

The development of awareness of racism in adolescents of color over 4 years of high school

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Abstract

This mixed methods, longitudinal study considered the developing awareness of racism of adolescents of color over 4 years of high school. A series of latent growth models were fit to consider participating adolescents' ($n = 643$) developing awareness of interpersonal and institutional forms of racism over five waves of surveys. Additionally, four waves of interviews with a subset of adolescents ($n = 70$) were analyzed through a multistep process consistent with qualitative research methods that seek to balance etic/outsider and emic/insider perspectives. Participating adolescents demonstrated significant, linear growth in their awareness of interpersonal and systemic forms of racism between middle and late adolescence. Participating adolescents also most frequently cited examples of racism in the systemic domain of power to demonstrate their understanding of racism, and their invocation of examples of systemic racism grew more frequent as they advanced through high school. The present study revealed that, on average, adolescents' awareness of racism increases significantly between middle and late adolescence, but also that there is considerable heterogeneity in the ways that adolescents of color recognize and understand racism.

KEYWORDS

adolescents, awareness of racism, discrimination, racism, stereotype consciousness

1 | INTRODUCTION

Racial inequity and injustice are longstanding and pervasive problems in the United States (Bonilla-Silva, 2006; Duncan & Murnane, 2011; Schmitt et al., 2014). White (non-Hispanic) families in the United States possess, on average, more than 10 times the wealth of Black and Latinx families (Kochhar & Fry, 2014) and report approximately \$20,000 more per year in median household income (DeNavas-Walt & Proctor, 2014). Black, Latinx, and Native American youth have less access to advanced coursework in high school than their White peers, are more likely to be taught by 1st-year teachers, and are disproportionately suspended and expelled (Deruy, 2016; Gregory et al., 2010; Jones, 2018). Black and Latinx families are significantly more likely than White families to live in neighborhoods that expose them to environmental toxins (Santiago-Rivera et al., 2016), and pregnancy mortality rates for Black women in the United States are 3–4 times higher than for (non-Hispanic) White women (Committee Opinion, 2015).

These inequitable outcomes point to ways in which racism disadvantages people of color in the United States and also confers unearned advantage or privilege on White people in the United States in myriad ways ranging from employment opportunities to consumer interactions to access to the housing market (e.g., Pager & Shepherd, 2008; Santiago-Rivera et al., 2016; Schmitt et al., 2014). Importantly, a small-but-growing body of research suggests that, for adolescents of color, the ability to recognize and understand the effects of racism and other oppressive social forces are predictive of a number of positive developmental outcomes (Heberle et al., 2020). For example, Hope and Jagers (2014) reported that, in a sample of Black young adults ages 15–25 ($n = 593$), perceptions of systemic racism significantly predicted youths' engagement in political activism. Likewise, Seider and Graves (2020) found that Black and Latinx youths' ($n = 364$) growing awareness of the effects of racism and poverty over 4 years of high school significantly predicted their cumulative grade point average at the end of high school.

Research on youth racial identity development has also found that, for adolescents of color, higher awareness of racism is associated with better physical and mental health (Rivas-Drake et al., 2009; Sellers et al., 2006) and higher academic achievement (Altschul et al., 2006). Other scholars have reported that, for Black adolescents, combining high feelings of connectedness and pride in one's racial group with high awareness of societal racial biases, is predictive of positive academic outcomes (Chavous et al., 2003) and resilience to perceived racial discrimination (Thomas et al., 2009). In explaining these relationships, scholars have posited that it is healthier and more adaptive for marginalized individuals to recognize the causes and social forces underlying oppression than to blame themselves or their identity group for their conditions (Diemer et al., 2017; Ginwright, 2010; Jost et al., 2004). Support for this hypothesis can be found in a longitudinal study that found Black Americans surveyed over a 13 year period were more likely to survive and thrive if they attributed experiences of racism to systemic factors rather than their own individual characteristics (LaVeist et al., 2001). Similarly, researchers have found self-blame to be predictive of poorer physical and mental health outcomes for individuals contending with other forms of oppression such as poverty (Cottle, 2001; Krawitz & Watson, 1997) and domestic violence (O'Neill & Kerig, 2000).

In considering how such awareness of racism develops, a handful of studies have reported on differences in young people's awareness of racism between childhood, early adolescence, and late adolescence (e.g., Killen et al., 2007) as well as how awareness of racism develops in adolescents of color over time (e.g., Bañales et al., 2019; Benner & Graham, 2011). Each of these studies (described in greater detail below) made important contributions to the research literature; however, limitations of these various studies include a cross-sectional research design, consideration of adolescents' developing awareness of racism over a relatively short period of time, and a focus on adolescents' awareness of only a singular type of racism (e.g., interpersonal, cultural, etc.). The present study seeks to contribute to this extant scholarship through a longitudinal, mixed methods research design that investigates how adolescents of color develop their awareness of multiple forms of racism over 4 years of high school. Below, we review the key theoretical frameworks and research questions guiding the present study.

2 | CONCEPTUALIZING AND RECOGNIZING RACISM

Collins (2009) conceptualizes racism as a system of power with four interrelated but distinct domains: interpersonal, structural, disciplinary, and cultural. The *interpersonal* domain of power shapes race relations between individuals and includes the prejudicial or discriminatory behaviors with which one person might treat another. The *structural* domain of power refers to the ways in which social institutions such as police departments, schools, and hospitals are organized to privilege or obstruct the success of particular racial groups over others, and the *disciplinary* domain of power refers to the ways in which individuals within those organizations exercise their authority to confer privileges to some and disadvantages to others. In this paper, we follow the lead of several other frameworks in referring to the structural and disciplinary domains as, cumulatively, the *systemic* domains of power (e.g., Race Forward, 2020).

Finally, the *cultural* domain of power refers to the ideas and ideologies within a society that justify the enactment of racism and racial injustice in the three other domains of power. For example, Collins (2009) and other scholars (e.g., Bonilla-Silva et al., 2004) have reported that one of the most powerful and pernicious of these ideologies in the post-Civil Rights era United States is “colorblindness” or “colorblind racism.” Specifically, Bonilla-Silva argues that colorblind racism entails a belief that racism was an historical problem in the United States but no longer represents a central feature of the country’s culture, systems, or interpersonal interactions. This overarching ideology leads to a number of pernicious corollaries within the cultural domain of power such as the belief that the inequitable conditions in the United States for members of different racial groups are due to the personal characteristics (e.g., laziness vs. industriousness) of members of those groups and that such inequities are normal and natural. Bonilla-Silva (2006) notes that these ideologies produce narratives that influence the ways in which people of all races and backgrounds see and make sense of the world. For example, researchers have found that both White Americans (Loya, 2011) and African Americans (Neville et al., 2005) who espouse color-blind racial beliefs are more likely to justify racial inequality, deny the existence of White privilege, and characterize people of color as responsible for inequities they experience. In her seminal 2009 article presenting this framework, Collins noted that the media is a particularly powerful purveyor of these racist ideas and ideologies in the cultural domain of power, which then contribute to the prevalence of racism in the interpersonal and systemic domains of power as well. The ubiquity of social media sites such as Facebook, Twitter, and Instagram has only amplified this role for media in the ensuing decade.

2.1 | Awareness of cultural and interpersonal racism

Children of color in the United States as young as 6 years old demonstrate awareness of stereotypes about their own racial group (Bigler et al., 2003), and, by age 11, are able to infer other’s stereotypes and describe broadly held societal stereotypes about their racial group (McKown & Strambler, 2009). Other scholars have reported that Black and Latinx adolescents’ awareness of racial stereotypes increase over their first 2 years of high school (Altschul et al., 2006). In other words, young people of color begin at a very early age to recognize the pernicious societal messages about race that represent the cultural domain of power, and there is preliminary evidence that such recognition increases over the course of adolescence.

Children and adolescents of color in the United States not only demonstrate awareness of societal stereotypes about their racial group(s), but also experience discrimination and prejudice in interactions with peers and adults that represent the interpersonal domain of power (Collins, 2009). Specifically, children of color in the United States typically report having experienced interpersonal racial discrimination by early adolescence (Bigler et al., 2003; Brown et al., 2011), with 77% of African American adolescents reporting at least one incident of experienced discrimination within the past 3 months (Prelow et al., 2004; Seaton et al., 2010). Such experiences with interpersonal racial discrimination have been found to increase as youth of color move through adolescence (Douglass et al., 2016; Fisher et al., 2000; McLoyd et al., 2009; Rivas-Drake et al., 2009; Seaton, 2009; Spencer et al., 1997).

Consequently, youth of color develop an awareness of racism in the interpersonal domain at an earlier age than their White peers (Bigler & Wright, 2014; McKown & Strambler, 2009; Seaton et al., 2010). Similar to the research cited above on young people's stereotype consciousness, there is evidence that, for youth of color, awareness of racism in the interpersonal domains increases over the course of adolescence. Killen et al. (2007) found in a racially diverse sample of 4th, 7th, and 10th grade students that young people's beliefs about the influence of racial discrimination in interracial settings increased with age. Benner and Graham (2011) reported that Latinx adolescents' perceived experiences of racial discrimination increase over their first 2 years of high school, and Seider et al. (2019) found that Black and Latinx adolescents demonstrated significant growth in their awareness of interpersonal racism over their first 3 years of high school, and that adolescents' awareness of interpersonal racism correlated with their awareness of poverty. The present study sought to contribute to this extant scholarship by drawing on both quantitative survey data and qualitative interview data to consider the developing awareness of racism in the cultural and interpersonal domains for youth of color over all 4 years of high school.

2.2 | Awareness of systemic racism

A smaller body of research has investigated adolescents' developing awareness of racism in the systemic domain of power (Bañales et al., 2019; Hope & Bañales, 2018; Hughes & Bigler, 2011; Killen et al., 2011). Scholars have theorized that adolescents' development of formal reasoning and abstract thinking skills increase their ability to recognize and understand how the policies, procedures, and practices of social institutions can privilege or obstruct the success of particular racial groups (Harrell, 2000; Hughes & Bigler, 2011; Quintana, 2008; Seaton et al., 2010). That said, scholars have also suggested that the more abstract and covert nature of systemic racism means that awareness of this form of racism typically develops for adolescents and adults through explicit learning opportunities rather than lived experience (e.g., Dupree et al., 2015; Gurin et al., 2015; Lopez et al., 1998; Seaton et al., 2010).

Several cross-sectional studies have reported that Black and Latinx youth demonstrate the ability in early adolescence to recognize how racism is embedded in systems in their communities such as law enforcement and schools (Hope & Bañales, 2018; Quintana & Vera, 1999), and Bañales et al. (2019) reported that Black adolescents' systemic attributions for race achievement gaps increased between the 10th grade and 12th grades. This study aligns with Hughes and Bigler's (2011) finding that, with age, 14–17-year-old Black adolescents became more supportive of affirmative action and school desegregation policies. Both sets of scholars interpreted these findings as indicative of Black adolescents' emerging recognition of systemic forms of racism. The present study utilized survey and interview data collected from adolescents of color over 4 years of high school to contribute to this scholarship on youths' developing understandings of racism in the systemic domain of power as well.

2.3 | Colorblind racism

One obstacle to adolescents recognizing and understanding racism in these various domains of power is an ideology of "colorblind racism" that Bonilla-Silva et al. (2004) have characterized as the dominant racial ideology in the post-Civil Rights era United States. Specifically, Bonilla-Silva argues that colorblind racism entails a belief that racism was an historical problem in the United States but no longer represents a central feature of the country's culture, systems, or interpersonal interactions. This overarching ideology leads to a number of pernicious corollaries such as the belief that the inequitable conditions in the United States for members of different racial groups are due to the personal characteristics (e.g., laziness vs. industriousness) of members of those groups and that such inequities are normal and natural. Bonilla-Silva (2006) notes that these ideologies produce narratives that influence the ways in which people of all races and backgrounds see and make sense of the world. For example, researchers have found that both White Americans (Loya, 2011) and African Americans

(Neville et al., 2005) who espouse color-blind racial beliefs are more likely to justify racial inequality, deny the existence of White privilege, and characterize people of color as responsible for inequities they experience. We describe in Sections 5 and 6 below how color-blind racism seemed to influence participating adolescents' beliefs about the relationship between race and opportunity in the United States.

3 | DEVELOPING AWARENESS OF RACISM

In addition to Collins's (2009) framework on racism and domains of power, the present study was also guided by two theoretical frameworks about how youth develop an awareness of racism and racial discrimination. First, McKown (2004) theorized that the development of youths' awareness of racism is due, in large part, to three factors: (1) increasing perspective-taking skills that strengthen youths' understanding of other people's beliefs and motives (Killen et al., 2002; Selman, 1980); (2) increasing exposure to racism through both firsthand experience and socialization from parents, mentors, and peers (Hughes & Chen, 1999; Phinney & Chavira, 1995; Rendon et al., 2020); and (3) increasing ability to utilize logic and inductive reasoning to synthesize multiple experiences and sources of information (Piaget, 1985). Cumulatively, these factors contribute to growth in awareness of racism among youth of color as they progress through childhood and into adolescence.

Second, Spears Brown and Bigler (2005) offer a conceptual model of youths' perceptions of discrimination that incorporates their cognitive abilities, situational cues, and individual differences. In terms of cognitive abilities, these scholars posit that youths' ability to perceive discrimination is due, in part, to their developing understanding of race as a social phenomenon ("cultural cognition") and their ability to decode other people's thoughts, emotions, and intentions ("social cognition"). In terms of situational factors, these scholars posit that youth are more likely to perceive discrimination when the target is another individual or group; they have knowledge of previous biased actions by the perpetrator; the discriminatory situation draws upon a societal stereotype; and they perceive social support for making attributions of discrimination. Finally, in terms of individual factors, Spears Brown and Bigler (2005) assert that a young person's likelihood of perceiving discrimination is increased by membership in a stigmatized group, knowledge about discrimination; and possession of a strong group identity. Cumulatively, these three different dimensions—cognitive abilities, situational cues, and individual factors—are theorized to contribute to youths' abilities to perceive racial discrimination.

Drawing on both of these theoretical frameworks as well as the scholarship described above, the present study was guided by the following research questions:

1. How does awareness of racism develop in adolescents of color over 4 years of high school?
2. How do these adolescents' descriptions and understandings of racism change over 4 years of high school?

Given the theoretical frameworks (e.g., Collins, 2009; McKown, 2004) and scholarship (e.g., Bañales et al., 2019; Hughes & Bigler, 2011; Killen et al., 2011) cited above, we hypothesized that participating adolescents would demonstrate significant growth in their awareness of racism in multiple domains over their 4 years of high school (research question #1) and describe an increasing understanding of systemic and cultural forms of racism (research question #2). Below, we describe this study's sample, collected data, and analytic strategy.

4 | METHOD

The present study drew upon data collected as part of a larger mixed-methods investigation of the development of adolescents' critical consciousness of racial and economic injustice (Seider et al., 2016, 2017, 2018). Accordingly, previous papers offer similar descriptions of the participants and data collection procedures described below.

4.1 | Participants

The study's participants included youth ($n = 643$) who entered the ninth grade in six public charter high schools located in five northeastern cities in the fall of 2013 (and thus were members of their respective classes of 2017). Purposeful sampling was utilized to identify high schools that served adolescents from racially and economically marginalized groups, admitted these young people via randomized registration lotteries, and featured mission statements citing explicit goals for youth civic development. The six schools varied considerably in the extent to which they offered curriculum and programming directly related to issues of race and racism, but several of the schools offered literature electives with titles such as "African American Literature" and "The Black Experience." Other schools featured service-learning and social action coursework that allowed interested students to focus their efforts on issues of racism.

Within this sample, 360 students identified as female and 283 students identified as male. Three hundred and seventy-five students (58%) identified as Black or African American, 136 students (21%) identified as Latinx, 117 students (18%) identified as multiracial, seven students (1%) identified as "Other," and two students (0.3%) identified as Native American. A small number of adolescents ($n = 6$) attending the participating schools identified as White and participated in the data collection procedures described below, but were excluded from the analyses reported on in this paper. Finally, almost 80% of the participating adolescents qualified for free or reduced-price lunch, a proxy for low socioeconomic status.

4.2 | Data collection

Two types of data were collected for this study. First, ninth grade students in the Class of 2017 at the six participating schools completed surveys in September of 2013 ($n = 454$) that included items adapted from two previously validated measures of awareness of racism (see measures section below). Youth in the Class of 2017 at these same schools then completed this same survey in May, 2014 at the conclusion of their ninth-grade year when youth were generally 14–15 years old ($n = 456$); in May, 2015 at the conclusion of their 10th-grade year when youth were generally 15–16 years old ($n = 388$); in May, 2016 at the conclusion of their 11th-grade year when youth were generally 16–17 years old ($n = 373$); and in May, 2017 at the conclusion of their 12th-grade year when youth were generally 17–18 years old ($n = 350$). Because of attrition and backfilling at the participating schools, the total sample size reported above ($n = 643$) represents every adolescent who participated in at least one wave of data collection.

During the spring of 2014, members of our research team also conducted 45–60 min qualitative interviews with 10–12 ninth-grade students from each of the participating schools ($n = 70$). Students were randomly selected by our research team from course rosters of 9th grade advisory periods. Thirty-six identified as female, and 34 as male. We then interviewed 51 of these same adolescents again in the spring of their 10th-, 11th-, and 12th-grade school years for a total of four interviews per student over their 4 years of high school (19 students left their respective schools over the 4 years of the study and did not complete all four interviews). The interview protocol was designed to learn more about participants' understandings of oppressive social forces such as racism as well as their commitment to challenging these forces. Particularly relevant to the present study was a question included on the interview protocol each year that read: "Do you believe people of all races and backgrounds in the United States are given an equal opportunity to succeed? Why or why not?" As described in greater detail below, analyses focused on the adolescents ($n = 51$) who responded to this question at the end of each of their 4 years of high school offered useful insights into their developing beliefs about racism and its effects.

4.3 | Measures

The survey completed by participating adolescents included two measures related to their awareness of interpersonal and systemic forms of racism. Participating adolescents responded to all of the items comprising these measures along a 5-point Likert scale in which a “1” represented “No way!” and a “5” represented “Definitely!” Item responses were averaged to create a single score for each measure, informed by exploratory factor analyses (EFA) conducted before this study. The absence of a study measure considering adolescents' awareness of racism in the cultural domain is considered in this study's limitations.

The *Awareness of Interpersonal Racism* measure consisted of four items from Oyserman et al. (1995) Racial-Ethnic Identity Scale (Awareness of Racism subscale) that assess an individual's awareness of the prejudice and discriminatory behaviors directed at them by other individuals because of their race. Put another way, this measure relates to racism in the interpersonal domain of power within Collins's (2009) framework. The measure was originally developed, validated, and administered to samples of Black and Latinx adolescents. This measure first asks adolescents to identify their racial identity (which we used within our data-set to code students' race/ethnicity) and then solicits their level of agreement with particular statements into which they insert that racial identity. For example, one item reads: “Some people will treat me differently because I am ____.” A second item reads: “Some people might have negative ideas about my abilities because I am ____” (see Table A1 for all items). Prior EFA results supported the computation of a single factor score with acceptable internal consistency reliability (Cronbach's $\alpha = .73$).

The *Awareness of Systemic Racism* measure consisted of four items from Gurin et al. (2013) Structural Thinking about Racial Inequality Scale that assess the extent to which an individual recognizes the presence of racism in social institutions. As noted above, systemic racism can be characterized as encompassing racism in both the structural and disciplinary domains of power in Collins's (2009) conceptual framework. The scale was originally developed, validated, and administered to college students from diverse racial backgrounds. One item on this measure solicits students' level of agreement to the following statement: “Racism in the educational system limits the success of Blacks, Latinos and other racial minorities.” A second item reads: “Many businesses intentionally keep many Black, Latino and other racial minorities from gaining positions of power” (see Table A1 for all items). Both of these items solicit participating adolescents' recognition of the ways in which racism can manifest—not only in the actions of individuals—but in systems and institutions as well. Prior EFA results supported the computation of a single factor score with acceptable internal consistency reliability (Cronbach's $\alpha = .70$).

4.4 | Data analysis

This project utilized a sequential explanatory analytic strategy in which we first analyzed quantitative survey data to consider change over time in participating adolescents' awareness of interpersonal and systemic forms of racism (research question #1) (Creswell & Plano Clark, 2011). We then analyzed qualitative interview data to consider participating adolescents' changing descriptions of the effects of racism in the various domains of power over 4 years of high school (research question #2). Triangulation of these data allowed for useful insights about how adolescents' developing awareness of racism over 4 years of high school related to their beliefs about the effects of such racism.

4.4.1 | Quantitative surveys

For the present study, a series of latent growth models (LGMs) were fit to explore the study's first research question. In LGMs, repeated averaged observed scores are used as indicators of latent factor variables. One of these factors (the intercept) represents the initial level of any growth construct of interest. The other factor (the slope) represents how much change can be expected in the growth construct after a unit change in time

(Preacher, 2010). Although both the intercept and slope factors are unobserved variables, this technique assumes that the factor intercepts and slopes are responsible for changes witnessed in individuals' averaged observed scores on the construct of interest. LGMs also allow both the intercept and slope to be modeled as random effects; accordingly, how much individual variability is present in these factors can be estimated and additional covariates can be included in the model to help explain this variability (Preacher, 2010).

All statistical analyses were conducted using R 3.6.3 (R Core Team, 2020) and the lavaan package (0.6–7; Rosseel, 2012). Time-specific averaged scores were used in the models for purposes of ease as well as comprehensibility to the widest audience (Abry et al., 2017). In accordance with suggestions from Preacher (2010) and Grimm et al. (2016), root mean square error of approximation (RMSEA) values less than 0.10 and 0.05, and Comparative Fit Index (CFI) values above 0.90 and 0.95 were considered consistent with acceptable and good model fit, respectively. The RMSEA is a value of absolute fit, assessing how far the model is from “perfect” fit, or a fit of zero; the CFI, alternatively, is a measure of incremental fit, and assesses models against a null model (Little, 2013). As is typical in longitudinal studies, attrition was common in this study (Little, 2013). Additionally, data screening indicated the data were multivariate nonnormal, particularly for the Awareness of Interpersonal Racism measure (i.e., the Mardia's measure of multivariate kurtosis exceeded recommended cutoffs; Finney & DiStefano, 2006). Thus, models were estimated using full information maximum likelihood with robust standard errors (i.e., the MLR estimator implemented in Mplus), to provide robust standard errors and scaled test statistics and to include all cases with available data (Acock, 2008).

For the current study, we first fit unconditional LGMs to the repeated measures data (i.e., Time 1 through Time 5) for youths' awareness of both interpersonal and systemic forms of racism; factor means, variances, and correlations were estimated, allowing for an examination of the form of growth for each of these measures. For our analysis, we set the intercept to the first measurement occasion (i.e., Time 1), and as such, the intercept represents youths' awareness of interpersonal or systemic racism at the start of high school. Based on the pattern of means observed in students' scores (Table 1), linear LGMs were expected to fit the data well; however, quadratic LGMs were also tested to evaluate whether a nonlinear growth pattern better reproduced the observed data. We calculated the difference test for the scaled χ^2 s to compare the fit of the quadratic model to that of the linear model; a significant test statistic would indicate the more complex quadratic model fit significantly better than the more parsimonious linear model (Satorra & Bentler, 2010). After the appropriate form of growth was determined, variables representing gender (male = 1, female = 0) and race/ethnicity (two dummy coded race variables were created; Latinx = 1 and multiracial = 1 with African American/Black = 0 for each) were incorporated in conditional LGMs as predictors of intercept and growth factors, allowing us to account for and explore differences in growth among these demographic groups. Given the large number of statistical tests associated with these models, an adjusted α level of .01 was used to gauge statistical significance.

4.4.2 | Qualitative interviews

All interviews with participating adolescents were audio-recorded, transcribed verbatim, and participants were assigned pseudonyms. Our analysis of these interviews was a multistep process consistent with qualitative

TABLE 1 Summary statistics for awareness of interpersonal and systemic racism

	T1	T2	T3	T4	T5
N	454	456	388	373	350
Interpersonal racism	3.42 (0.98)	3.49 (1.02)	3.79 (0.93)	3.87 (0.94)	4.07 (0.93)
Systemic racism	3.37 (0.77)	3.50 (0.86)	3.52 (0.81)	3.73 (0.84)	3.91 (0.79)

Note: SDs in parentheses.

research methods that seek to balance etic/outsider and emic/insider perspectives (Erickson & Murphy, 2008). Beginning with an etic structure, our research team utilized our research questions and guiding conceptual frameworks to construct categories that represented key dimensions of our inquiry. Next, we worked collaboratively to populate these superordinate categories with code names drawn from etic concepts in the extant research literature on domains of power (Collins, 2009) and awareness of racism (e.g., Chavous et al., 2003) as well as emic descriptions by study participants emerging from our qualitative interviews (Ryan & Bernard, 2003).

Each qualitative interview was then coded independently by the authors using NVivo Research 10 software. After coding each interview independently, the authors compared their analyses of each interview transcript, recoded, and then compared again until all coding discrepancies are resolved. Our team then utilized NVivo's "cutting and sorting" capabilities (Lincoln & Guba, 1985) to compile summary tables for individual codes, so as to identify emergent patterns and themes, as well as for each interviewed adolescent, so as to be able to consider shifts in their beliefs and understandings over time (Miles & Huberman, 1994). As noted above, the present study focused, in particular, on adolescents' responses to an interview question posed at the end of each year of high school that read: "Do you believe people of all races and backgrounds in the United States are given an equal opportunity to succeed? Why or why not?"

5 | RESULTS

Below, we first share results relevant to our first research question by reporting on analyses of participating adolescents' ($n = 643$) five waves of survey data, and then results relevant to our second research question by reporting on analyses of four waves of interviews with a subset of these adolescents ($n = 51$).

5.1 | Growth in awareness of racism

Presented below in Table 1 are the descriptive statistics for adolescents' scores at each time point (T1-T5) on the awareness of interpersonal racism and systemic racism measures. These statistics reveal that adolescents in the sample demonstrated positive changes, on average, in their awareness of both forms of racism over their 4 years of high school. As reported in Table 2, both the linear and quadratic growth models fit the observed data well. For awareness of interpersonal racism, the scaled χ^2 difference test indicated the quadratic model did *not* fit significantly better (11.317, $df = 4$, $p = .023$); thus the linear model will be presented and explored in more detail. In contrast, for awareness of systemic racism, the quadratic model did fit significantly better (14.728, $df = 4$, $p = .005$) and, thus, will be presented.

Regarding youths' growth in awareness of *interpersonal racism*, the parameter estimates for the unconditional model reported in Table 3 describe how youths' awareness of interpersonal racism changed over time. Specifically, the intercept factor mean was 3.364 ($p < .001$), indicating moderate awareness of interpersonal racism at time 1. The slope factor mean was 0.171 ($p < .001$), indicating that, on average, adolescents increased their awareness of interpersonal racism by a magnitude of approximately 0.17 units from year to year. The factor variances were both significant, indicating significant individual variability in both levels of ($p < .001$) and rates of change ($p < .001$) in awareness of interpersonal racism. Finally, the factor correlation was negative and significant ($r = -0.411$, $p < .001$), indicating that youth with higher awareness of interpersonal racism at the start of high school experienced slower growth in this variable over time. The results of the conditional model incorporating the demographic controls are quite similar to those of the unconditional models (Table 3); note that the factor means for the intercept and slope now represent the average initial level and rate of change for students with values of 0 for all control variables. The conditional model, however, does indicate that Latinx students had significantly lower intercepts (i.e., lower levels of awareness of interpersonal racism at the initial time point) compared to the reference group ($\gamma = -0.474$, $p < .001$).

TABLE 2 Fit indices for latent growth models

Model	χ^2 (df)	CFI	RMSEA
Unconditional			
1. Linear interpersonal	25.150 (10)	0.968	0.048
2. Quadratic interpersonal	13.715 (6)	0.984	0.045
3. Linear systemic	26.335 (10)	0.951	0.050
4. Quadratic systemic	11.477 (6)	0.984	0.038
Conditional			
5. Linear interpersonal	34.263 (19)	0.974	0.035
6. Quadratic systemic	18.904 (12)	0.982	0.030

Abbreviations: CFI, Comparative Fit Index; LGM, latent growth model; RMSEA, root mean square error of approximation.

Note: Model 1 is the linear LGM for awareness of interpersonal racism without demographic controls; Model 2 is the quadratic LGM for awareness of interpersonal racism; Model 3 is the linear LGM for awareness of systemic racism; Model 4 is the quadratic LGM for awareness of systemic racism. Models 5 and 6 parallel Models 1 and 4, respectively, but do include demographic controls.

Regarding youths' growth in awareness of *systemic racism*, the parameter estimates for the model reported in Table 4 describe how youths' awareness of systemic racism changed over time. Specifically, the intercept factor mean was 3.374 ($p < .001$), indicating moderate awareness of systemic racism at time 1. The linear slope factor mean was 0.060 ($p = .080$) and a quadratic factor mean of 0.018 ($p = .028$). The positive linear factor mean combined with the positive quadratic factor mean indicate that, on average, there was an increase in adolescents'

TABLE 3 Parameter estimates for awareness of interpersonal racism latent growth models

<i>Unconditional model</i>				
Factor	Factor mean (μ)	Factor variance (ζ)	Factor correlations	
			1	2
1. Intercept	3.364**	0.598**	-	-
2. Linear slope	0.171**	0.026**	-0.411**	-
<i>Conditional model</i>				
Factor	Factor mean (μ)	Unexplained factor variance (ζ)	Factor correlations	
			1	2
1. Intercept	3.569**	0.553**	-	-
2. Linear slope	0.181**	0.025**	-0.411**	-
<i>Unstandardized regression coefficients (g)</i>				
	1. Intercept		2. Linear slope	
Male	-0.161		-0.041	
Latinx	-0.474**		0.039	
Multiracial	-0.171		-0.022	

Note: Coding for the controls is as follows: male (male = 1, female = 0), Latinx (Latinx = 1, Black = 0), multiracial (multiracial = 1, Black = 0). The factor means in the conditional model represent initial levels and rates of change for students with values of 0 for all controls (i.e., Black females).

* $p < .01$.

** $p < .001$.

TABLE 4 Parameter estimates for awareness of systemic racism latent growth models

<i>Unconditional model</i>					
Factor	Factor mean (μ)	Factor variance (ζ)	Factor correlations		
			1	2	3
1. Intercept	3.374**	0.489**	-		
2. Linear	0.060	0.208**	-0.503**	-	
3. Quadratic	0.018	0.009*	0.270	-0.893**	-
<i>Conditional model</i>					
Factor	Factor mean (μ)	Factor variance (ζ)	Factor correlations		
			1	2	3
1. Intercept	3.396**	0.489**	-		
2. Linear	0.099	0.208**	-0.515**	-	
3. Quadratic	0.019	0.010*	0.283	-0.897**	-
<i>Unstandardized regression coefficients (γ)</i>					
	1. Intercept	2. Linear	3. Quadratic		
Male	0.001	-0.061	-0.001		
Latinx	-0.184	0.069	-0.012		
Multiracial	-0.071	-0.119	0.018		

Note: Coding for the controls is as follows: male (male = 1, female = 0), Latinx (Latinx = 1, Black = 0), multiracial (multiracial = 1, Black = 0). The factor means in the conditional model represent initial levels and rates of change for students with values of 0 for all controls (i.e., Black females).

* $p < .01$.

** $p < .001$.

awareness of systemic racism over time (increasing by a magnitude of approximately 0.06 at the initial time point) and that this increase became more pronounced over time (i.e., greater increases in awareness of systemic racism in the later years than in earlier years). The factor variances were all significant, indicating significant individual variability in both levels of and rates of change in awareness of systemic racism. Finally, the factor correlation between the intercepts and linear slopes was negative and significant ($r = -0.503$, $p < .001$), indicating that youth with higher awareness of systemic racism at the start of high school experienced lesser initial growth in this variable. Additionally, the correlation between linear and quadratic growth factors was negative and significant ($r = -0.893$, $p < .001$), indicating that youth who had greater initial rates of change in awareness of systemic racism had subsequently lesser increases in rates of change over time (i.e., change over time did not increase as much for these students). Finally, the results of the conditional model incorporating the demographic controls are quite similar to those of the unconditional models (Table 4) and none of the demographic controls significantly predict intercepts or growth factors. This indicates these groups did not differ from one another in their levels of or change in awareness of systemic racism over time.

5.2 | Changing beliefs about racism

Recall from Section 4 above that adolescents who participated in four waves of longitudinal interviews ($n = 51$) responded to the following prompt at the end of each of their 4 years of high school: "Do you believe people of all

racess and backgrounds in the United States are given an equal opportunity to succeed?" Several key patterns emerged in considering adolescents' annual responses to this prompt.

5.2.1 | Endorsing a colorblind ideology at the start of high school

First, the majority of adolescents ($n = 33$ of 51, 65%) asserted as ninth graders that people of all races and backgrounds in the United States have an equal opportunity to succeed. For example, one adolescent, Ronald, who identified as a Black young man, explained: "All races have the chance to succeed because as long as you put your mind to it, anything is possible." Another ninth grader, Jonathan, who also identified as a Black young man, offered: "Everyone basically has the same mind. Like nothing is different about people that depends on their race. So everyone can have the same education and get smarter." In short, the majority of young people in our study espoused a "colorblind ideology" as ninth graders that personal qualities such as perseverance, intelligence, and ingenuity—not race—are the determinants of success in the United States (Bonilla-Silva et al., 2004). Notably, this endorsement of a colorblind ideology was evident in similar proportions for adolescents who identified as Black (63%) and Latinx (65%).

Importantly, of these 33 adolescents who espoused a colorblind ideology as ninth graders, 20 then rejected this ideology just a year later as 10th graders. Another nine of these adolescents ($n = 29$) rejected this ideology 2 years later as 11th graders, and one additional adolescent ($n = 30$) rejected this ideology 3 years later in the 12th grade. Put another way, only three of the 33 adolescents who espoused a color-blind ideology as ninth graders maintained this belief over all 4 years of high school. This shift away from a colorblind ideology over the course of high school was evident in the responses of adolescents who identified as both Black and Latinx.

The figures cited above reveal that nearly two-thirds ($n = 20$) of the adolescents who espoused a color-blind ideology as ninth graders ($n = 33$) then rejected this belief just a year later at the end of 10th grade, and then continued to reject this ideology in subsequent years of high school as well. One adolescent, Solomon, who identified as a Black young man, represents a useful example of this shift in perspective over 4 years of high school. As a ninth grader, Solomon asserted that everyone has an equal chance to succeed in the United States because "it all depends on, like, how you take things seriously. It doesn't matter if like you're Black, White, Asian, Indian, Native, somewhere else, a foreign student from another country. As long as you put your mind to it, I think you can succeed." As a 10th grader a year later, however, Solomon rejected the idea that people of all races have an equal chance to succeed in the United States. He explained: "You go to a business place, and I'm not trying to be racist, but like if you see a White guy versus a Black guy [interviewing for a job] and they're both wearing a suit... of course you're going to pick the White guy, because the business is full of Caucasians or whatever, and they probably going to want more!" Evident in this explanation is Solomon's assumption that a business place will be comprised predominantly of White people and that their racial biases will lead hiring managers to preference White job applicants over Black applicants.

A year later as an 11th grader, Solomon pointed again to differential experiences on the job market between White people and Black people as evidence of unequal opportunities for success in the United States. He explained: "White people get much more of a chance than Black people [at a job]... I think the African American Black would have a much harder time proving himself what he could do. Because coming from the stereotypes, people think, 'Oh, he can't do this.' He gonna have to prove that stereotype wrong." In this response, Solomon pointed to the ways in which pernicious societal stereotypes about African Americans lead to unequal professional opportunities for Black and White workers.

Finally, as a 12th grader, Solomon continued to point to jobs as a space where people of color receive fewer opportunities than White people. He explained: "People of color, they're more likely to be disregarded as someone who is like, maybe Caucasian or European. People of color, yeah, they are successful here and there. But you don't see that as much as White people... I've seen this a lot at the Prudential [office building]. There'd be like a group of

people. It'd be like four White people and maybe like two Black people." In this final interview, Solomon pointed to the paucity of African Americans he sees at a nearby corporate office building as evidence of unequal opportunities for people of color. His primary assertion in this explanation is that White hiring managers unjustly disregard the capabilities of people of color. Somewhat more ambiguous is whether Solomon's reference to people of color only being successful "here and there" is intended to serve as further evidence of racist hiring practices or, alternatively, the effects of internalized racism.

5.2.2 | Gradually shifting away from a colorblind ideology

While Solomon was representative of the 20 adolescents who endorsed a color-blind ideology as a ninth grader and then rejected this ideology as a 10th grader, recall that another 10 adolescents endorsed a colorblind ideology as ninth graders but did not reject this ideology until either the 11th grade (2 years later) or 12th grade (3 years later). A number of these adolescents ($n = 7$) who demonstrated a more gradual shift away from a colorblind ideology responded to our interview prompt in either the 10th or 11th grade with a transitional "yes, but" explanation. In this "yes, but" explanation, adolescents declared that, yes, people in the United States do have equal opportunities for success regardless of their racial background, but also seemed to contradict this perspective by acknowledging the existence or pernicious effects of racism. For example, one student, Matthew, who identified as a Latinx young man, stated unequivocally as a ninth grader that everyone has an equal chance to succeed regardless of their race or background. As a 10th grader 1 year later, however, Matthew explained, "They give us an equal chance, but depending on the person, they might not want that to happen. They might want to keep it to one race in particular." In this 10th grade interview, Matthew asserted again that everyone has an equal opportunity to succeed, but then added that people's biases and bigotry might pose obstacles for people of color like himself.

Another adolescent, Shawn, who identified as an African American young man, asserted as both a 9th and 10th grader that "anyone could succeed if they strive for it." As an 11th grader, however, Shawn explained: "Society can give like, people of all races an equal chance to succeed. But it's like, I don't know, it might be hard because we get like the stereotypes about Black people...So it's like some people give up. But I think it's an equal right though. You just gotta force yourself to do it." In this 11th grade explanation, Shawn twice stated his belief in equality of opportunity and put the onus on Black people to persevere in their striving for success, but he also suggested that stereotypes can have a pernicious effect on people's beliefs in their own abilities. In subsequent interviews, both Matthew and Shawn unequivocally rejected the colorblind ideology by asserting that racism *does* lead to unequal opportunities for people of color in the United States. For them and five other adolescents, the "yes, but" perspective seemed to represent a transitional step in their developing awareness of racism—a step in which they sought to reconcile an image of the United States as a colorblind meritocracy with their burgeoning awareness of the distinctive obstacles facing people of color.

In summary, of the 33 adolescents who espoused a colorblind ideology as ninth graders, the majority ($n = 20$) rejected this ideology just a year later as 10th graders. However, another portion of these young people ($n = 10$) demonstrated a more gradual shift away from a colorblind ideology. Only a handful of adolescents ($n = 3$) endorsed a colorblind vision of race, racism, and opportunity in the United States over all 4 years of high school.

5.2.3 | Rejecting a colorblind ideology from the start of high school

As noted above, the majority of interviewed adolescents ($n = 33$, 63%) espoused a colorblind ideology in their 1st year of high school about the effects of racism on people of color (see Table 5). A smaller number of interviewed adolescents ($n = 19$, 37%) rejected this colorblind ideology as ninth graders. For example, one adolescent, Julie, who identified as an African American young woman, explained that race *does* influence one's ability to succeed

TABLE 5 Participants ($n = 51$) responses to interview question about race and opportunity

	9th grade	10th grade	11th grade	12th grade
N	51	51	51	50
Yes	32 (63%)	17 (33%)	8 (16%)	3 (6%)
No	19 (37%)	24 (47%)	42 (82%)	47 (94%)
Question not asked	0 (0%)	10 (20%)	1 (2%)	0 (0%)

Note: The interview question read: "Do you believe people of all races and backgrounds in the United States have an equal opportunity to succeed?"

"because I believe African Americans have been enslaved for 200 years, and that is a lot of years. So therefore they have been held back from being already educated, and being wise, and being smart, so it's like they've been held back for 200 years. So, it's gonna take a while for them to like catch up to other races because they have been oppressed for a long period of time." In this explanation, Julie rejected the colorblind ideology by noting that the inequities caused by African Americans' 200 years of enslavement impacts the opportunities afforded to contemporary African Americans today. At the same time, her description of African Americans not yet being "wise" or "smart" and needing to "catch up to other races" might be characterized as the result of internalized racism or even unconsciously buying into a colorblind ideology.

While 30 of the 33 adolescents who endorsed the colorblind ideology as ninth graders shifted their perspective by the end of high school, the opposite was true of adolescents who rejected the colorblind ideology as ninth graders. Specifically, all 19 of the adolescents who rejected the colorblind ideology as ninth graders also rejected the colorblind ideology as 12th graders, and only a handful of those adolescents ($n = 3$) endorsed a colorblind ideology as either 10th or 11th graders. Put another way, 16 of the 19 adolescents who rejected the colorblind ideology as ninth graders continued to reject the colorblind ideology in each of their subsequent years of high school as well. And even the three students who shifted to endorsing the colorblind ideology as 10th or 11th graders subsequently reverted back to rejecting it again as 12th graders.

5.2.4 | Racism and domains of power

In responding to our yearly interview prompt about race and opportunity in the United States, participating adolescents described a variety of ways in which they perceived racism to impact the opportunities for success afforded people of color in the United States. As noted in Section 4, we then coded these responses in terms of the domain(s) of power that adolescents referenced (see Table 6). For example, one adolescent, Shantelle, who identified as a Black and Latinx young woman, offered a description of racism in the interpersonal domain when she explained as a 12th grader: "I have a cousin who's White, and she doesn't have like the same issues that we have. We went to Six Flags [amusement park], and they let her cut the line because they thought that she was White, and they wouldn't let me get on the ride because I was Black, I felt like. And it's just like subtle things like that that could discourage a lot of people." This experience of racial discrimination described by Shantelle represented an example of racism in the interpersonal domain of power.

Another adolescent, Monica, who identified as an African American young woman, offered an example of racism in the *cultural domain of power* when she explained how racial stereotypes can impede the career ambitions of children of color: "I think society, when they see a little Black boy they're gonna think he plays football, he has to play basketball. But if a Black boy says, 'I want to be a doctor,' I feel like society is gonna look at him like, 'What you doing? That's not what you're supposed to be doing. You're supposed to have a ball in your hand.'" Here,

TABLE 6 Domain of power referenced by participants ($n = 51$) who responded “no” to interview prompt about whether everyone in the United States has an equal opportunity to succeed regardless of race

	9th grade	10th grade	11th grade	12th grade
Interpersonal	5	7	6	10
Cultural	5	6	15	9
Systemic	10	18	26	34

Note: The interview question read: “Do you believe people of all races and backgrounds in the United States have an equal opportunity to succeed?”

Monica explained how pernicious racial stereotypes about Black intellectual inferiority and athletic prowess can influence the career trajectories of Black youth long before they even apply for a job. We characterize Monica's description as an example of racism in the cultural domain of power for two reasons. First, stereotypes about Black intellectual inferiority derive from the dominant colorblind ideology in the United States that seeks to attribute inequitable conditions for Black Americans to personal shortcomings rather than racism and systematic discrimination (Bonilla-Silva et al., 2004). Second, the related stereotype that Black Americans can only achieve success through athletics (or the arts) is one that has been amplified and exacerbated by media representations of successful Black Americans (Collins, 2009) and—as Monica points out—can constrain Black Americans' exploration of their full range of personal interests and professional ambitions.

Finally, a third adolescent, Anajah, who identified as a mixed-race young woman with parents from India and Jamaica, cited racism in the systemic domain when she described as a 12th grader her experience being assigned to attend a failing middle school within her city: “I felt like, you know, my society had kinda failed me. I was trying to make it, you know, learn something else, and I was forced to go to a [failing] zoned school... Sometimes people, they drop out or they get their GED, and it's like I'm not saying that this doesn't happen to White people, but I'm saying that I know more Black people who has had this happen to [them] than I do White people.” In this explanation, Anajah shared her perspective that the public school system in her city offered fewer resources and opportunities to Black children than to White children—an example of racism in the systemic domain of power. As can be seen in each of these examples as well as Table 6 below, adolescents in the present study invoked all three domains of power in their descriptions of how racism inhibited the opportunities afforded to people of color in the United States.

5.2.5 | Increasing descriptions in the systemic domain

Table 6 below also reveals that, as the adolescents in the present study advanced through their 4 years of high school, the number of adolescents citing examples of racism in the interpersonal and cultural domains of power remained fairly stable while the number of adolescents citing racism in the systemic domain increased each year. In other words, as they got older, increasing numbers of adolescents offered examples from the systemic domain of power to explain how racism constrains the opportunities for success afforded to people of color. Notably, this pattern of increasing references to racism in the system domain of power was primarily driven by adolescents who identified as Black or African American. In contrast, the number of Latinx adolescents citing racism in the systemic domain of power remained fairly consistent over participants' 4 years of high school.

In addition to this broad trend in adolescents' changing descriptions of racism, it is also useful to look at themes and patterns that emerged in different adolescents' yearly descriptions of racism. For example, only a handful ($n = 8$) of the adolescents who participated in four waves of interviews ($n = 51$) offered an example of racism in the systemic domain of power as *ninth graders* to explain their beliefs about racism and opportunity.

Importantly, six of those eight adolescents who cited an example of racism in the systemic domain as ninth graders continued to offer examples of racism in the systemic domain in all of their subsequent interviews as well.

One such adolescent was Stephon, who identified as a Black young man and explained as a ninth grader that “in Caucasian neighborhoods they have good schools, and, like us, we just have schools out here that there’s teachers that don’t really care. Out there, it’s like everyone’s going to college and everything. They’re surrounded by a good environment. But us, we’re like surrounded with negative things going on.” In this explanation, Stephon pointed to inequities in the schooling and neighborhood experiences of White and Black families influence their respective opportunities for success. Our research team coded this description by Stephon as an example of racism in the systemic domain of power because we perceived him to be pointing out how inequities in societal systems such as the public schools unfairly create advantages for White youth and disadvantage Black youth. This perception was further strengthened by Stephon going on to more clearly describe the effects of racism in the systemic domain of power in each of this three subsequent interviews. That said, one could also interpret Stephon’s explanation as a ninth grader of the poor schools and challenging neighborhoods inhabited by people of color as articulating deficit-based thinking about communities of color. As is evident throughout these qualitative results, an adolescent’s description of the effects of racism could be simultaneously insightful, perceptive, ambiguous, and contradictory.

A second pattern that emerged in our interview data was that 16 adolescents offered examples of racism in the interpersonal or cultural domains of power as 10th graders ($n = 8$) or 11th graders ($n = 8$) to explain their beliefs about racism and opportunity, but then shifted to descriptions of racism in the systemic domain of power a year later as 11th and 12th graders. One example of such an adolescent was Leondra, who identified as a Black young woman. After endorsing a colorblind ideology as a ninth grader, Leondra asserted one year later as a 10th grader that a person’s race *does* impact their opportunities for success. She explained: “Because when you’re Black, you’re already like labeled as something. Even if you’re not, you’re already labeled a certain way, and you have to like kind of prove yourself...And I just feel like we’re not give the same chance [as] a White person.” Here, Leondra invoked the cultural domain of power to explain how pernicious stereotypes about the personal characteristics of Black people (e.g., intellectual inferiority, laziness) lead them to be prejudged, underestimated, and not offered the same opportunities as White people. Per Steele’s (1997) work on stereotype threat, recognition of these pernicious stereotypes can also constrain Black people’s ability and willingness to reveal their true, full selves in academic and professional settings.

A year later as an 11th grader, Leondra echoed many of her peers in citing job interviews as a space where racism limits the opportunities afforded people of color. She explained: “If I was in competition with a White person for a position at a job, I’m pretty sure that White person would get it over me. Or I would have to work twice as hard to get it than that White person. And same thing for a Latino or a person of like Hispanic background.” Our research team coded this explanation by Leondra as an invocation of racism in the interpersonal domain, though her words also hinted at a burgeoning recognition of racism in the systemic domain of power as well. In other words, Leondra’s explanation as an 11th grader seemed to imply a growing recognition that the United States’s economic system is one that requires African American and Latinx workers to work “twice as hard” to reap the same opportunities as their White coworkers.

Finally, as a 12th grader in her final year of high school, Leondra made clear that she now possessed a fuller awareness of racism in the systemic domain of power. Specifically, Leondra explained in this fourth and final interview:

Okay, so White and Black people. We can make it as far as White people, but I believe that it’s harder for us because we would have to prove ourselves more, and we have to work towards getting in the same positions that a lot of White people were just raised in, or born into, or just put there in general because of their skin color. And I’ve also noticed that a lot of the situations I’ve been in, I’ve noticed that a lot of them don’t really know as much as I do or like they’re more nonchalant and like care less about the way they act because they already—we’re held to a certain stereotype and a certain image while they have it in a different way.

In this explanation, Leondra expanded upon ideas about racism in the cultural and interpersonal domains that she had raised in each of her previous interviews. Importantly, however, Leondra also referenced the effects of racism in the systemic domain of power when she added that White people often hold positions of power by virtue of their racial identity and the privileges that accompany that White identity.

A third pattern that emerged in our interview data was that 18 adolescents who had endorsed a colorblind ideology in their previous interviews cited examples of racism in the systemic domain of power as 10th ($n = 9$), 11th ($n = 6$), and 12th ($n = 3$) graders to explain their adoption of a worldview that rejected the colorblind ideology. Put another way, this group of adolescents, who had not previously cited examples of racism in any of the domains of power, now pointed to examples of racism in the systemic domain to illustrate their shifting beliefs about racism. For example, one adolescent, Elvis, who identified as a Latinx young man, endorsed a colorblind ideology as a 9th, 10th, and 11th grader with explanations such as, "We're all the same, even though we learn at different paces," "We're all the same thing, and eventually we'll be the same," and "I believe everyone has a chance to succeed as long as they try." Each of these responses represented an endorsement of the colorblind ideology by dismissing the effects of race and racism on the opportunities afforded to people from different racial groups.

In his final year of high school, however, Elvis rejected the colorblind ideology and explained: "One of the things we were learning about in gender studies where like um women get paid less than men and then uh, Black women get paid less than White women, so no I don't think we're all equally paid." After 3 years of espousing a colorblind ideology with regard to opportunities for success in the United States, Elvis cited an example of racism (and sexism) in the systemic domain of power as a 12th grader to explain his shift in thinking about the effects of racism on the opportunities afforded to people of color.

In summary, adolescents in the present study increasingly pointed to examples of racism in the systemic domain of power as they advanced through high school, but took several different pathways to do so. A small group of adolescents cited examples of racism in the systemic domain of power in their very 1st year of high school and then continued to do so for their subsequent years of high school. A larger group of adolescents pointed to examples of racism in the interpersonal and cultural domains of power in their early years of high school and then shifted to citing examples of racism in the systemic domain of power in their later years of high school. Finally, another sizable group of adolescents spent the beginning years of high school endorsing a colorblind ideology that dismissed the influence of racism on opportunities afforded to people of color, but then shifted to a worldview that rejected this colorblind ideology and cited examples of racism in the systemic domain to illustrate this shift. We consider the implications of all of these themes and patterns in Section 6 below.

6 | DISCUSSION

The present study sought to contribute to the relatively small body of scholarship that has investigated the developing awareness of racism of adolescents of color (e.g., Bañales et al., 2019; Benner & Graham, 2011; Killen et al., 2007) through a mixed methods, longitudinal research design that included five waves of surveys ($n = 643$) and four waves of interviews ($n = 51$) with participating youth. Below, we consider several of the key findings that emerged from analyses and triangulation of these data.

6.1 | Developing awareness of racism

First, participating adolescents ($n = 643$) demonstrated increases in their awareness of both interpersonal and systemic forms of racism over 4 years of high school. It was notable that the linear model demonstrated good fit with the survey data for adolescents' developing awareness of interpersonal racism, suggesting a consistency to adolescents' growing understandings of this type of racism over their 4 years of high school. In contrast, growth in

adolescents' awareness of systemic racism was best represented by a quadratic model, suggesting that adolescents demonstrated increasingly positive rates of change in their awareness of systemic racism as they advanced through high school. The inclusion of demographic controls in the LGMs largely indicated there were no differences in how awareness of racism developed over time between male and female students or between Black, Latinx, and multiracial students, with the exception of Latinx students reporting lower initial levels of awareness of interpersonal racism. With regard to this last point, one explanation is that Latinx adolescents in the sample had experienced less interpersonal racism going into their 1st year of high school than their African American and multiracial peers (Prelow et al., 2004; Seaton et al., 2010). Another possibility is that the parents of Latinx adolescents—many of whom were immigrants to the United States—were less likely to engage in socialization practices that prepared their children in early adolescence to recognize interpersonal forms of racism (Hughes, 2003).

The finding that adolescents demonstrated significant, positive linear growth in awareness of interpersonal racism over 4 years of high school resonates with this study's guiding theoretical frameworks (McKown, 2004; Spears Brown & Bigler, 2005). These frameworks propose that increasing cognitive sophistication and wider interactions with the world will lead older adolescents to demonstrate greater awareness of interpersonal racism, on average, than younger adolescents. More specifically, individuals develop stronger perspective-taking skills as they advance through adolescence that strengthen their ability to recognize and understand other people's racist beliefs, motives, and actions (e.g., McLoyd et al., 2009; Spencer et al., 1997). Youth are also frequently accorded increasing levels of independence and mobility as they advance through adolescence, which results in increasing exposure to experiences of interpersonal racism (McKown, 2004; Spears Brown & Bigler, 2005). Accordingly, the present study's finding that adolescents of color demonstrated significant, linear growth in their awareness of interpersonal racism over 4 years of high school seems in keeping with scholarship on the increasing cognitive sophistication and autonomy that are a part of normative adolescent development.

Participating adolescents also demonstrated positive growth in their awareness of systemic racism over 4 years of high school, but this growth was better represented by a quadratic model that revealed adolescents to demonstrate steeper rates of change in their latter years of high school. The development of formal reasoning and abstract thinking skills over the course of adolescence likely contributes to this finding by increasing youths' ability to recognize and understand systemic forms of racism (Harrell, 2000; Hughes & Bigler, 2011; Quintana, 2008; Seaton et al., 2010). However, recall that the more abstract and covert nature of systemic racism also means that awareness of this form of racism may be more likely to develop through explicit learning opportunities rather than lived experience (e.g., Dupree et al., 2015; Gurin et al., 2015; Lopez et al., 1998; Seaton et al., 2010). Consequently, one might expect the rate of change in adolescents' awareness of systemic racism to increase in the latter years of high school if parents and educators are more likely to engage young people in learning and discussions of systemic racism as they draw closer to adulthood. Longitudinal interviews with participating adolescents—discussed in greater detail below—suggested that adolescents' caregivers and teachers were more likely to introduce them to examples of systemic racism in their final years of high school than in their early years of high school. Analyses of these interviews added important nuance to our understanding of both the nature of these young people's developing awareness of racism over 4 years of high school as well as contextual factors influencing this development.

6.2 | Shifting from a colorblind ideology to acknowledging racism

For example, the majority of interviewed adolescents (33 of 51) expressed their belief in their 1st year of high school that people of all races and backgrounds in the United States possess equal opportunities to achieve success. Such a perspective resonates with what Bonilla-Silva (2004) describes as “colorblind racism” or a “colorblind ideology”—the belief that racism no longer represents a central feature of the culture, systems, or

interpersonal interactions in the United States. Scholars have characterized such a worldview as problematic because it implies that contemporary racial inequities in health, housing, employment, education, and a host of other measures are due to the personal characteristics of members of these groups, and that such inequities are normal and natural (Bonilla-Silva, 2006; Loya, 2011; Neville et al., 2005). Given that Bonilla-Silva characterizes colorblind racism as the “dominant ideology” in the United States, it should perhaps not be surprising that the majority of adolescents in the present study expressed as ninth graders their belief in this ideology that they had likely heard from a variety of sources including family members, teachers, popular culture, and social media.

Importantly, of the 33 adolescents who expressed their belief in a colorblind ideology as ninth graders, nearly all of these young people (30 of 33) had emphatically rejected this perspective by their final year of high school just 3 years later. In other words, these young people came to believe over their 4 years of high school that an individual's race *does* influence his or her opportunities for success. Within this group of 30 adolescents, two distinct patterns emerged in their shift from a colorblind worldview to one that recognized and acknowledged the effects of racism. Specifically, one group of adolescents ($n = 20$) demonstrated a more abrupt shift in worldview in which they espoused a colorblind ideology as a ninth grader and then fully rejected this ideology a year later in the 10th grade. In contrast, another group of adolescents ($n = 10$) demonstrated a more gradual shift in perspective in which they first articulated strong support for a colorblind ideology, expressed more equivocal support for this ideology a year later, and then finally rejected the colorblind ideology a year after that.

For both groups of adolescents, their abandonment of a colorblind ideology as they advanced through high school seemed to be related primarily to their greater independence from parents and caregivers, which allowed for wider interactions with the world and greater socialization from peers and non-parental adults (McKown, 2004; Spears Brown & Bigler, 2005). For example, as described in Section 5, adolescents in the present study attributed their shifts in worldview to factors ranging from more sophisticated conversations with their parents about racism, experiences seeking out part-time jobs, observing older students participate in the college admission process, visiting neighborhoods and communities very different from their own, and participating in academic lessons on systemic forms of racism. Both empirical research (e.g., Rendón et al., 2018) and the conceptual frameworks guiding the present study (e.g., McKown, 2004) suggest that participants' likelihood of engaging in each of these types of experiences increases as they advance through adolescence and contribute to their growing recognition and understanding of the effects of racism on their lives and communities.

6.3 | Developing an awareness of systemic racism

Among the adolescents who participated in four waves of qualitative interviews ($n = 51$), several distinct groups also emerged in their invocation of systemic forms of racism to describe the relationship between race and opportunity in the United States. These distinct groups of adolescents are noteworthy because racism in the systemic domain of power is arguably the most abstract form of racism within Collins's (2009) framework, and, consequently, requires the most sophisticated cognitive skills and explicit socialization practices to recognize and understand (Bañales et al., 2019; Hope & Bañales, 2018; Hughes & Bigler, 2011; Killen et al., 2011).

Within the present study, only a small number of adolescents ($n = 8$) cited examples of racism in the systemic domain in their 1st year of high school as ninth graders. In explaining how they had come to recognize systemic forms of racism, these young people pointed to a range of formal and informal learning experiences such as a middle school class that introduced the topic of redlining and conversations with their parents about inequitable school funding practices. Interestingly, six of these adolescents continued to offer examples of racism in the systemic domain of power in their subsequent interviews as 10th, 11th, and 12th graders as well. This pattern suggests that many of the young people who exhibited awareness of systemic racism at a relatively precocious age continued to recognize and acknowledge this form of racism throughout their high school years.

A larger group of adolescents ($n = 16$) shifted over their 4 years of high school from a colorblind worldview to an awareness of cultural and interpersonal forms of racism to an awareness of racism in the systemic domain of power. Specifically, these young people offered a colorblind worldview as ninth graders, rejected this worldview in the 10th or 11th grade by describing racism in the interpersonal or cultural domain, and then cited racism in the systemic domain of power in their final year of high school. As noted in Section 5, this pattern was particularly prevalent for adolescents who identified as Black or African American.

This trajectory seems to align with both the conceptual frameworks (e.g., McKown, 2004) and extant research (e.g., McLoyd et al., 2009) guiding the present study that point to the combined influence of adolescents' increasing cognitive skills and wider experiences in the world on their developing awareness of racism. Specifically, the extant scholarship suggests that these young people's interactions with a widening group of peers and adults increased their exposure to firsthand experiences with racism and also provided opportunities to engage in learning and discussion about racism (McKown, 2004; Rendón et al., 2018; Spears Brown & Bigler, 2005). At the same time, these young people were also developing the formal reasoning skills to question the colorblind ideology that is dominant in the United States, the perspective-taking skills to identify racist and racialized interactions with other people, and the abstract thinking skills to understand how racism can also be present in systems and institutions (Harrell, 2000; Hughes & Bigler, 2011; McLoyd et al., 2009; Quintana, 2008; Seaton et al., 2010; Spencer et al., 1997).

Cumulatively, adolescents' experiences and growing cognitive sophistication contributed to their shift from a colorblind worldview to an awareness of cultural and interpersonal forms of racism to an awareness of racism in the systemic domain of power. The fact that this pattern was particularly prevalent among African American adolescents in our sample resonates with extant research that has found African American parents, caregivers, and mentors to be more likely to socialize their children to recognize systemic forms of racism and racial bias (e.g., Hughes, 2003).

Finally, a third group of adolescents ($n = 18$) shifted from endorsing a colorblind ideology in one interview (as either 9th, 10th, or 11th graders) to rejecting this ideology the very next year by citing their awareness of racism in the systemic domain of power. In other words, adolescents in this group shifted from a colorblind worldview to an awareness of the pernicious effects of systemic forms of racism without the same intermediary steps described by many of their classmates.

The fact that approximately a third of the interviewed adolescents demonstrated this relatively abrupt shift in worldview is consistent with analyses of these young people's survey data that found, on average, growth in awareness of systemic racism was best represented by a quadratic growth model rather than a linear one. As noted above, one explanation for adolescents' steeper growth in the latter years of high school is that recognizing systemic racism may require not only more sophisticated cognitive skills but also explicit socialization from parents and teachers, and that such socialization may be more likely to occur as adolescents approach the end of high school (Hughes, 2003; Seaton et al., 2010; Spencer et al., 1997). This explanation resonates with descriptions by a number of the interviewed adolescents themselves about where their understandings of systemic racism had come from.

For example, one adolescent, Elvis, espoused a colorblind ideology in each of his first 3 years of high before rejecting this ideology as a 12th grader and citing his newfound awareness of racism in the systemic domain of power. In explaining this shift in perspective, Elvis credited a gender studies elective course he had taken as a 12th grader that introduced him to pay gaps between both men and women, and also between White people and people of color. In considering this explanation by Elvis and other adolescents, it is important to recall that all of the young people in the present study were attending secondary schools that included explicit goals for youth civic development in their mission or vision statements. Consequently, these young people may have been particularly likely to attend schools featuring curriculum and programming that introduced students to racism and other forms of injustice, and which contributed to these adolescents' shifts in just a single year from a colorblind worldview to a recognition and understanding of systemic forms of racism. And, in fact, in previous studies, we have drawn on both

adolescents' qualitative interviews as well as field notes collected from the participating secondary schools to identify specific programming that may have contributed to adolescents' developing awareness of racism and other oppressive social forces (Seider et al., 2016, 2017).

6.4 | Ambiguous and contradictory descriptions of racism

In this study, we have described the growth that participating adolescents demonstrated in their awareness of interpersonal and systemic forms of racism over 4 years of high school. Moreover, we have drawn on four waves of interviews with participating youth to identify more nuanced patterns and groups within this broader developmental trajectory. Identifying these trajectories, patterns, and groups offer useful insights to researchers and youth-serving professionals about the development of young people's awareness of racism, but it is also important to acknowledge that adolescents' beliefs and understandings of racism were not always as clear or straightforward as such patterns and groupings might imply.

As noted in Section 5, a number of explanations by participating adolescents of the relationship between race and opportunity seemed to offer an example of racism in the systemic domain of power, but were ambiguous enough that one might also reasonably interpret the explanation as commenting on the deficiencies of communities of color. Other adolescents participating in interviews would espouse a colorblind worldview, but then seem to contradict this perspective an instant later by adding that they also believed people of color have to work harder than White people to achieve similar results. Still other adolescents would offer powerful examples of how racism affects their daily lives as people of color, but then assert that they faced no greater barriers to success than their White peers. These ambiguous and contradictory explanations resonate with work by other scholars about the motivations of individuals from oppressed groups to justify existing, oppressive systems (Jost et al., 2004) or to maintain contradictory beliefs about oppressive systems (Bonilla-Silva, 2004; Kluegel & Smith, 1986). Importantly, these ambiguous and contradictory explanations also serve as an important reminder that—despite the growth in awareness of racism reported for this study's broader sample of adolescents and the patterns identified for specific subgroups within this sample—the developing awareness of racism of the individual adolescents within this study represented a series of distinct and winding pathways.

6.5 | Limitations

There were a number of limitations to the present study. First, while the study is guided by Collins's (2009) framework that conceptualizes in terms of multiple domains of power, this study's survey tool only included measures associated with two of these domains (interpersonal, systemic). Consequently, this study's quantitative results cannot offer insight into participating adolescents' developing awareness of racism in the cultural domain of power.

Second, the prompt in the qualitative interview protocol posed each year of high school to a subset of participating adolescents—and the focus of this study's qualitative analyses—did not *directly* ask adolescents about their understandings of racism. Instead, the prompt asked students to respond to the question: "Do you believe people of all races and backgrounds in the United States are given an equal opportunity to succeed?" Adolescents' responses to this prompt unequivocally offered insight into their understandings of racism, but it is also likely that its framing influenced the ways in which participating adolescents demonstrated their understanding of racism.

Third, this study's sample was comprised predominantly of Black and Latinx adolescents from low-income families in northeastern cities. As a result, findings from this study may not be generalizable to adolescents from other racial and socioeconomic groups, or from other geographic regions and types of communities. Additionally, all of these adolescents attended public charter schools in their respective cities that articulated an explicit

commitment to youth civic development in their mission or vision statements. This means that the adolescents participating in the present study came from families with the social capital necessary to enroll their children in the randomized lottery for admission to their respective schools, and also that these young people were attending schools that were more likely than traditional high school to engage their students in reflection and learning about civic and political issues such as racism and oppression. For all of these reasons, the young people in the present study may not have been representative of other low-income youth of color in their respective cities.

6.6 | Implications

The present study is the first that we are aware of to investigate how awareness of interpersonal and systemic forms of racism develops in adolescents of color over 4 years of high school. Accordingly, the results hold useful implications for scholars, educators, parents, and other stakeholders invested in preparing young people of color to navigate and challenge racism in the various domains of power. For example, the results of the present study emphasize there is considerable heterogeneity in the ways that adolescents of color recognize and understand racism. Youth in the present study demonstrated a wide range of understandings about *whether* racism shapes opportunities in the United States, *how* racism influences such opportunities, and *where* such racism is manifest. Consequently, educators and youth-serving professionals should not assume that young people with whom they are working—even young people who share similarities in their age, race, grade level, socioeconomic status, schooling, or geography—possess similar understandings of racism and its effects.

The present study also demonstrates that young people's beliefs about racism are dynamic. Young people in the present study demonstrated growth in their awareness of racism, shifts in their beliefs about the relationship between racism and opportunity, and changes in the domains of power they cited to explain the relationship between racism and opportunity. Accordingly, parents, educators, and other youth-serving professionals should not regard a young person's understandings of racism as entrenched or intractable, but, instead, understandings that can demonstrate sizable shifts over a relatively short period of time. Such a perspective seems likely to influence the approach a parent or educator takes in supporting the positive development of a young person espousing, say, a color-blind ideology as a ninth grader.

Finally, the present study also demonstrated in a variety of ways that young people of color are developing, on average, deeper, and more complex understandings of racism as they move from early to late adolescence. Accordingly, parents and educators should not shy away from engaging young people in discussion and learning about these topics. The young people who participated in qualitative interviews made clear that they were learning about racism from a variety of sources ranging from social media to firsthand experiences to conversations with peers. Given that these types of experiences are occurring, youth-serving adults have an important role to play in scaffolding young people's reflection upon these experiences. Adults who are silent on these issues or espouse a color-blind ideology that contradicts young people's other learnings and experiences are not fully supporting their youths' development of the skills necessary to survive and thrive in a world where racism remains pernicious and persistent.

PEER REVIEW

The peer review history for this article is available at <https://publons.com/publon/10.1002/jcop.22494>

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

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