

Relations between racial stress and critical consciousness for black adolescents



Elan C. Hope^{a,*}, Chauncey D. Smith^b, Qiana R. Cryer-Coupet^c, Alexis S. Briggs^a

^a Department of Psychology, NC State University, USA

^b Curry School of Education & Human Development, University of Virginia, USA

^c Department of School, NC State University, USA

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ABSTRACT

Black adolescents may use critical consciousness to cope with stress from experiences of racism. In the current study ($n = 594$; $M_{age} = 15.4$), we used structural equation modeling to examine how stress from individual, institutional, and cultural racism may directly and indirectly relate to critical reflection, critical agency, and critical action for Black adolescents. Analyses indicated that individual and cultural racial stress were positively related to critical reflection and critical agency. Further, all three types of racism were directly related to critical action. Individual and cultural racial stress were also related to critical action indirectly through critical reflection – perceived inequality and critical agency. Altogether, these findings provide empirical evidence for how experiences of racism motivate critical consciousness development for Black adolescents. In efforts to bolster critical consciousness, practitioners may consider providing space and time for Black youth to discuss their own experiences of racism.

Racism is a common and normative experience for Black adolescents (Lanier, Sommers, Fletcher, Sutton, & Roberts, 2016; Seaton, Caldwell, Settles, & Jackson, 2008). Black youth experience racism in neighborhoods and schools (Benner et al., 2018; Hope, Skoog, & Jagers, 2015), making the management of these experiences a part of their everyday lives. For Black adolescents, one theorized response to racism is to engage in critical action as an act of self-preservation to mitigate the negative effects of stress caused by racial oppression *and* as an act of resistance to change the very conditions that sustain racial oppression (Hope & Spencer, 2017; Watts, Diemer, & Voight, 2011). This contention is documented through the historic youth resistance against anti-Black racism of the Student Nonviolent Coordinating Committee of the Civil Rights Movement (Stoper, 1977) and the contemporary Black Lives Matter movement (Garza, 2014). Critical action to resist oppression is a part of critical consciousness, which also includes *critical reflection*, dialectic understanding of how systems of oppression work, and *critical agency*, belief in one's ability to affect change toward social justice (Freire, 1970; Watts et al., 2011). Previous research has typically examined Black youths' critical reflection, without investigating how Black youth's own experiences of racism impact that understanding and subsequent action (e.g., Diemer & Rapa, 2016; Godfrey, Burson, Yanisch, Hughes, & Way, 2019; Seider, Clark, & Graves, 2019). As such, in the current study, we contribute to this line of research and

investigate how experiencing stress from racism at multiple levels is related to critical consciousness for Black adolescents. We investigate whether racial stress is directly related to critical reflection, critical agency, and critical action for Black adolescents. We also examine whether there are indirect paths from racial stress to critical action through critical reflection and critical agency. We contend that, for Black adolescents, experiences of stress from racism may relate to critical reflection of racial oppression, and thus promote critical agency, and critical action to dismantle systems of racial oppression.

Racism & adolescence

Racism manifests via individuals, institutions, and culture (Jones, 1997; Pincus, 1996). Individual racism includes bigotry, racial prejudice, and racial microaggressions (Jones, 1997; Sue, 2010). Institutional racism is the manifestation of racist beliefs that are indelible in institutional policies and practices and result in inequitable outcomes between racial groups (Jones, Dovidio, & Vietze, 2014). Cultural racism includes the laws and cultural practices that uphold the historic and modern dominance of the majority group over minority groups (Jones, 1997; Utsey & Ponterotto, 1996). During adolescence, race becomes more salient and Black adolescents then are better able to recognize and report racism (Hughes, Del Toro, Harding, Way, & Rarick, 2016). In one

* Corresponding author at: Department of Psychology, North Carolina State University, Campus Box 7650, Raleigh, NC 27695-7650, USA.
E-mail address: ehope@ncsu.edu (E.C. Hope).

study, 97% of Black adolescents reported experiencing individual racism at least once within a two-week period (Seaton & Douglass, 2014). Racism experiences during adolescence have been associated with psychological maladjustment (Benner et al., 2018; Seaton & Iida, 2019), poor academic performance (Benner & Graham, 2013; English, Lambert, & Jalongo, 2016), and poor physical health (Brody et al., 2014; Williams, Lawrence, Davis, & Vu, 2019). Further, racism that Black people experience in adolescence is predictive of increased symptoms of depression and anxiety in adulthood (Assari, Moazen-Zadeh, Caldwell, & Zimmerman, 2017a; Assari, Moghani Lankarani, & Caldwell, 2017b).

Stress from racism is the cognitive appraisal of risk for harm from racism and evaluation of resources to cope with that harm (Outlaw, 1993; Utsey et al., 2013). Stress from racism is a source of chronic worry for African Americans (Rucker, West, & Roemer, 2010) that compromises the autonomic nervous system and leads to cardiovascular disease (Brosschot, Gerin, & Thayer, 2006). Scholars contend that negative health outcomes related to racism are due to chronic race-related stress and race-related stress responses (Hicken, Lee, Ailshire, Burgard, & Williams, 2013). While racism is a common experience among Black youth, individuals have different responses to racism as a stressor (Hoggard, Byrd, & Sellers, 2015). Critical consciousness, particularly critical action, may be one way to cope with racism-related stress, reduce the negative effects of that stress, and change systems of racial oppression (Hope & Spencer, 2017). As such, we examined how stress from different types of racism is related to critical consciousness for Black adolescents.

Critical consciousness

Paolo Freire proposed the idea of critical consciousness through his work in Brazil where he used education and literacy as tools for liberation and social justice for the socioeconomically oppressed. Freire suggested that disenfranchised groups of people can engage in individual and collective action toward their own liberation via a critical understanding of the sociopolitical systems that oppress them (Freire, 1970). Psychologists contend that critical consciousness is comprised of three elements: critical reflection—analysis of the structural causes of inequitable sociopolitical conditions; critical agency—perceived ability to enact social change as an individual or collective; and critical action—actions taken within or outside of traditional political structures to address systemic inequality (Diemer, McWhirter, Ozer, & Rapa, 2015; Watts et al., 2011).

Critical consciousness theory offers a mediation model to explain how critical reflection, critical agency, and critical action are related (Watts et al., 2011; Diemer & Rapa, 2016). Theorists suggest that analysis of structural oppression (critical reflection) may lead to beliefs in one's ability and knowledge to affect change (critical agency), which then results in sociopolitical acts to redress systems of oppression (critical action). Through critical reflection, youth have an opportunity to analyze the social and political conditions within their environment, especially conditions that may inhibit civic participation, education opportunities, and economic advancement. By developing a critical understanding of sociopolitical conditions, youth are in turn empowered to act politically and civically to transform society. Equally, a reciprocal relationship may exist where participation in critical action fosters critical reflection and agency (Anyon, Bender, Kennedy, & Dechants, 2018). Through critical action, youth can continue to reflect critically on the state of injustice and oppression in their communities.

Critical reflection has two components: perceived inequality and egalitarianism (Diemer, Rapa, Park, & Perry, 2014). Perceived inequality is beliefs and understanding regarding the realities of social inequality across race/ethnicity, gender, and socioeconomic class. Scholars contend that perceived inequality beliefs reflect attributions for racial disparities that are structural or individualistic (Diemer et al., 2015). Youth who are more critically reflective of inequality would

attribute racial disparities to structural barriers like policies and access to resources (Bañales et al., 2019; Hope & Bañales, 2018), and would thus be motivated to access structural solutions to inequality. Egalitarianism is beliefs regarding the importance of equality between different groups of people and the ideal way a society should function to reflect that equality. Egalitarianism focuses on beliefs in just societies and equity across social groups (Diemer et al., 2015). Researchers suggest that more egalitarian beliefs indicate a belief system that rejects inequalities between groups and supports social policies and social justice initiatives that align with the goal of increasing equality between groups (Diemer et al., 2015). Given these differences, precursors to critical reflection might vary depending on the type of critical reflection. How critical reflection relates to critical agency and critical action may also vary.

Researchers have examined how critical reflection, critical agency, and critical action relate to each other for racially marginalized youth. Diemer and Rapa (2016) found, for Black adolescents, critical reflection—perceived inequality was related to more protesting and a greater expectation of future political participation, and internal political efficacy was related to a greater expectation of participating in conventional politics. For Black adolescents, egalitarianism was not related to critical agency or critical action. Further, in their study, they did not find evidence of a mediation model where critical reflection leads to critical agency, which then leads to critical action. In a study of Black adolescent boys', Lozada, Jagers, Smith, Bañales, and Hope (2017) examined critical reflection of racial oppression, social emotional skills (political efficacy), and prosocial behaviors (critical action). They found that the relationship between critical reflection and critical action was mediated by political efficacy.

This evidence suggests that critical reflection and critical agency relate to Black adolescents' critical action. Findings from this research also illuminate nuances in how critical reflection is (or is not) related to critical agency and action. One consideration is how each dimension of critical reflection is conceptualized. In the Lozada et al. (2017), evidence of mediation path was supported with a conceptualization of critical reflection that was specific to racial oppression. In the Diemer and Rapa (2016) study, a more general conceptualization of critical reflection across various domains was considered, and there was no evidence of critical agency as a mediator. In both studies, critical reflection that focused on understanding of inequality and oppression was related to critical agency and action. Scholars suggest that critical reflection in one domain (e.g., race oppression) does not equate critical reflection in another domain (e.g., class oppression; Diemer et al., 2015), which could explain the differential study findings. In our study, we will examine the theoretical assertion that critical agency mediates the relations between critical reflection and critical action. We also contend that experiences of racism may be important to consider in models that test the theoretical mediation process of critical consciousness beliefs and actions among Black youth.

Racism & critical consciousness

Watts and colleagues (2006) further posit that adolescent critical consciousness develops from early life experiences within family, schools, and communities. For Black adolescents, these early life experiences are commonly racialized, and can include racial identity development, racial socialization, and experiences of racial discrimination (Godfrey et al., 2019; Hope et al., 2015; Mathews et al., 2019). Scholars posit that adolescents learn how to understand sociopolitical processes within the context of local education, family and peer socialization, and cultural norms regarding justice, equality, and myths of meritocracy (Curtis, 2019a; Curtis, 2019b; Hope & Bañales, 2018). Indeed, for Black youth, critical reflection and critical action can stem from personal and vicarious experiences of racism (Anyiwo, Banales, Rowley, Watkins, & Richards-Schuster, 2018). This is similar to what racial identity scholars describe as an encounter, or an experience that inspires a person to

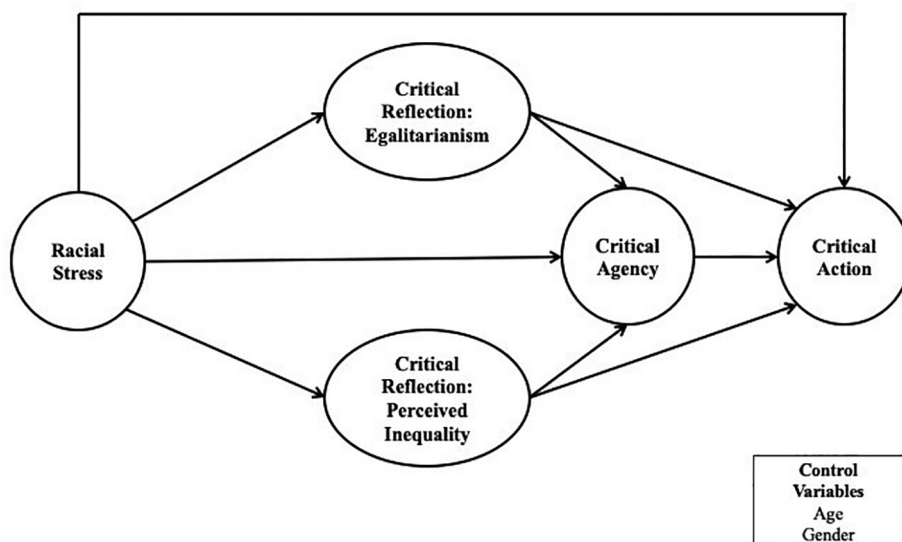


Fig. 1. Conceptual model of racial stress predicting critical consciousness.

critically reconsider, and perhaps even redefine, what it means to be Black within sociopolitical systems (Cross Jr., 1991; Neville & Cross, 2017). These encounters can be positive (e.g., experiencing joyful and strong community among Black people) or negative (e.g., experiencing racism and bias).

The research overwhelmingly finds that racism is a negative encounter that has negative implications for Black adolescent wellbeing (Benner et al., 2018). Nevertheless, Black youth implement a variety of strategies to cope with the reality of racism in their lives (Anderson, Jones, Anyiwo, McKenny, & Gaylord-Harden, 2018). One such coping strategy, but certainly not the only strategy, may be engaging in individual and collective action to dismantle systems of racial oppression (Hope & Spencer, 2017). For individual experiences of racism, Black youth may be motivated to change racially oppressive systems as a part of a strategy to cope with the negative impacts that they may experience personally. For institutional and cultural forms of racism, Black youth may be motivated to engage in systemic change after engaging in a deep analysis of how systems of racial inequality are embedded in society. For example, a Black adolescent might experience institutional racism via mistreatment at school. This mistreatment might lead the student to grapple with whether the mistreatment is the result of individual interactions or the structural roots of racial stereotypes (perceived inequality), while also questioning whether an equitable world is possible (egalitarianism). This reflection could then relate to how the student imagines their ability to engage in critical action and whether or not they engage in critical action (Hope & Bañales, 2018). Equally, as a young Black person experiences overrepresentation of negative images of Black people in the media, they may be motivated to create new positive media content. The substance of that content may be the result of a critical reflection of structural racism embedded in the media and feelings of agency to be able to affect change through art (Stornaiuolo & Thomas, 2018).

Several empirical studies point to the importance of understanding how stress from racism may relate to critical action via critical reflection and critical agency. Researchers have found that a deep exploration of what it means to be Black within a system of racial oppression precedes increases in race-focused activism (Neville & Cross, 2017). More frequent experiences of interpersonal racist events (Szymanski, 2012), racial microaggressions (Hope, Velez, Offidani-Bertrand, Keels, & Durkee, 2018; White-Johnson, 2012), and stress from racial discrimination (Szymanski & Lewis, 2015), are related to more sociopolitical action among Black college students. Further, Black adolescents and emerging adults who recognized institutional racism

participated in more traditional political activities such as campaigning, boycotting, or protesting (Hope & Jagers, 2014). Black youth who experience more institutional racism are also more likely to indicate future intentions to participate race-related activism that is risky and may result in arrest or bodily harm (Hope, Gugwor, Riddick, & Pender, 2019). Experiences of cultural racism are related to a greater future orientation toward lower risk activism for the Black community, such as wearing t-shirts with political messages or engaging in sociopolitical discussions (Hope et al., 2019). There is also some evidence that experiences of institutional racism are related to less low-risk activism for Black youth (Hope et al., 2019). It is possible that, for some youth, experiences that situate racism as structurally embedded are demotivating, and contribute to feelings that society is unfair (Ballard, 2015). Indeed, for Black college students, more institutional racial mistrust was related to less engagement in sociopolitical actions (Leath & Chavous, 2017). These studies indicate that experiences of racism may differentially relate to critical action, depending on both the type of racism and the types of actions taken for social justice change. As such, questions remain regarding if and how individual, institutional, and cultural racism are related to critical action. To extend this growing line of research on the sociocultural factors that influence critical consciousness, we examined how the stress from these three different manifestations of racism are related to critical actions through critical reflection and agency.

The current study

Critical reflection is a likely precursor for critical action, and critical reflection is influenced by experiences within the sociopolitical context, including experiences of racism and racial oppression. In the current study, we tested the proposition that the stress that Black adolescents experience as a result of racism has direct and indirect relations to critical consciousness beliefs and actions (see Fig. 1). We examined whether stress from racism is directly related to critical reflection, critical agency, and critical action. Congruent with sociopolitical development theory (Watts & Guessous, 2006) and recent theory development at the nexus of race and critical consciousness (Anyiwo et al., 2018), we hypothesized that stress from racism would be positively related to critical reflection – perceived inequality, critical agency, and critical action. We expect that racial stress may have a negative or no direct effect on egalitarian beliefs for Black youth. Further, we expected that stress from racism, particularly institutional and cultural racism, would relate positively to critical action, through critical reflection –

perceived inequality and critical agency. For individual racism, we expect that racial stress may positively relate to critical action indirectly through critical agency. Finally, we tested the critical consciousness mediation hypothesis and whether critical reflection was related to critical action through critical agency. Given mixed results from previous research (Diemer & Rapa, 2016; Lozada et al., 2017), we did not extend a formal hypothesis for these indirect paths.

Method

Participants

Participants were 594 self-identified Black adolescents living in the United States, ages 13 to 18 years old ($M = 15.44$; $SD = 1.24$). In terms of gender, participants identified as female (47.5%), male (52.4%), and other, not specified (0.17%). Participants identified as Black/African American (91.8%) and biracial (8.25%). A majority of participants were from the South (56.25%), while 14.70% were from the Midwest, 20.95% from the Northeast, and 8.11% from the West. With regard to education, 19% of participants were in middle grades (6-8th), 80.6% were in high school (9 – 12th), and 0.34% were not currently in school. Of the adolescents, 4.55% identified as LGBTQ. With regard to household income, 34.2% of participants reported a total annual income under \$35,000. An additional 23.7% of participants came from households that made between \$35,000 - \$54,999 and 28.8% from household that made between \$55,000 - \$99,999, annually. Finally, 13.3% of participants came from households that made over \$100,000 annually.

Procedure

Participants were recruited through a dyadic survey of Black adolescents and their primary caregiver from across the United States. This study was designed to understand the psychological, physical, economic, and political health of Black caregivers and their adolescent children with a focus on family socialization, communication, and relationships. Caregiver-adolescent dyads were recruited using Qualtrics Panels, an online survey delivery service that researchers can use to recruit participants (see Brandon, Long, Loraas, Mueller-Phillips, & Vansant, 2014 for a detailed description). Potential caregiver respondents were sent an email invitation to participate in the research study, including the expected duration of the study and incentives available for participation. To reduce self-selection bias, the survey invitation did not include specific details about the content of the survey. Adolescent participants qualified if they self-identified as Black and between 13 and 18 years old. First, the parent completed their survey; then, the adolescent child completed a separate study. We primarily used adolescent report data for this study, with the exception of household income, which was reported by the parent or guardian. Participants received an incentive based on the length of the survey, their specific panelist profile, and target acquisition difficulty. The specific incentive varied and included cash, airline miles, gift cards, redeemable points, sweepstakes entrance, and vouchers. Study protocols were approved by the IRB at the host university.

Measures

Details about each latent construct, individual items from each scale, and descriptive data can be found in Supplemental Table 1.

Racial stress

Stress from individual, institutional, and cultural racism were measured using the Index of Race-Related Stress (IRRS; Seaton, 2003). Participants reported whether they had experienced a race-related event and the extent to which the experience was bothersome or upsetting using a 5-point scale (0, *this event never happened to me*; 1, *this*

event happened, but did not bother me; 2, *this event happened, and I was slightly upset*; 3, *this event happened, and I was upset*; 4, *this event happened, and I was extremely upset*). In this study, we focused on the experiences of stress from racism, rather than a count of the number of racist events a person experienced. The individual racism subscale was made up of 10 items. An example of individual racism is “Whites/non-Blacks have stared at you as if you didn't belong in the same place with them, whether it was in a store, restaurant, or other type of business.” The individual racism subscale had an alpha value of 0.94 and a mean interitem correlation of 0.61. The institutional racism subscale was made up of 12 items. An example of institutional racism is “You have been questioned about being in a White neighborhood for no reason.” The institutional racism subscale had an alpha value of 0.94 and a mean interitem covariance of 0.57. Finally, the cultural racism subscale was made up of 9 items. An example of cultural racism is “You seldom hear or read anything positive about Black people on radio, TV, in newspapers, or history books.” The cultural racism subscale had an alpha value of 0.94 and a mean interitem correlation of 0.60. This scale was validated in a sample of African American adolescents (ages 13–18) and there was internal consistency for the individual ($\alpha = 0.87$), institutional ($\alpha = 0.84$), and cultural $\alpha = 0.82$) racism subscales.

Critical reflection

Critical reflection was measured using the two subscales from the Critical Consciousness Scale (Diemer et al., 2014). Critical reflection – perceived inequality was measured using 8 items that assessed youth's beliefs about socioeconomic, racial, and gendered opportunity constraints in education and jobs. An example item is, “Certain racial or ethnic groups have fewer chances to get good jobs.” Critical reflection – egalitarianism was measured using 5 items that assessed youth's beliefs that all groups in society should be treated equal. An example item is, “Group equality should be our ideal.” Each item was assessed using a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). All items were coded such that higher responses indicate greater critical reflection. Internal reliability was adequate for critical reflection – perceived inequality ($\alpha = 0.94$; $M_{IC} = 0.66$) and critical reflection - egalitarianism ($\alpha = 0.84$; $M_{IC} = 0.56$).

Critical agency

Critical agency was measured using 7 items from the Measure of Adolescent Critical Consciousness Scale (McWhirter & McWhirter, 2016). Items assessed personal efficacy and motivation to participate in actions to eradicate racism and enhance their own communities. Items were measured on a 5-point scale from 1 (Strongly Disagree) to 5 (Strongly Agree). An example item is “I am motivated to end racism and discrimination.” These items had high internal reliability ($\alpha = 0.91$; $M_{IC} = 0.59$).

Critical action

Youth reported critical action by indicating whether or not they had participated in eleven political and civic activities within the last 12 months. All 9 items were used from the Critical Consciousness Scale (CCS), Sociopolitical Action subscale (Diemer et al., 2014) and two items were used from the Measure of Adolescent Critical Consciousness (MACC), Critical Behavior subscale (McWhirter & McWhirter, 2016). The third possible item from the MACC was redundant to items in the CCS. Participants indicated whether or not they participated in each activity, where yes was coded a “1” and no was coded as “0.” Example items include, “Joined a protest march, political demonstration, or political meeting” and “I was involved in activities or groups that promote equality and justice.” Typically, critical action summed as a count of the total number of activities endorsed by the participant out of the 11 possible activities. In our structural equation models, we included critical action as a latent construct with 11 binary indicators. The alpha coefficient for the scale was 0.86 and the mean interitem covariance was 0.34.

Demographic covariates

Age and income were included in each model as covariates. Income was indicated on a 9-point scale in \$10,000 increments from under \$25,000 (1) to over \$100,000 (9).

Data analysis plan

All data analyses were run using Stata 16. First, we conducted preliminary descriptive analyses of all study variables. Next, we conducted a confirmatory factor analysis (CFA) to estimate how well the observed variables represented the hypothesized latent constructs. We then estimated three structural equation models (SEM) to test our hypotheses that racial stress influences youth critical civic action via critical reflection and critical agency. SEM models were estimated using maximum likelihood with Satorra-Bentler adjustments. The Satorra-Bentler adjustment provides a chi-squared test that is robust to non-normality, along with robust standard errors, and goodness-of-fit statistics derived from the adjusted chi-squared test (StataCorp, 2019). There was no missing data in the variables used in these analyses. We controlled for age and household income. Overall fit was determined by the Satorra-Bentler adjusted chi-square statistic that tests for comparability between the proposed model and the model in which constructs are assumed to be unrelated. We also examined the Satorra-Bentler adjusted comparative fit index (CFI), Tucker-Lewis Index (TLI), standardized root-mean square residual (SRMR), and root-mean square error of approximation (RMSEA) to determine goodness of fit. Models were considered to have a good fit if the CFI was greater than 0.95, the TLI was greater than 0.95, and the RMSEA was less than 0.05 (Accock, 2013). In addition to model fit, we examined effect sizes of the direct and indirect path coefficients. Standardized coefficients less than 0.10 were considered small, those larger than 0.30 were considered moderate, and coefficients larger than 0.50 were considered large (Kline, 2005). Indirect effects were examined using the MEDSEM module, which estimates indirect effects via the Monte Carlo test with 5000 replications (Mehmetoglu, 2017).

Results

Preliminary analyses

Analyses were conducted to evaluate means, frequencies, standard deviations, and bivariate correlations for all study variables (see Table 1). On average, participants reported experiencing 11.69 out of 31 possible types of racism. Sixteen percent of participants reported that they did not experience racism and 6.2% of participants reported experiencing all 31 instances of racism. Just under 75% of participants had at least one experience with individual racism, 59.6% had at least one institutional racism experience, and 74% reported at least one

cultural racism experience. On average, participants reported that instances of racism did not bother them on the individual ($M = 1.01$, $SD = 1.13$), institutional ($M = 0.58$, $SD = 0.88$), and cultural level ($M = 1.38$, $SD = 1.22$). Stress from individual racism was positively correlated with perceived inequality, critical agency, and critical civic action. Stress from institutional racism was positively correlated with perceived inequality and critical civic action, and negatively correlated with egalitarianism. Stress from cultural racism was positively correlated with perceived inequality, egalitarianism, critical agency, and critical civic action.

Measurement model

We conducted a confirmatory factor analysis (CFA) to examine how well the observed items represented hypothesized latent constructs. The CFA included latent constructs for the dimensions of racial stress (individual, institutional, cultural) and dimensions of critical consciousness (perceived inequality, egalitarianism, critical agency, and critical action). The CFA fit the data adequately (RMSEA = 0.041, CFI = 0.908, TLI = 0.904, SRMR = 0.071; χ^2 (1809, $N = 594$) = 3592.37, $p < .001$). Upon examination of the modification indices, we applied several error covariances: one pair of items from the critical reflection – perceived inequality subscale (item 4 with item 7), 1 pair of items from the critical agency subscale (item 4 with item 6), and two pairs of items from the critical action subscale (item 4 with item 6; item 10 with item 11). With the added covaried error terms, the model fit statistics indicated a good to adequate fit to the data (RMSEA = 0.037, CFI = 0.923, TLI = 0.919, SRMR = 0.07; χ^2 (1805, $N = 594$) = 3302.42, $p < .001$).

Individual racial stress predicting critical action

We examined whether critical reflection (perceived inequality and egalitarianism) and critical agency mediate the relationship between individual racial stress and critical action. The Satorra-Bentler adjusted goodness-of-fit statistics indicate that the model was an adequate fit (χ^2 (846, $N = 594$) = 1445.81, $p < .001$; RMSEA = 0.035; CFI = 0.934; TLI = 0.930; SRMR = 0.062). This model accounted for 4.8% of the variance in perceived inequality, 0.4% of the variance in egalitarianism, 28% of the variance in critical agency, and 12% of the variance in critical action. All standardized path coefficients are presented in Table 2.

Individual racial stress was positively related to perceived inequality ($\beta = 0.22$, $p < .001$), but not egalitarian beliefs ($\beta = 0.06$, $p = .120$). Stress from individual racism was positively related to critical agency ($\beta = 0.14$, $p < .001$) and critical action ($\beta = 0.18$, $p < .001$). With regard to critical reflection, perceived inequality was not directly related to critical agency ($\beta = 0.05$, $p = .210$) and was

Table 1
Means, standard deviations, and bivariate correlations of the study variables (n = 594).

Variable	1	2	3	4	5	6	7	8	9
1. Individual racial stress	–								
2. Institutional racial stress	0.78***	–							
3. Cultural racial stress	0.78***	0.58***	–						
4. Critical reflection: Perceived inequality	0.21***	0.14***	0.26***	–					
5. Critical reflection: Egalitarianism	0.04	–0.17**	0.21***	0.20***	–				
6. Critical agency	0.17***	0.01	0.27***	0.17***	0.45***	–			
7. Critical civic action	0.21***	0.16***	0.22***	0.17***	0.07	0.25***	–		
8. Age	0.06	0.04	0.06	0.00	–0.03	–0.04	0.02	–	
9. Household income	–0.01	–0.04	0.01	0.08	0.07	0.11**	0.08	0.02	–
Mean	1.01	0.58	1.39	3.47	4.31	3.97	1.61	15.44	4.38
Standard Deviation	1.13	0.88	1.22	1.04	0.80	0.78	2.49	1.24	2.73
Range	0–4	0–4	0–4	1–5	1.4–5	1–5	0–11	13–18	1–9

** $p < .01$.
*** $p < .001$.

Table 2
Path coefficients for the structural equation model of individual racial Stress predicting critical action.

Path	Unstandardized estimate	SE	Standardized estimate
Direct effects			
Individual Racial Stress → Perceived Inequality	0.19	0.04	0.22**
Individual Racial Stress → Egalitarianism	0.02	0.02	0.06
Individual Racial Stress → Critical Agency	0.10	0.02	0.14***
Individual Racial Stress → Critical Action	0.04	0.01	0.18***
Perceived Inequality → Critical Agency	0.04	0.03	0.05
Perceived Inequality → Critical Action	0.03	0.01	0.11*
Egalitarianism → Critical Agency	0.79	0.11	0.49***
Egalitarianism → Critical Action	-0.05	0.03	-0.09
Critical Agency → Critical Action	0.08	0.02	0.24***
Age → Critical Action	0.00	0.01	0.01
Income → Critical Action	0.00	0.00	0.05
Indirect Effects			
Individual Racial Stress → Perceived Inequality → Critical Agency	0.01	0.01	0.01
Individual Racial Stress → Egalitarianism → Critical Agency	0.02	0.01	0.03
Individual Racial Stress → Perceived Inequality → Critical Action	0.01	0.00	0.02*
Individual Racial Stress → Egalitarianism → Critical Action	-0.001	0.001	-0.01
Individual Racial Stress → Critical Agency → Critical Action	0.04	0.01	0.04**
Perceived Inequality → Agency → Critical Action	0.00	0.00	0.01
Egalitarianism → Agency → Critical Action	0.06	0.02	0.12**

* $p < .05$.

** $p < .01$.

*** $p < .001$.

positively related to critical action ($\beta = 0.11, p = .014$). Egalitarianism was positively related to critical agency ($\beta = 0.49, p < .001$) and not directly related to critical action ($\beta = -0.09, p = .109$). Finally, critical agency was positively related to critical action ($\beta = 0.24, p < .001$).

There were several significant indirect effects in this model. Perceived inequality had an indirect effect on the relation between individual racial stress and critical action (indirect effect = 0.023, $p = .042$), and accounted for 12% of the effect of individual racial stress on critical action. Critical agency had an indirect effect on the relation between individual racial stress and critical action (indirect effect = 0.035, $p = .010$), accounting for 17% of the effect of individual racial stress on critical action. Finally, despite no direct effect between egalitarianism and critical action, there was an indirect effect of agency on this relationship (indirect effect = 0.119, $p = .003$).

Institutional racial stress predicting critical action

Next, we examined the model with institutional racial stress. The Satorra-Bentler adjusted goodness-of-fit statistics indicate that the model was an adequate fit ($\chi^2 (931, N = 594) = 1735.65, p < .001$; RMSEA = 0.038; CFI = 0.932; TLI = 0.928; SRMR = 0.071). This model accounted for 1.1% of the variance in perceived inequality, 2.1% of the variance in egalitarianism, 25% of the variance in critical agency, and 11% of the variance in critical action. All path coefficients and standard errors are presented in Table 3.

Institutional racial stress was positively related to perceived inequality ($\beta = 0.11, p = .005$), and negatively related to egalitarian beliefs ($\beta = -0.15, p < .001$). Stress from institutional racism was not related to critical agency ($\beta = 0.05, p = .201$) and was positively related to critical action ($\beta = 0.16, p < .001$). With regard to critical reflection, perceived inequality was not directly related to critical agency ($\beta = 0.08, p = .054$) and was positively related to critical action ($\beta = 0.11, p = .007$). Egalitarianism was positively related to critical agency ($\beta = 0.50, p < .001$) and not directly related to critical action ($\beta = -0.06, p = .309$). Finally, critical agency was positively related to critical action ($\beta = 0.28, p < .001$).

There were two significant indirect effects in this model. These indirect effects were detected despite no direct effects, in what Zhao and colleagues (2010) refer to as an indirect-only mediation model.

Egalitarianism had an indirect effect between institutional racial stress and critical agency (indirect effect = $-0.08, p = .001$). More stress from institutional racial stress is related to lower egalitarian beliefs, and lower egalitarian beliefs is related to lower critical agency. Finally, despite no direct effect between egalitarianism and critical action, there was an indirect effect of agency on this relationship (indirect effect = 0.14, $p < .001$).

Cultural racial stress predicting critical action

Lastly, we examined the model of cultural racial stress and critical consciousness. The Satorra-Bentler adjusted goodness-of-fit statistics indicate that the model was a good to adequate fit ($\chi^2 (805, N = 594) = 1417.66, p < .001$; RMSEA = 0.036; CFI = 0.947; TLI = 0.943; SRMR = 0.062). This model accounted for 8.5% of the variance in perceived inequality, 5.2% of the variance in egalitarianism, 30% of the variance in critical agency, and 11% of the variance in critical action. All standardized path coefficients are presented in Table 4.

Cultural racial stress was positively related to perceived inequality ($\beta = 0.29, p < .001$) and egalitarian beliefs ($\beta = 0.23, p < .001$). Stress from cultural racism was positively related to critical agency ($\beta = 0.21, p < .001$) and critical action ($\beta = 0.14, p = .003$). With regard to critical reflection, perceived inequality was not directly related to critical agency ($\beta = 0.03, p = .489$) and was positively related to critical action ($\beta = 0.11, p = .013$). Egalitarianism was positively related to critical agency ($\beta = 0.46, p < .001$) and negatively related to critical action ($\beta = -0.11, p = .045$). Finally, critical agency was positively related to critical action ($\beta = 0.24, p < .001$).

There were several significant indirect effects in this model. Egalitarianism had an indirect effect on the relation between cultural racial stress and critical agency (indirect effect = 0.10, $p < .001$), and accounted for 33% of the effect of cultural racial stress on critical agency. Perceived inequality also had an indirect effect between cultural racial stress and critical action (indirect effect = 0.03, $p = .02$), and accounted for 18% of the effect of cultural racial stress on critical action. Critical agency had an indirect effect on the relation between cultural racial stress and critical action (indirect effect = 0.05, $p = .003$), accounting for 26% of the effect of cultural racial stress on critical action. Finally, there was an indirect effect of agency on this

Table 3
Path coefficients for the structural equation model of institutional racial stress predicting critical action.*

Path	Unstandardized estimate	SE	Standardized estimate
Direct effects			
Institutional Racial Stress → Perceived Inequality	0.11	0.04	0.11**
Institutional Racial Stress → Egalitarianism	-0.08	0.02	-0.15***
Institutional Racial Stress → Critical Agency	0.05	0.04	0.05
Institutional Racial Stress → Critical Action	0.04	0.01	0.16***
Perceived Inequality → Critical Agency	0.06	0.03	0.08
Perceived Inequality → Critical Action	0.03	0.01	0.11**
Egalitarianism → Critical Agency	0.80	0.11	0.50***
Egalitarianism → Critical Action	-0.03	0.03	-0.06
Critical Agency → Critical Action	0.08	0.02	0.28***
Age → Critical Action	0.00	0.01	0.02
Income → Critical Action	0.00	0.00	0.05
Indirect Effects			
Institutional Racial Stress → Perceived Inequality → Critical Agency	0.01	0.01	0.01
Institutional Racial Stress → Egalitarianism → Critical Agency	-0.06	0.02	-0.08**
Institutional Racial Stress → Perceived Inequality → Critical Action	0.00	0.00	0.01
Institutional Racial Stress → Egalitarianism → Critical Action	0.00	0.00	0.01
Institutional Racial Stress → Critical Agency → Critical Action	0.02	0.01	0.02
Perceived Inequality → Agency → Critical Action	0.01	0.00	0.02
Egalitarianism → Agency → Critical Action	0.07	0.02	0.14***

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

relation between egalitarianism and critical action (indirect effect = 0.109, $p = .001$).

Discussion

Black youth experience development in the unfortunately normative context of racism and racial oppression. In this study, we examined how stress from experiences of different types of racism might relate to critical action, via critical reflection and critical agency. Consistent with our hypotheses, we found that stress from individual, institutional, and cultural racism were all directly and positively related to critical action. As predicted, there were some differences in how racial stress is related to critical reflection – perceived inequality and critical reflection – egalitarianism. Further, individual racial stress and cultural racial stress were each positively related to critical agency. Several indirect paths

were significant across each of the types of racism, which are discussed below. Altogether, these findings shed light on how Black adolescents' stressful experiences of racial oppression are related to critical consciousness beliefs and critical action to ameliorate these oppressive conditions.

The current study helps to establish the relationship between racism and critical consciousness. Scholars suggest that experiences or encounters with racism can catalyze a critical analysis and reflection of what it means to be Black within a racially oppressive society, and what actions steps can be taken to make sociopolitical change (Anyiwo et al., 2018; Neville & Cross, 2017). Our findings suggest that the stress that Black youth experience from the cultural domination of majority groups is related to an awareness of social injustice, beliefs that all groups should be treated equal, and motivation to fight racism in their communities. Individual racism, on the other hand, was related to

Table 4
Path coefficients for the structural equation model of cultural racial stress predicting critical action.

Path	Unstandardized estimate	SE	Standardized estimate
Direct effects			
Cultural Racial Stress → Perceived Inequality	0.19	0.02	0.29***
Cultural Racial Stress → Egalitarianism	0.07	0.01	0.23***
Cultural Racial Stress → Critical Agency	0.11	0.02	0.21***
Cultural Racial Stress → Critical Action	0.02	0.01	0.14**
Perceived Inequality → Critical Agency	0.02	0.02	0.03
Perceived Inequality → Critical Action	0.03	0.01	0.11*
Egalitarianism → Critical Agency	0.73	0.11	0.46***
Egalitarianism → Critical Action	-0.06	0.03	-0.11*
Critical Agency → Critical Action	0.08	0.02	0.24***
Age → Critical Action	0.00	0.01	0.04
Income → Critical Action	0.00	0.00	0.04
Indirect Effects			
Cultural Racial Stress → Perceived Inequality → Critical Agency	0.01	0.01	0.01
Cultural Racial Stress → Egalitarianism → Critical Agency	0.05	0.01	0.10***
Cultural Racial Stress → Perceived Inequality → Critical Action	0.01	0.00	0.03*
Cultural Racial Stress → Egalitarianism → Critical Action	-0.004	0.00	-0.03
Cultural Racial Stress → Critical Agency → Critical Action	0.05	0.02	0.05**
Perceived Inequality → Agency → Critical Action	0.00	0.00	0.01
Egalitarianism → Agency → Critical Action	0.06	0.02	0.11**

* $p < .05$.
 ** $p < .01$.
 *** $p < .001$.

perceptions of inequality and personal agency to effect change. Institutional racism was most unique. While there was a positive relation to perceptions of inequality, more institutional racial stress was related to less egalitarian beliefs. Perhaps, for Black youth, experiences of racism that manifest within institutional systems relate to less endorsement of beliefs that the world could or should be equal. Youth who experienced more institutional racism reported more beliefs in social inequalities, but less beliefs that group equality is an attainable or desirable goal. This is similar to findings that Latinx and Asian adolescents who experience racial discrimination report less beliefs that society is fair and egalitarian (Ballard, 2015). Critical reflection of perceived inequality is congruent with experiencing inequality, while egalitarian beliefs are rooted in hopes for an ideal world to come. These beliefs in an ideal future may not change based on experiences of inequality (in the case of individual racism) or may actually cause one to believe that hoping for that ideal world is futile (in the case of institutional racism).

Second, findings from our study provide evidence that racial stress is directly and indirectly related to critical action. These results support theoretical and qualitative research that suggest, for Black youth, encounters with racism may yield action toward racial justice (Anyiwo et al., 2018; Neville & Cross, 2017). All three types of racism were related directly to critical action, with similar effect sizes. This aligns with previous research that has shown that experiences of racism and racial discrimination relate to various types of critical action (Aldana, Bañales, & Richards-Schuster, 2019; Hope et al., 2019; Hope & Jagers, 2014; Szymanski, 2012; Szymanski & Lewis, 2015). While racism is stressful and harmful for Black youth, experiences of racism do relate to more critical action to address inequitable systems.

Further, for individual and cultural racial stress in relation to critical action, there were indirect effects of perceived inequality and critical agency. Understanding social inequalities across race, gender, and class, and beliefs in one's ability to engage in social action for change, connect racially stressful experiences to critical action for liberation. These findings held when the racial experiences were individual and cultural. It may be that experiencing racism at the individual level emboldens youth to consider critical action as a coping mechanism to reduce the stress of that experience and change the environment to eliminate those negative racial interactions (Hope & Spencer, 2017). They may seek to understand the structural causes of the racism they encountered and feel empowered to be a part of changing those structures. It might also be the case that experiencing racism at broader cultural levels and understanding those experiences as structurally rooted motivate Black youth to change the system on a macro level (Hope & Bañales, 2018). Findings from this study provide evidence that sociocultural experiences are part of critical consciousness development for Black youth. In addition to experiences of racism being directly related to critical action, a critical understanding of the structural roots of racial oppression and perceptions of one's ability to effect change are two mechanisms through which racial stress is related to engagement for social change.

The third major finding from this study was that stress from institutional and cultural racism was indirectly related to critical agency through egalitarian beliefs. For Black youth, the stress of cultural racism was related to more egalitarian beliefs, and more egalitarian beliefs were related to more critical agency. This finding implies that Black youth experiences of structurally embedded racism are related to greater belief in their own capacity to effect social justice change, through their beliefs about how an ideal society should treat people as equals. It is possible that as Black youth grapple with the reality and consequences of cultural racism, distal racial stressors that manifest as structural inequities, they more firmly believe that society should operate differently. That belief in a more equitable world, then supports feelings of efficacy to be a part of creating a more just way of living. Conversely, stress from institutional racism was related to less egalitarian beliefs, which are then related to less critical agency. In this case, the stress from institutional racism, which is more proximal to the youth, may engender mistrust in the systems' ability to change, thus

undermining beliefs that a just and equitable world is a realistic possibility. This less egalitarian belief system is then related to feeling less efficacious to be able to engage in critical actions for social change. In previous research, egalitarianism was not related to critical agency (Diemer & Rapa, 2016). However, when including socioculturally salient experiences, like racism, we uncover possible pathways that connect critical reflection to critical agency for Black adolescents. Taken together, these findings suggest that researchers should continue to explore *how* racially marginalized adolescents are motivated to be agents of social change in light of their experiences with racism and their equity beliefs.

Finally, there was evidence to support the mediation hypotheses of the critical consciousness dimensions. In each model, egalitarianism was related to critical action through critical agency. Black youth who believe that people should be treated equally, feel more agentic toward social justice actions, and those who feel more agentic participate in more critical action for social change. This finding contradicts previous research, which did not find indirect paths from critical reflection to critical agency to critical action (Diemer & Rapa, 2016). Moreover, egalitarianism was only directly related to critical action in the cultural racial stress model, where more egalitarianism was related to less critical action. Egalitarianism was, however, consistently and positively related to critical agency across each model. Black youth who adopted beliefs that society should reflect equality among social groups also felt they could engage with their communities in ways that support social change. These positive feelings of agency were then related to more engagement in critical action. Altogether, an egalitarian critical reflection may be important to support critical action via feelings of agency. When considering critical action alone, egalitarianism does not relate to or is related to less action to address social justice change. For Black youth, beliefs that society should be just and equal for all groups is most positively related to critical action through the youths' beliefs that they can actually be a part of making that just world a reality.

Scholars have proposed that critical action is one mechanism by which racially marginalized youth acknowledge and cope with experiences of racism (Hope & Spencer, 2017). The findings from the current study build on this theoretical assertion and provide some evidence to suggest that critical reflection and critical agency are accessible tools for Black youth to engage in action in the face of racism and racial stress. Our findings echo and extend previous scholarly work that: (1) emphasizes the importance of critical reflection and critical agency as predictors of critical action (e.g., Diemer & Rapa, 2016; Hope & Jagers, 2014), (2) underscores the ways in which experiences of racism relates to critical reflection (e.g., Hope & Bañales, 2018) and critical action (Neville & Cross, 2017). We find direct paths from each type of racism to components of critical consciousness. Further, we find weaker indirect pathways, wherein, stress from racism works through one aspect of critical consciousness to relate to another component of critical consciousness. This suggests that stress from racism at multiple levels is associated with beliefs and actions related to social justice change, and the processes that connect social justice related beliefs to social justice actions. Taken together, this study provides evidence to suggest that the stress from experiencing racism may be related to critical consciousness development and critical action for Black youth. It also supports critical consciousness and sociopolitical development theories (Anyiwo, et al., 2017; Watts et al., 2011; Watts & Guessous, 2006), which contend that socioculturally grounded early life experiences are important for how youth understand racial oppression and decide to act to dismantle such systems. Our examination of racial stress provides evidence of a pathway from some experiences of racism to critical action via critical reflection and critical agency. Further, our investigation highlights that individual evaluations of stress from racism, and not just the presence or absence of racist encounters, are related to various components of critical consciousness.

Limitations

There are several limitations to consider when interpreting the results from this study. First, our study relied on cross-sectional self-report survey accounts. Thus, we cannot extend conclusions that indicate causality or the longitudinal developmental nature of how these processes co-occur over the lifespan. We also asked respondents to indicate their past racial stress and critical action, while critical reflection and critical agency were measured as current beliefs. Future studies should tease apart the directionality of the relationship between stress from racism and critical consciousness development over time. Researchers have established that critical consciousness grows and develops in positive directions throughout high school (Seider et al., 2019). Additional investigation is needed to determine if and how experiences of racism throughout adolescence impact critical consciousness processes. It is also important to consider that critical reflections of racism may also relate to adolescents recognizing racism more clearly. Another limitation is that due to the strong correlations between the different levels of racism, we could not include all three types of racial stress in the same model. While a strength of the study is in our examination of multiple types of racism, future research should consider innovative ways to measure racism so they can be examined simultaneously. Further, we relied on self-report of retrospective accounts of stress experienced from instances of racism. This measure was a useful tool, but was limited in that it asked participants to report both experiencing racism and evaluating that experience on a stress-types scale. While the individual interpretation of one's own stress level is meaningful, future studies may also consider collecting physiological and ambulatory measures of stress in response to racist and racially discriminatory events.

Our study did extend past research by examining a sample of Black adolescents with diversity in geographic location, urbanicity, and economic status. This allows us to consider how generalizable these findings might be for Black adolescents throughout the US. However, we were not able to consider how these areas of intragroup diversity might intersect with race to complicate experiences of racism for Black youth. Further, scholars have also identified racial socialization and racial identity (Anyiwo et al., 2018; Mathews et al., 2019; Smith & Hope, 2020) as other sociocultural mechanisms through which Black youth cope with racism and negotiation liberation in concert with critical consciousness. Future research should consider how racial identity and racial socialization might mediate the connections between experiences of racism and critical consciousness for Black youth. Finally, related frameworks, such as Sociopolitical Development Theory posit that the relation between critical reflection and critical action is moderated by critical agency (Watts & Guessous, 2006). Future research should examine the moderation hypothesis in conjunction with models that include sociocultural factors.

Implications

This study has implications for youth development practitioners working with Black youth as they negotiate race, racism, and sociopolitical development. Our findings suggest that Black youth may employ critical consciousness processes in response to stress from racism in a variety of ways. Utilizing activities that promote diverse approaches to critical reflection (egalitarianism and inequality) and bolstering the capacity for a sense of agency are ideal for psychological well-being and civic action. Furthermore, our findings suggest that Black youth may need additional space and time, with scaffolding from adults, to process the scope of institutional racism and the possibilities of challenging it. Researchers have examined how youth participatory action research and race-based interventions can provide opportunities for Black youth to engage in critical reflection and critical action (Betha, 2012; Kennedy et al., 2019; McKay, 2011; Smith & Hope, 2020). Our findings suggest that these programs may also consider addressing how youth

experience stress from racism in relation to their own sociopolitical beliefs and actions. The work of connecting stress responses to critical consciousness will have implications for development of Black youth, as well as physical health and wellbeing into adulthood.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.appdev.2020.101184>.

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