brown

You are being asked to participate in a research project conducted through West Chester University of PA. The University requires that you give your signed agreement to participate in this project.

The investigator will explain to you in detail the purpose of the project, the procedures to be used, the expected duration or frequency of your participation, and the potential benefits and possible risks of participation. You may ask her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you decide to participate in the project, please sign on the last page of this form in the presence of the person who explained the project to you. You will be given a copy of this form to keep.

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

Nature and Purpose of the Project
The investigators will be evaluating how accurately university undergraduates are able to assess the behavior of preschool children based on a very brief video observation.

Explanation of Procedures
After attaining consent, you will be given some general background information about the children you will observe and the preschool they attend as well as the measure you will use to rate the behavior. Then the research assistant will randomly assign you to assess the behaviors of one preschool child and you will be given some further information about that specific child and his or her classmates. The next step is viewing a five-minute video clip of this child and their peers in the preschool classroom. You will be evaluating this child’s behaviors and will be asked to fill out two brief assessment measures or surveys based on what you saw. You then will be given some further information about this study. The procedure should not take more than thirty minutes.

Identification of Any Experimental Medical Treatments or Procedures
This study does not use any experimental medical treatments or procedures.

Discomforts and Risks
We do not expect that this study will cause any discomfort above and beyond that typically experienced while completing a college assignment or activity. However, if the study triggers upset emotions, the Counseling Center, which is located in Commonwealth, can be contacted at: 610-436-2301.

Benefits
The research participant will learn more about psychological research and how we assess children’s behaviors based on brief observations. This research could contribute to the body of knowledge on the assessment of children’s behaviors based on brief observations. The research participant will also receive credit towards his or her PSY100 Introduction to Psychology class.

Confidentiality
On all the forms that you complete for us, we will replace your name with a code number to ensure anonymity. All data collected on the project will be stored and kept in a locked space available only to Dr. Brown and her research assistants.

Explanation of Compensation
The participant will have the option of receiving credit toward meeting requirements of a PSY100 Introduction to Psychology class. If he or she chooses not to participate in this experiment, he or she will have the option of earning the credit by participating in a different experiment, or completing an alternate assignment.

Name of person to Contact in Case of Research-Related Injury
In case of research-related injury, please contact Dr. Ellie Brown:
Eleanor D. Brown, PhD
Associate Professor of Psychology
Director, Early Childhood Cognition and Emotions Lab (ECCEL)
West Chester University
West Chester, PA 19383
ebrown@wcupa.edu
610-436-3153

If you have any questions about your rights as a subject/participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee through the OSR, 610-436-3310.

I have read this form and I understand it. I understand that if at any time I become uncomfortable with this project I am free to stop my participation. I understand also that it is not possible to identify all potential risks in an experimental procedure, and I believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.

____________________________________________________________
Signature                                Date
____________________________________________________________
Witness                                Relationship
Appendix B

Child Behavior Survey

ID ______

Please consider the child you watched in the video rate their behavior in terms of how true each of the following is about them a scale from 0 to 3. If the behavior listed doesn't seem to apply to this child, it would be a 0. If it very much applies it would be a 3. (1 or 2 would be in between.)

<table>
<thead>
<tr>
<th>Behavior</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inattentive, easily distracted</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Defiant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restless in the “squirmy” sense</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forgets things that he/she has already learned</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disturbs other children</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actively defies or refuses to comply with adult requests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is always “on the go” or acts as if driven by a motor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor with letters</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cannot remain still</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spiteful or vindictive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leaves seat in classroom or in other situations in which remaining</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>seating is expected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fidgets with hands or feet or squirms in seat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not reading up to par</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short attention span</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argues with adults</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only pays attention to things he/she is interested in</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has difficulty waiting his/her turn</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lacks interest in schoolwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distractibility or attention span a problem</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temper outbursts; explosive, unpredictable behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runs about or climbs in situations where it is inappropriate</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poor with numbers</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>---</td>
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<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>23. Interrupts others (butts into others' conversations or games)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>24. Has difficulty playing or engaging in leisure activities quietly</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>25. Fails to finish things he/she starts</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>26. Does not follow through on instructions and fails to finish schoolwork</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>27. Excitable, impulsive</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>28. Restless, always up and on the go</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>
Appendix C

Debriefing statement

“We appreciate your participation in this study. As you were told at the start, the purpose of the study is to evaluate how accurately university undergraduate students assess the behavior of preschool children based on a brief video observation.

What you were not told is that one thing we are interested in is how information about children’s race/ethnicity may bias such assessments. You and some other participants were randomly assigned to observe a child that was [black/white] whereas other participants were shown a child that was [black/white].

We will later analyze whether the information participants received about race/ethnicity related to a difference in their assessments of child behavior. We could not tell you this purpose of the study beforehand without jeopardizing our ability to accurately capture these effects.

The assessment you completed is labeled with a code number instead of your name such that your ratings will be completely anonymous. Results of this study will be based on averaging ratings across many student participants.

We expect that the results of this research will be published in a leading journal and will inform policy and practice related to the behavioral assessment of economically disadvantaged children. It is important that the results reflect an accurate picture of how children might be assessed. Thus, it is critical that you not tell anyone about what you saw or heard during this experiment or about the purpose of this study. We need to make sure that other student participants are not biased when they walk into this room to complete the study.

The exception would be that you can tell a psychologist or other counselor if you want to talk about your experience of completing this experiment. We do not expect that this study will cause any discomfort above and beyond that typically experienced while completing a college assignment or activity. However, if the study triggers upset emotions, the Counseling Center, which is located in Commonwealth, can be contacted at: 610-436-2301, and that information is included on your copy of the consent form.

Do you have any questions or concerns about the study or your participation in it?

[Answer questions]

Thank you so much for your participation. We appreciate it!
Appendix D

TO: Ellie Brown
FROM: Nicole M. Cattano, Ph.D.
     Co-Chair, WCU Institutional Review Board (IRB)
DATE: 8/11/2019

Project: Assessments of Children’s Behavior Based on Brief Observations - Continuing Review - Continuing Review/Transition to Updated Common Rule
Date of Approval: 8/11/2019

 Expedited Approval

This protocol has been approved for a continuing review, and has successfully transitioned to the new updated 45 CFR 46 common rule that went in to effect January 21, 2019. As a result, this project will not require continuing review. It is currently approved for data analyses only and closed to any new participant enrollment. Any revisions to this protocol that are needed will require approval by the WCU IRB. Upon completion of the project, you are expected to submit appropriate closure documentation. Please see www.wcupa.edu/research/irb.aspx for more information.

Any adverse reaction by a research subject is to be reported immediately through the Office of Research and Sponsored Programs via email at irb@wcupa.edu

Signature:

Co-Chair of WCU IRB

WCU Institutional Review Board (IRB)
IORG#: IORG0004242
IRB#: IRB00005030
FWA#: FWA00014155

West Chester University is a member of the State System of Higher Education