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Adultification, Anger Bias, and adults' different perceptions of Black and White children

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Abstract

Adultification, perceiving a child as older and more mature, and anger bias, perceiving anger where it does not exist, are two phenomena disproportionately imposed on Black children compared to White children. The current study assessed whether perceiving a Black child as older increases the odds of mistakenly perceiving anger. Participating were 152 parents who viewed video representations of 40 children in an emotion understanding paradigm. Black children were not seen as older than White children but they did have 1.27 higher odds of being misperceived as angry ($p < .05$). Additionally, for each year increase in perceived age, the odds of anger bias increased by 1.04 for the Black children ($p < .05$), but did not increase for White children. Implications of this finding include Black children receiving increased consequences when adults perceive them as older and angry.

Keywords

anger bias; adultification; racial bias; child development; emotion recognition

Multiple studies suggest that Black children are seen as more adult-like than White children, a phenomenon known as adultification, and thus, less innocent and more culpable (for boys, Goff et al., 2014; for girls: Epstein et al., 2017). One consequence of adultification may be racialized anger bias, the phenomenon in which adults mis-label emotions of Black children as angry when they are *not* displaying anger, and at higher rates than White children (Halberstadt et al., 2020a). The current study links these two lines of research regarding misperceptions of Black children to better understand how age perceptions may affect racialized anger bias.

Adultification

As children mature, adults increase their expectations for emotional regulation, academic achievement, and adult-like behavior. Ideally, expectations are developmentally appropriate, and when they are not, inappropriate expectations are randomly distributed. However, adults are less accurate in assessments of Black compared to White children's behaviors (Irizarry & Cohen, 2019), abilities (Parks & Kennedy, 2007), emotional expressions (Halberstadt

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et al., 2020a), and age (Goff et al., 2014). These effects may be interwoven, with serious negative consequences for Black children.

Adultification is the perception that a child is older and more mature than their age or current developmental stage would indicate, and is thought to result in the erroneous view that a child does not need the protections usually afforded to children in the United States (Epstein et al., 2017). Evidence is accumulating that adultification is racialized; both Black boys and girls are seen as more adult-like than White children (Epstein et al.; Goff et al., 2014; Small et al., 2012) and this evidence is consistent with historical (King, 2005) and anecdotal (Center on Poverty and Inequality, 2020) accounts of Black children being treated as adults. It may be that adultification imposes the negative stereotypes of Black adults in the United States on Black children.

Thus far, research has uncovered associations between adultification and miscalculations of maturity (Epstein et al., 2017), culpability (Goff et al., 2014), and financial need judgments (Small et al., 2012) for Black but not White children. Although there are now seven supportive studies, the methodological concerns and constraints (e.g., global questions about maturity and culpability instead of age-targeted questions, very small sets of stimuli, real versus imagined target children) confirm the value of replication, as well as improvements involving greater specificity, ecological validity, and generalizability, to better understand adultification, and how adultification relates to other known areas of racialized perceptions of Black children.

Anger Bias

Another type of racial bias involves a pattern of misattributing anger to Black adults compared to White adults, even when there is no physical evidence for anger (Halberstadt et al., 2018; Hugenberg & Bodenhausen, 2004). Halberstadt et al. (2018) named this phenomenon of misperceiving anger in Black individuals to a greater extent than in White individuals as “racialized anger bias.” In the above studies, racialized anger bias was identified across various methodologies and instantiations of Black and White adults. Recently, racialized anger bias was also found to be imposed on children of elementary-school age, suggesting that people make these misattributions across a good portion of Black individuals’ lifespans (Halberstadt et al., 2020a).

Understanding adultification and anger bias is important because the real-life analogue of being perceived as older, or “adult-like,” and/or angry includes enormously harsh realities in the United States. For example, when engaging with the justice system, Black children have been 18 times more likely than White children to be sentenced as adults rather than children (Poe-Yamagata & Jones, 2007). Likewise, in education, Black children are substantially more likely to be suspended from school (Riddle & Sinclair, 2019) or receive harsher punishments for the same infractions (Okonofua & Eberhardt, 2015) than White children, a phenomenon that increases in likelihood as Black children progress through school (Gopalan & Nelson, 2019). These are serious consequences.

In the current study, we attempted to assess the robustness of the adultification and racialized anger bias main effects, using a more ecologically valid measure in which adults actually see the children they are rating. We also predicted interrelations between adultification and racialized anger bias, testing whether Black children are more likely to receive anger bias than White children or if anger bias toward Black children is a result of being perceived as older and thus more likely to receive biases associated with Black adults. We predicted a two-way interaction such that racialized anger bias would be exacerbated as Black children are perceived to be closer to adulthood, but White children would be perceived similarly regardless of their perceived age.

METHOD

Participants

We recruited 152 adults from M*Turk in 2019 (IRB #14263). On average, participants were 33.47 years old ($SD=6.79$, range = 22 – 52 years) and identified as White (67%), Black (19%), Hispanic (6%), Asian (5%), “Other race” (3%); 52% identified as female. The majority of the sample was well-educated, with 88% holding at least a 2-year degree and 95% employed at least part time (89% full time). All adults were required to pass participation restrictions: pass a robot test, use any non-mobile device (the PerCEIVED task is not compatible with mobile devices), verify they currently lived in the United States (by a statement of endorsement and by correctly identifying an American nickel), and endorse being the parent of a child between the ages of 3 and 18. If all conditions were satisfied, participants were invited to complete the survey.

Previous research with a similar study and analytical design (interaction between race and gender predicting anger bias, Halberstadt et al., 2020a) was able to detect a significant effect with 178 participants. A power analysis (Soper, 2019) suggested a sample of at least 38 participants was needed to detect a within-person effect.

Measures

Perceptions of Children’s Emotions in Videos, Evolving and Dynamic - Age (PerCEIVED-Age) Task.—This modified version of the PerCEIVED task (Halberstadt et al., 2020b) contains 40 child actors engaged in dynamic expression of five emotions (happy, sad, disgust, surprise, fear) and improves on the previous measure for age-related research by balancing by age (ages 10 to 13) across race (Black, White), and by race across emotion (but is not balanced across race *and* age *and* emotion)¹. The age range for the current stimuli was selected as an indirect replication of previous work with pictures of boys (Goff et al., 2014). See the Table for more detail. Gender is controlled for, in both the race/emotion and race/age balance.

Participants saw the early formation of expression, which is much like the fragmented expression occurring in real life. For each of the 40 expressions, they selected which emotion they believed the child was depicting (of six options: happy, sad, disgust, angry,

¹For further information detailing the age, race, gender, emotion, perceived age, and anger bias of each actor see Supplemental Table

surprise, fear). Because our goal was to detect anger bias and understand its impact on age perceptions, no expressions included anger. Although participants might expect to see some anger in a study of emotional expression, perceiving anger more often in one race of child than another is evidence of racialized anger bias. To calculate anger bias, we coded each selection of anger as “1” and all other selections as “0” (see Halberstadt et al., 2020b for more detail regarding the creation of this task). All analyses with anger bias are presented as the odds of selecting anger.

Perceived age.—To assess age perceptions, we also presented the participants with a still photo displaying a neutral expression for each of the 40 children. The participants then rated what age they thought each child was by using a dragging tool ranging from 0 to 25. The still photographs of the children were randomly presented within and across participants.

In 2% of the responses, participants thought the child was older than 18 or younger than 4 years old. These extreme responses, but not the entire participant, were removed as outliers, because they indicate participant confusion about children’s ages or momentary inattention. Within this quality control threshold, one participant was missing more than 25% of their responses and, thus, was removed entirely from analyses.

Perceived age was calculated, instead of a difference score from the children’s actual age, so that an age at which a potential shift in perception of anger could be observed. This would allow us to test if a shift occurs when children are perceived to be beginning adolescence or earlier or later.

Procedure

Participants obtained a link to the online survey through M*Turk. To ensure fidelity of M*Turk data, participants were required to pass sample restrictions described above. They began the survey by completing the 2nd round of the PerCEIVED-Age Task and then were shown still photos of the same children and asked to rate the age of each child. Participants were paid \$3 as compensation. The entire study took 30 minutes, on average, to complete.

RESULTS

Analysis Plan.

We begin by presenting descriptive statistics of the predictors and the outcome variables. For hypothesis testing, we used multilevel modeling and SAS software, Version 9.4. To address the goals of this study, we ran multilevel models, logistic for the models including anger bias as the outcome. We followed previous convention and used 3.29 as the Level-1 variance in calculating the intraclass correlation (ICC; Ene et al., 2015).

Age perceptions.

The average perceived age of the children was 10.65 years old: for Black children, 10.69 ($SD = 1.83$; skew = -0.11 ; kurtosis = 0.36), and for White children, 10.62 ($SD = 1.89$; skew = -0.14 ; kurtosis = 0.71). The ICC calculation indicated that 41% ($p < .0001$) of the variance was attributable to between-person differences and 59% ($p < .0001$) was

attributable to within-person variance. Contrary to predictions, race of the child was not a significant predictor of age perceptions, $\gamma_{01} = 0.07$, $p = .22$.

Anger Bias.

Anger bias was observed at an average rate of 12%: for Black children, 13.0% ($SD = 11.9\%$; skew = 1.74; kurtosis = 4.96) and for White children, 10.6% ($SD = 8.9\%$; skew = -0.15; kurtosis = 0.71). The ICC calculation indicated that 13% of the variance was attributable to between-person differences and 87% of the variance was attributable to within-person variance. As predicted, race of the child was a significant predictor of adult participants' anger bias (OR = 1.27, CI = 1.08, 1.49, $p = .003$) such that the odds of receiving anger bias were greater for Black children than for White children, replicating previous work.

Interaction between age perceptions and anger bias.

In the model assessing the interaction between race of child and participant perceptions of the child's age on anger bias (14% between, 86% within-in person); the main effect of race of child was not a significant predictor (OR = 0.66, CI = 0.34, 1.26, $p = .21$), nor was the main effect of age perceptions (OR = 0.98, CI = 0.94, 1.03, $p = 0.94$). However, the interaction of race of child and participant perception of age was a significant predictor of anger bias (OR = 1.06, CI = 1.00, 1.12, $p < .001$). Post hoc analyses indicated that, for Black children, the odds of receiving anger bias significantly increased as adults' perceptions of their age increased; the odds of anger bias increased by 4% for every year increase in age perception (CI = 1.02, 1.07, $p < .05$). For White children, however, there was no significant difference in odds of receiving anger bias with increases in adults' perceptions of their age (OR = 0.98, CI = 0.96, 1.00, $p = 0.53$) (Figure). This suggests that on average, individuals may not perceive a difference in age between Black and White children, but when they do, there are consequences for the Black child that do not exist for the White child.

DISCUSSION

Given the costs of adultification of Black children and previous research suggesting Black children receive greater anger bias than White children, our goal was to see whether we could replicate the adultification of Black children relative to White children when participants were looking at photographs of real children, rather than imagining them or looking at only one, as well as to offer another replication of racialized anger bias that was balanced by child age. Age perceptions are important because adults often do not know the exact age of children in many settings (e.g., shopping malls, hallways in large schools, basketball courts, etc.). Although we did not observe adultification in age perceptions of Black children, we did find that, on average, Black children were subjected to higher levels of anger bias than White children, replicating previous work. Further, we observed adultification-like processes in the interaction between age perceptions and racialized anger bias, as predicted. That is, on average, participants did not perceive the Black children as a group to be older than the White children. However, when an adult *did* perceive an individual Black child to be older, there were negative consequences for that child, such that

the odds of anger bias for that child increased by 4% for each year older the Black child was perceived to be. This effect was not observed for the White children.

Adultification

In our study, the largest sample yet conducted in this type of research, Black children were not unilaterally seen as older than White children. Unlike past work that tested the associations between age estimations and negative outcomes as average scores, the current study took a multilevel modeling approach. On average, Black children were not seen as older than White children. However, when responses to individual children were considered (a participant's estimation of a singular child and their estimation of their child's facial expression), evidence of adultification-like processes emerged. That is, when a Black child *was* seen as older, there were expectations about them, and highly negative ones, that did not exist for a White child who was viewed as older. These findings converge with other studies to demonstrate that when Black children are viewed as older, unfair consequences follow (Epstein et al., 2017; Goff et al., 2014; Small et al., 2012).

As noted above, the current study did not replicate previous findings of overall differences in age estimations by race. Other studies will have to assess if this is an outlier or whether attempting to make the children as similar as possible for the emotion portion of the task – by requiring all child actors to wear the same color shirt, framing the video so that only faces and shoulders were included – reduced cues about age, such as height and chest development, which individuals may rely on when making assessments of age. It might also be that global assessments about children may be more infused with racial attitudes, and when people are assessing real individuals, the adultification phenomena of assuming Black children as older than White children is just not strong.

An alternative explanation for adultification could be that Black children reach puberty earlier than White children (Herman-Giddens et al., 2012; Reagan et al., 2012), and therefore may look older. However, in previous studies testing adultification, perceptions of children were based on the participants imagining a child within each age range and were not based on visualization of real children. Thus, although it is possible that stereotypes toward Black children may be exacerbated by physical appearance as a function of puberty, that adultification is observed with imagined Black children suggests stereotypes of Black children as older and more adult-like exist outside of their physical appearance. Further, our study found no significant differences in mean level or variability of age perceptions when the participants viewed photos of actual Black and White children, suggesting the biological impact of puberty on appearances had no impact on the association between perceived age and racialized anger bias.

Finally, the current study operationalized adultification as perception of child age, the operationalization used previously (Study 2, 3a, and 3b, Goff et al., 2014). Another definition, however, is the perception of *expectations* (Epstein et al., 2017; Study 1, Goff et al., 2014). It may be that age perceptions and maturity perceptions are both forms of adultification but distinct processes. We strongly recommend disentangling these two conceptualizations (age perceptions and expectations) in future research.

Anger Bias Is Greater Toward Older Black Children

When adults perceived Black children to be on the cusp of adolescence, it was increasingly likely that they would be misperceived as angry, even when they were not. Although we found anger bias occurring in only 12% of the emotion assessments and at 1.27 greater odds for Black children than White (which is similar to the 8% and 1.24 respectively found by Halberstadt et al., [2020]), it is important to note it may only take one micro-aggression to impair a relationship between an adult and a child or one small moment for a police officer to misidentify an emotional expression in an interaction that can lead to dire consequences. The real-life analogue to seeing anger when it does not exist in a controlled experiment is seeing anger in a child's face when that child is trying to communicate another emotion or is just engaged in what they are doing without deep emotion.

In a best-case scenario, anger bias may create confusion that individuals could attempt to clarify or ignore. In the worst-case scenario, anger bias may create situations in which the perceiver punishes the target for their perceived anger, disruptiveness, or aggression. Interpreting ambiguous emotional expressions as angry may result in the perceiver becoming angry themselves (Maoz et al., 2017). This is particularly relevant for Black children, who are more likely to be suspended from school (Riddle & Sinclair, 2019) or arrested for misdemeanors (Poe-Yamagata & Jones, 2007) than White children, and even when the events are structurally similar or the same (Okonofua & Eberhardt, 2015). It is possible a portion of these offenses are associated with anger bias in which the child was displaying a different emotion that was misinterpreted as anger. Although this possibility needs to be systematically explored, the opportunities for revealing bias seem substantial, given that teachers in any given classroom are seeing hundreds of facial expressions per day. Without the opportunity for objective verification, such misattributions might also confirm teachers' implicit biases, thus perpetuating them further.

Limitations and Future Directions

The measure of emotion recognition and age perception in the current study was balanced by age/race/gender, by race/emotion/gender, and within emotion, similar in age by race, but not balanced by age/race/gender/emotion. However, *age perceptions* should not be influenced by expressed emotions because participants viewed photos of the children whose facial expressions were neutral in a task that was separate from the emotion recognition task. Further, *anger bias* effects are not the result of the task design because emotions were balanced across race and gender and children were very similar in age by race and gender (See Table).

The current study was limited to parents. To further understand the magnitude of the effect, other populations of adults who interact with children (e.g., teachers, pediatricians, social workers, school resource officers) should also be sampled in order to replicate the current study's findings and expand our understanding of the theoretical and practical implications of the interaction between perceived age and racialized anger bias. Future work can also explore who is most at risk for anger bias (e.g., participant race, familiarity with children across various races), and to expand the age range of the child actors.

Conclusions

Racial biases continue to be a systematic, cultural problem, one that is particularly disheartening when the victims are our children. This is the eighth study to demonstrate a racialized shift in perceptions of Black children associated with the child's age or perceived age (Epstein et al., 2017; Goff et al., 2014; Small et al., 2012) and this accumulation research suggests the importance of exploring the breadth of impositions upon Black children. Although shifts in children's development are expected and encouraged, an imposed developmental shift in which expectations of Black children are affected by how old they are perceived to be can be harmful to children. It is important that researchers continue to identify and describe how adults' have increasingly discrepant views of Black children as they mature and to explore how these imposed developmental shifts impact our children.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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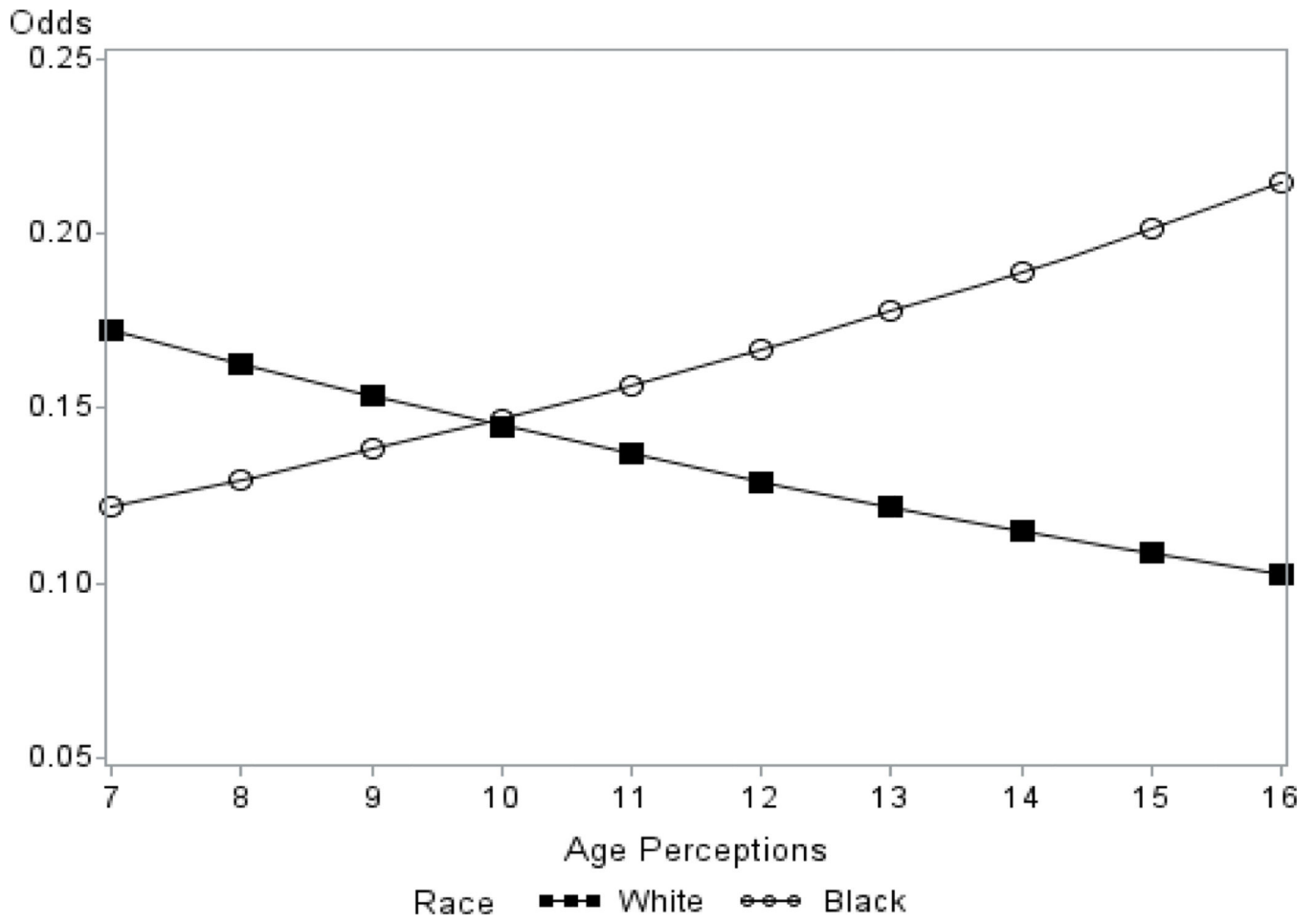


Figure.
Odds of receiving anger bias based on participant perceptions of children's age.

Table

Distribution of race, age, and emotions of child in the PerCEIVED – modified task.

| Age | 10 | 11 | 12 | 13 | Summed across age |
|----------------------------|--------------|--------------|----------------------|---------------------|--------------------------|
| # Black children | 4 | 4 | 6 | 6 | |
| <i>Emotions</i> | D, D, H, H | D, F, F, Sa | F, F, Sa, Sa, Su, Su | D, H, H, Sa, Su, Su | 4D, 4H, 4F, 4Sa, 4Su |
| # White children | 4 | 4 | 6 | 6 | |
| <i>Emotions</i> | D, H, H, F | D, F, Sa, Su | D, F, F, Sa, Sa, Su | D, H, H, Sa, Su, Su | 4D, 4H, 4F, 4Sa, 4Su |
| Emotion | Happy | Sad | Disgust | Surprise | Fear |
| # of Black children | 4 | 4 | 4 | 4 | 4 |
| <i>Age</i> | 11.50 (1.50) | 12.00 (0.71) | 11.00 (1.23) | 12.50 (0.50) | 11.50 (0.50) |
| # of White children | 4 | 4 | 4 | 4 | 4 |
| <i>Age</i> | 11.50 (1.50) | 12.00 (0.71) | 11.50 (1.12) | 12.25 (0.83) | 11.25 (0.83) |
| Overall Mean (<i>SD</i>) | 11.50 (1.50) | 12.00 (0.71) | 11.25 (1.20) | 12.38 (0.70) | 11.37 (0.70) |

Note:

^{1.} D= disgust, H=happy, F=fear, Sa=Sad, Su=Surprise.

^{2.} At ages 10 and 11, for each age/race category, two actors are female and two actors are male. At ages 12 and 13, for each age/race category, three actors are female and three actors are male.

^{3.} For each emotion/race category, two actors are female and two actors are male.