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CRITICAL ACTION AND ETHNIC-RACIAL IDENTITY

Critical Action and Ethnic Racial Identity: Tools of Racial Resistance at the College Transition

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Abstract

This study examines the reciprocal relationship between critical action and ethnic-racial identity (ERI) exploration in Black college students using a longitudinal cross-lagged model. Participants were Black students (N=237; M_{age}= 18.2, 74% female) from a longitudinal study of college transition. Analyses examined the temporal ordering and directionality of associations between critical action and ERI exploration over four time points from college entry through four years of college. Critical action positively predicted ERI exploration over each year of college, and ERI exploration positively predicted critical action in a reciprocal fashion over the same years. These findings underscore theoretical assertions that critical action and ERI are intertwined in Black youths' development and provide insight into how critical action and ERI overlap beyond adolescence.

Keywords: Black college students, ethnic-racial identity exploration, critical action, emerging adulthood

Critical Action and Ethnic-Racial Identity Exploration: Tools of Racial Resistance at the

College Transition

Black student activism at predominately White institutions (PWIs) has gained national attention as campus movements such as "I Too, am Harvard" and #Being Black at Michigan (#BBUM) have challenged students, professors, and administrators to consider the stark contrast between PWIs' commitment to diversity, equity, and inclusion and the racial marginalization of Black students. Student activism extends beyond the campus context to movements such as #BlackLivesMatter (#BLM) as Black students bring visibility to social inequities nationwide (Hope et al., 2016; Rhoads, 2016). Modern collective movements such as #BLM reinforce the central role of ethnic-racial identity (i.e., the meaning and process of understanding the role of one's ethnic-racial group) in the critical action (i.e., actions intended to disrupt systems of oppression) of Black college students. These two constructs are likely linked for Black college students given the salience of Black sociopolitical events (e.g., #BLM protests amidst COVID-19; Marshburn et al., 2021; Panda et al., 2020) and Black college students' roles in highlighting racial injustice (Glasker, 2002; Gurin & Epps, 1975; Rogers, 2012). Yet, little research links Black college students' critical action and ethnic-racial identity (ERI) exploration (De Angelo et al., 2016; Miller & Schwartz, 2016; Smith et al., 2015). The aim of this paper is to examine reciprocal associations between critical action and ERI exploration as Black adolescents navigate a key developmental period—the transition to college, in a racially marginalizing context (e.g., PWIs).

This study fills several gaps in the existing literature. First, this study empirically tests theoretical overlap between ERI and critical consciousness theory by examining how ERI exploration may lead to subsequent critical action to challenge racial inequality in Black college

students (Cross, 1991; Watts & Flanagan, 2007; Watts & Guessous, 2006). Second, this work examines critical action and ERI in a Black college student population, as little work focuses on how identity and critical action, one way youth resist oppression, develop in emerging adulthood (Heberle et al., 2020; Syed & Mitchell, 2013). Third, we use longitudinal data to examine how associations between ERI and critical action change over the college years.

Overview of Conceptual Frameworks

The empirical analysis of critical action and ERI exploration tests theory linking ethnic-racial marginalization and social justice action (Anyiwo et al., 2018; Mathews et al., 2019). Critical action and ERI formation are linked in Black communities' fight for full recognition as United States citizens. Black communities have a long history of employing extra-parliamentary tactics (e.g., protests, marches, boycotts) to call attention to how Blackness is treated as inferior within American society (Ortiz, 2018; Rojas, 2007). Further, Black people empower their own communities by exploring narratives of cultural strength and resistance that contradict deficit framings of Black people (Chapman-Hilliard & Adams-Bass, 2016; Chapman-Hilliard & Beasley, 2018; Chapman-Hilliard et al., 2020). Mitchell and Dell (1992) found that Black college students actively exploring their racial identity were more likely to be involved in Black-oriented student organizations. Equally, research suggests that campus and community involvement may prompt racial identity exploration in Black college students (Taylor & Howard-Hamilton, 1995). Other scholars suggest that the relationship between ERI exploration and critical action reinforce one another as students become more involved in campus life (Harper & Quaye, 2007). Regardless of if Black student action occurs through Black campus organizations or community events, college is a time where ERI exploration and critical action are actively co-occurring, particularly in PWI contexts. Yet, critical action and ERI are not

typically examined together as contributors to Black college student development. Considering both critical action and ERI simultaneously allows a more holistic understanding of factors that motivate sociopolitical development among Black college students.

Critical consciousness theory emphasizes critical action as a tool to resist oppression across societal contexts (Diemer et al., 2016; Watts & Hipolito-Delgado 2015). Black college students may use both their college and community involvement as tools to challenge larger, systemic inequities. In taking action, Black college students may be motivated by a deep exploration of their cultural traditions, as Black communities maintain a long history of political resistance to racism. ERI process theory links critical action and exploration by highlighting the tools Black individuals use to explore the meaning of Blackness (Cross, 1991). This theory considers how specific behaviors, events, or traditional practices emphasize the cultural strengths of the Black community (Syed & Azmitia, 2009). During ERI exploration (i.e., individuals' search for the meaning and representation of racial identity in their lives) Black college students may engage in discussions or cultural activities associated with the Black community that expose them to ideals and practices considered traditional to the Black community, such as communalism and social responsibility. Further, during ERI resolution (i.e., one's commitment to and internalization of a specific understanding and role of their racial group), Black students may integrate an understanding of community uplift into their sense of self in ways that translate into critical action as a practice of formal citizenship. Though ERI process theory involves both racial exploration and resolution, this work examines ERI exploration, as a salient developmental process that occurs during the college transition (Syed & Azmitia, 2008; Syed & Juan, 2012; Syed & Mitchell, 2010). ERI process theory also accounts for how contextual changes, such as school transitions, spark ERI development (Azmitia et al., 2008; Benner & Graham, 2009, 2011;

French et al., 2006). The majority of work on ERI and school adjustment focuses on the

transition from middle to high school (Benner & Graham, 2009). Yet, ERI exploration continues

during the college transition, where students are often exposed to greater diversity in terms of

peers, curricula, and engagement opportunities that shape their identity development (Wilkins,

2014).

Critical Action and Black College Students

Critical action involves social and political behaviors enacted to resist oppression and

promote social justice for marginalized communities (Aldana et al., 2019; Diemer et al., 2016).

For Black college students, critical action can include participating in Black cultural

organizations, mainstream student government, or hosting educational forums to spread

awareness about a social issue, particularly in the face of racial discrimination (Fasset et al.,

2018; Harper & Quaye, 2007). Critical action plays an important role for Black students who

must navigate racial challenges with peers and faculty (Cerezo et al., 2014; Petchauer, 2011).

Reports of racial microaggressions, low enrollment of students of color, and lack of racial and

ethnic diversity among faculty may contribute to the belief that Black students do not belong at

PWIs (Hope et al., 2016; Solorzano et al., 2000). Black-oriented organizations may serve as a

central organizing space for Black students to challenge racial oppression while navigating

PWIs. Further, participating in such organizations may foster stronger connection and belonging

to Black students that ultimately promote prosocial behaviors in service of Black communities

(Bentley-Edwards & Chapman-Hillard, 2015). Other campus spaces, such as Black studies

courses and Black community events may facilitate a critical knowledge of Black history and the

cultural tradition of racial uplift that may propel Black students to enact systemic change

(Chapman-Hillard et al., 2020). Indeed, Black college students use critical action to hold

university administration accountable for the discrepancies between Black students' experiences of negative campus racial climate and PWI mission statements that espouse to prioritize diversity, equity, and inclusion (Glasker, 2002; Harper & Hurtado, 2007; Hurtado & Ruiz Alvarado, 2012). Students who experience racism on campus and who recognize these experiences as marginalization may use critical action to resist racial oppression and to cope with race-related stress (Hope & Spencer, 2017; McWhirter et al., 2019).

As a "mediating institution" (Flanagan et al., 2011 p. 101) colleges transmit both implicit and explicit messaging about how their students should engage politically, socially, and economically in society. Thus, opportunities for critical action in college likely reflect Black marginalization in broader society, particularly in education (Dancy et al., 2018). In the process of resisting racial oppression in college, students may explore their racial identity as it connects to their critical action behaviors. As students recognize discrepancies in their experiences, they may think explicitly about the role of race in their lives. This exploration of race and identity enables Black students to pursue critical action and advocate for resources that curate an inclusive college experience.

Ethnic-Racial Identity Exploration at Predominately White Institutions

Black college students at PWIs regularly report experiences of tokenization (i.e., forced to represent their race as the only one or one of few Black students), and racial discrimination from faculty and peers that inform their ERI development (Hurtado et al., 2015; Sekaquaptewa et al., 2007). Syed and Azmitia (2010) found that experiences of prejudice were a major catalyst for ERI exploration, and such exploration increased as college students of color experienced racial discrimination. However, ERI exploration is not limited to negative racialized experiences. Positive connections with diverse Black student communities provide support in the face of

negative race-related experiences, while simultaneously contributing to ERI development. Baber (2012) found that Black students at a PWI experienced more heterogeneous Black communities in college than in their home communities, promoting ERI exploration through their connections with heterogenous Black peers who varied in terms of ethnicity, socioeconomic status, religious background, and geographic origin. Black peer connections allowed for a reexamination of the meaning of their Blackness beyond being the "token Black student," providing students a sense of support and belonging in college.

Black individuals exploring their racial history may see links between their personal racialized experiences and a collective Black identity connected to the fight for racial justice (Chapman-Hilliard & Adams-Bass, 2016). The connections between Black social justice history and identity develop during adolescence, allowing youth to engage with abstract concepts and critically examine factors that prompt ERI exploration (e.g., racial discrimination and racial socialization; Chapell & Overton, 2002; King, 2005; Seaton, 2010). Further, the college transition may prompt re-engagement with identity exploration as youth encounter spaces that likely differ greatly from their home and secondary schooling environments and provide more opportunities (and autonomy) for engagement (Baber, 2012).

Despite work demonstrating school transition as a factor that promotes ERI development, most research on ERI development focuses on adolescents (Benner & Graham, 2009, 2011; Umaña-Taylor et al., 2018). Research on adolescents suggests that the most salient contributors to ERI development are racialized experiences such as racial socialization or experiences of racial discrimination (Anyiwo et al., 2018; Seaton et al., 2012). Similarly, emerging adults are exposed to a broad range of factors that could catalyze ERI exploration in college settings. Colleges are important developmental contexts due to exposure to diverse perspectives through

several mediums including peers, faculty, and course curricula (Arnett, 2016). Such exposure has significant implications for the ERI development of college students of color (Blake, 2019). Given the relevance of the college contexts for youth development, it is important to examine how Black college students (re)think their ERI within these environments.

Yet, how does ERI exploration connect with critical action in the college context? Scholars have found that Black students who hold ERI beliefs emphasizing Blackness as a unique and central experience to one's self concept are more likely to engage in critical action (Hope et al., 2019; Syzmanski & Lewis 2015). This connection is underscored by contextual factors such as Black students' membership in Black-oriented organizations that serve as spaces to affirm and uplift Black experiences at PWIs where race is always salient (Jones, 2014; Jones & Reddick, 2017; Pinedo et al., 2021). Black student organizations at PWIs allow Black students to deeply explore their identity through service to the Black community and learning the history of their racial group (Guiffrida, 2003; Rojas, 2007). Black students may also use mainstream forms of organizational involvement to advocate for more resources for Black students to succeed at PWIs, particularly if they are aware of institutional inequities across student organizations (Hoffman & Mitchell, 2016; Jones & Reddick, 2017).

Current Study

This study examines associations between critical action and ERI exploration among Black college students from college entry through four years of college. We empirically test the reciprocal relationship between critical action and ERI exploration with the following questions:

1. What is the relationship between critical action and ERI exploration among Black college students?

2. How does the relationship between critical action and ERI exploration change over time among Black college students?

We hypothesize that critical action and ERI exploration will have reciprocal relationships with one another during the college transition. We expect that critical action will be positively associated with ERI exploration, and that ERI exploration will have positive associations with critical action. Further, we posit that the reciprocal relationships between critical action and ERI exploration will remain stable over time, as the two processes likely reinforce one another for Black students within PWIs.

Method

Data for this study comes from the Minority College Cohort Study—a longitudinal investigation of 533 Black and Latinx students who entered college in fall of 2013. Only the students who identified as Black or African American ($N = 237$) were selected for inclusion in this study. Ethnic diversity within the sample of Black students included 78% African American, 5% African, 2% Caribbean, 2% Afro-Latinx, 9% multiracial, and 4% undeclared. Participants were recruited from five predominately White universities in the Midwest: two urban private institutions (18%), one urban public institution (42%), one rural public institution (25%), and one suburban public institution (14%). Only 6% of the Black students were born outside of the U.S. and 48% identified as first-generation college students. Most of the Black students identified as female (74%), 26% identified as male, and only one student identified as transgender (this student was excluded from analyses due to low representation). The mean age of the sample was 18.2 years old (SD=0.47), and the majority of students (86%) graduated from public high schools.

Procedures

University administrators distributed an online survey to students in fall 2013. Students were eligible to participate in the study if they identified as Latinx or Black (this included multiracial students who held primary identifications as Latinx or Black) and were a first-time college freshman. Participants provided informed consent via the survey portal and subsequently completed the questionnaire for each wave of data collection. Seven waves of data were collected over a 4-year period, with three data collection intervals occurring during each of the first two years of college (i.e., fall, winter, & spring terms), and the seventh wave of data collection occurring at the end of the fourth year of college. Surveys administered during the fall and spring terms required approximately 45 minutes to complete, and participants received a $25 electronic gift card. Winter surveys required approximately 15 minutes, and participants received a $15 electronic gift card. Data collection was managed using REDcap software (Harris et al., 2009). The present study used the following four waves of data for analyses: Wave 1 (i.e., college entry, fall 2013), Wave 3 (i.e., end of college year 1, spring 2014), Wave 6 (i.e., end of college year 2, spring 2015) and Wave 7 (i.e., end of college year 4, spring 2017); from this point forward these waves of data will be referred to as T1, T2, T3, and T4 respectively.

Measures

Critical Action. Critical action was captured by five items from the Youth Involvement Inventory (YII; Pancer et al. 2007), a 30-item measure that identifies political, community, and service activities of youth and young adults. Item responses indicated how often respondents participated in each activity in the previous year. Responses ranged from 1 (*Never*) to 5 (*More than 10 times*). An example item was, "How often did you [in the past year] join a protest, march, meeting, or demonstration?" ($\alpha_{T1} = .83$, $IIC_{T1} = .54$; $\alpha_{T2} = .75$, $IIC_{T2} = .44$; $\alpha_{T3} = .78$, $IIC_{T3} = .45$; $\alpha_{T4} = .79$, $IIC_{T4} = .48$). A full item list is available in the supplemental files.

Ethnic-racial Identity Exploration. ERI exploration items captured the behaviors participants engaged in to understand their ERI. Three items were derived from the revised Multigroup Ethnic Identity Measure (MEIM-R, Phinney & Ong 2007). Items were rated on a 4-point Likert-type scale from *strongly disagree* (1) to *strongly agree* (4). An example item was, "I have often talked to other people in order to learn more about my ethnic group." (α_{T1} = .94, IIC_{T1} = .83; α_{T2} = .90, IIC_{T2} = .75; α_{T3} = .93, IIC_{T3} = .81; α_{T4} = .93, IIC_{T4} = .87). A full item list is available in the supplemental files.

Demographics and Covariates. First-generation college status was used as a proxy for socioeconomic status and this variable was computed from mother's and father's educational level to distinguish students with non–college educated parents (1) from students with at least one parent who obtained a four-year college degree (0). Gender was coded as 0 (*male*) and 1 (*female*). Racial discrimination in high school was captured at T1 using the 15-item School-Based Racial and Ethnic Microaggressions Scale (SB-REMA; Keels et al., 2017). Items were dichotomized to indicate whether each type of microaggression was experienced during senior year of high school (*yes* = 1, *no* = 0). These items were summed together to create a total breadth score ranging from 0 to 15 (M = 7.28, SD = 5.05, α = .93).

Data Analysis Plan

Descriptive statistics, including means, standard deviations, were computed in SPSS 24 (IBM Corp, 2016; see supplemental tables 1-4). Confirmatory factor analysis (CFA), measurement invariance testing, and cross-lagged panel models were analyzed in MPLUS version 8.4 (Muthén & Muthén, 2017). These analyses used the maximum likelihood estimator (MLR) to generate parameter estimates that best reflect patterns of association between students' responses (Kline, 2011). Participant retention from T1 (*N* = 237) remained at 90%, 86%, and

84% of the original sample at T2, T3, and T4, respectively. Missing data across all study variables ranged from 1% - 2% at T1, 10% - 16% at T2, 14% - 21% at T3, and 17% - 20% at T4. Racial discrimination at T1 was positively correlated with missing data at T2 ($r = .16$, $p = .013$), such that Black students who experienced more racial discrimination at T1 were more likely to have missing data at T2. However, missing data at T3 and T4 were not correlated with any participant demographics or study variables at T1. Little's missing completely at random test confirmed that all study variables from T1 to T4 were missing completely at random (MCAR); $\chi^2 (793, N = 237) = 718.14$, $p = .973$ (Little & Rubin, 2014). Missingness was addressed in MPlus (8.4) with full information maximum likelihood estimation to maximize all available data across participants (Enders & Bandalos, 2001).

We used CFA to create eight latent constructs. These latent constructs represented critical action and ERI exploration from T1-T4. We first assessed longitudinal measurement invariance across measures of critical action and exploration to examine if both constructs were similarly measured across time. Four models with increasing parameter restrictions were estimated, with each model being compared to the previous model using a chi-square difference test. Due to the use of the MLR estimator, chi-square difference tests were assessed using the Satorra-Bentler chi-square (Satorra & Bentler, 2010). The first model assessed configural invariance, which examines if the same items are loading onto the same factors at each time point (Liu et al., 2017). Configural invariance is evaluated by traditional SEM model fit indicators (i.e., CFI, TLI, RMSEA, & SRMR) that suggest good model fit. The second model (metric invariance) restricts factor loadings to be equal across time and is compared to the first model. The scalar invariance model restricts both factor loadings and intercepts to be equal across time. The fourth and final model assesses strict measurement invariance, which constrains factor loadings, intercepts, and

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residual variances to be equal across timepoints. Measurement invariance is assessed by following parameters: non-significant chi-square difference tests (all p >.05), ΔCFI (comparative fit index) ≥ −.01, ΔRMSEA (root mean square error of approximation) ≥ .015, and ΔSRMR (standardized root mean square residual) ≥ .03 for metric invariance, but ΔSRMR ≥ .01 for scalar and strict invariance (Chen, 2007; Putnick & Bornstein, 2016).

After evaluating model fit, we examined four iterative models that increased in complexity to inform the fully cross-lagged panel model: (a) baseline panel model with only autoregressive paths, (b) panel model with autoregressive paths and cross-lagged paths from ERI exploration (T1-T3) to critical action (T2-T4), respectively (c) panel model with autoregressive paths and cross-lagged paths from critical action (T1-T3) to ERI exploration (T2-T4), respectively, and (d) fully cross-lagged panel model with autoregressive paths and cross-lagged paths between both ERI exploration and critical action from T1-T4. Baseline latent variables and error terms for ERI exploration and critical action were correlated across all models. Model fit for the CFA and cross-lagged panel models were determined by a comparative fit index (CFI) and Tucker Lewis Index (TLI) value greater than or equal to .90, a root mean square error of approximation (RMSEA) value less than or equal to .08, and a standardized root mean square residual (SRMR) value less than or equal to .05 (Hu & Bentler, 1999). Wald tests were conducted to determine path equivalence across time. The following covariates were accounted for at T1 to adjust the models for gender, first-generation college status, and T1 racial discrimination.

A priori power analyses were conducted using the Soper calculator (Soper, 2017) These analyses assess the minimum required sample to detect a small (0.1), medium (0.3), or large (0.5) effect size. Power analyses included eight latent constructs (exploration T1-T4 & critical action

T1-T4) and thirty-five observed items (3 indicator variables for exploration, 5 indicator variables for critical action at each time point, and 3 covariates). Analyses indicated that a minimum sample size of 177 was needed to detect a medium effect size with a power level of .8. Therefore, the present study was sufficiently powered to detect medium to large effect sizes.

Results

Preliminary Data Analysis

The descriptive statistics for study measures are provided in supplemental materials. Respondents reported high levels of ERI exploration across the four time points ($M_{T1} = 2.93$; $M_{T2} = 2.89$; $M_{T3} = 3.05$ $M_{T4} = 3.21$), with a gradual increase over time. Most respondents were involved in at least one critical action behavior, with high variation across items. Black college students in this sample were most involved in ethnic clubs $M_{T1} = 1.47$; $M_{T2} = 1.32$; $M_{T3} = 1.15$; $M_{T4} = 1.65$). T1 and T4 show the highest levels of involvement in critical action across the four waves. Gender and first-generation college status did not reveal any significant differences in critical action or exploration at T1. However, more experiences of racial discrimination were associated with higher ERI exploration ($\beta = .16$ $p < .001$) and critical action ($\beta = .39$ $p < .001$) at T1.

Confirmatory Factor Analysis

After preliminary analysis, we conducted CFAs to determine how well observed items represented the latent constructs of exploration and critical action across four time points. All items were correlated with themselves over time. The majority of observed items measured the latent constructs well across each time point with positive and significant loadings ranging from .36 to .90 (see supplemental files for complete list of factor loadings). One item, "Worked or volunteered for a political campaign" did not maintain consistently high loadings across the time points but was retained due to conceptual alignment with Black students' critical action

behaviors. Model fit indices indicated good model fit for the final model (CFI = 0.95, TLI = 0.94, RMSEA = 0.05, and SRMR = 0.06).

Measurement Invariance

Table 1 presents the fit statistics across the four invariance models for the exploration constructs. Configural invariance was achieved at the first step with all indicators demonstrating good model fit. Metric invariance was also established given no change in CFI and a non-significant p-value when compared to Model 1. Subsequent non-significant chi-square values, and no change across models in the CFI indicator demonstrate both scalar and strict invariance across the four timepoints. ΔRMSEA and ΔSRMR met the desired cutoffs from Model 1 to Model 2 but had no change in subsequent models.

Table 2 presents the fit statistics across three invariance models for the critical action construct. Configural invariance was established, with all indicators demonstrating a good fitting model. Metric invariance was also established given the minimal change in CFI, a non-significant p-value when compared to Model 1. Scalar invariance was not achieved as indicated by the significant drop in CFI and a significant p-value when compared to the Model 2. Intercepts for the lead and protest items at T1 differed from the same subsequent items at T2-T4. As a result of measurement non-invariance at the third step, strict measurement invariance was not assessed (Putnick & Bornstein, 2016). Model paths were not constrained to be equal in the final model given that there was no difference in model fit with constrained versus unconstrained paths.

Cross-Lagged Panel Model

Model 4 (see Figure 1) tested the fully cross-lagged model with autoregressive effects and cross-lagged effects between ERI exploration and critical action at each time point. As

shown in Table 3, all models demonstrated good fit to the data, with Model 4 showing the best model fit. In Model 4, cross-lagged paths from ERI exploration (T1- T3) to critical action (T2-T4) were positive and statistically significant ($\beta=.15$ p$=.028$ and $\beta=.24$, p$=.007$, $\beta=.25$, p$<.001$, respectively). Additionally, cross-lagged paths from critical action (T1-T3) to ERI exploration (T2-T4) were also positive and statistically significant ($\beta=.19$ p$=.003$, $\beta=.17$, p$=.022$, and $\beta=.14$, p$=.027$, respectively). This indicates that ERI exploration and critical action have a positive bidirectional association in which these two factors reinforce one another and predict greater development among Black students over four years of college.

Wald tests were also conducted to assess equivalence in paths across the four timepoints (Chou & Bentler, 1990; Wald, 1943). Paths from critical action to ERI exploration were first compared to one another, followed by paths from ERI exploration to critical action. Results for all paths were non-significant, suggesting that there was no difference in the amount of variance each set of paths explained in the model.

We further examined potential mediation effects between ERI exploration and critical action over time. There was a small, but significant indirect effect for T2 and T4 critical action via exploration T3 ($\beta=.04$ p$=.036$). There was also a small indirect effect for critical action T1 to critical action T3 via exploration T2 ($\beta=.05$ p$=.047$). There were no significant indirect effects for exploration via critical action at any timepoint.

Discussion

The purpose of this study was to assess the relationship between critical action and ERI exploration among Black college students over the first two years of college using a longitudinal cross-lagged panel modeling approach. We found that critical action is associated with greater ERI exploration during the initial college transition and over four years of college. ERI

exploration is also associated with greater critical action over the same period. Aligned with our original hypotheses, this work emphasizes how critical action and ERI exploration are intertwined, by demonstrating how these two constructs reinforce one another among Black college students. Findings indicate that critical action and ERI exploration are reciprocal processes that promote positive bidirectional development in Black college students over a four-year period. Indirect effects also reveal that changes in critical action over time are partially explained (i.e., mediated) by changes in ERI exploration during the prior time point. However, changes in ERI exploration across each time point were not explained by changes in critical action during the prior wave. Although ERI exploration and critical action continue to have a bidirectional influence on one another over each time point, increases in ERI exploration appear to be more likely to explain changes in critical action during the following wave than vice versa.

Critical Action Predicts Ethnic-Racial Identity Exploration

Critical action engagement during Black students' senior year of high school (T1) was associated with greater ERI exploration at the end of their first year of college (T2). Additionally, critical action during the first and second year of college (T2 & T3, respectively) was again associated with greater ERI exploration at the end of the second and fourth year of college (T3 & T4, respectively). These findings suggest a consistent association between critical action and ERI exploration over the full duration of college. Secondary students with opportunities to engage in critical action during high school may organize school projects that tackle issues related to the Black community (Flanagan & Levine, 2010; Ginwright, 2007; Ginwright & Cammarota, 2002). Prior research suggests that critical action experiences during high school may connect Black youth to their cultural legacy of activism and subsequently initiate ERI exploration (Hart & Gullan, 2010). Black cultural events and social movements such

as the election of President Barack Obama and #BLM also provide meaningful social contexts that facilitate connections between critical action and ERI exploration, emphasizing dynamic interplay between the two processes (Franklin, 2016).

The longitudinal implications of critical action promoting greater ERI exploration over subsequent years demonstrates how behavior plays a central role in ERI development. Critical consciousness literature suggests a reciprocal relationship between critical reflection and critical action, as these two processes likely reinforce one another as youth mature into adulthood. ERI exploration for Black emerging adults likely involves some critical reflection on the inequitable experiences that Black people have historically been subjected to and continue to face in society today (Beasley et al., 2016; Chapman-Hillard & Adams-Bass, 2016). ERI exploration in college could be motivated by critical action in high school, especially if such action was inspired by Black sociopolitical events or movements (e.g., the election of President Barack Obama). Further, students who had access to critical action opportunities during adolescence may be more likely to seek out similar opportunities as a part of their adjustment process to the college environment.

Ethnic-Racial Identity Exploration Predicts Critical Action

ERI exploration at college entry (T1) was associated with greater critical action over the first year of college (T2). Additionally, ERI exploration at the end of the first and second year of college (T2 & T3, respectively) was associated with greater critical action over the second and fourth year of college (T3 & T4, respectively). These findings align with study hypotheses and previous work suggesting that ERI exploration during college is associated with campus involvement and intentional connection to one's culture (Guiffrida, 2003; Syed & Azmitia, 2009; 2010; Rojas, 2007). As the PWI context can be a space for both racial marginalization and racial

affirmation, there are multiple opportunities for prompting exploration. Further, those students who enter college in active exploration may intentionally seek academic, social, or sociopolitical opportunities that reinforce their exploration process (Harper, 2013; Syed, 2010; Thelamour et al., 2019).

The longitudinal implications of ERI exploration to promote greater critical action over time aligns with previous work suggesting that Black youth may be more likely to engage in ERI exploration during adolescence by learning their racial history (Chapman-Hillard & Adams-Bass, 2016; Way et al., 2008). Learning about the Black communities' cultural legacy of critical action may inspire future action as students define themselves in the college context. Further ERI exploration may foster a sense of collective identity and responsibility to the Black community as individuals learn about the power of Black collective mobilization. This may be particularly true for Black students who major in Black studies and learn about the Black communities' ongoing battle for racial justice (Beasley et al., 2016; Glasker, 2002). The current study extends previous work by directly linking ERI exploration with sociopolitical outcomes, as the majority of ERI literature focuses primarily on academic, social, and mental health outcomes (Hope et al., 2015; Rivas-Drake et al., 2014). Additionally, research suggests that political activism among Black college students is motivated by ERI beliefs and race-related experiences (Hope et al., 2019; Syzmanski & Lewis, 2015). However, prior work has shown links between ERI and activism orientation, but has not shown such associations with critical action behaviors. Thus, the link between ERI exploration and critical action extends previous work by connecting ERI development with behavioral outcomes, rather than attitudes or orientations towards racial justice.

Mediation of Critical Action Via Exploration

ERI exploration partially mediated critical action over time, whereas critical action did not mediate ERI exploration at any timepoint during college. This suggests that increases in ERI exploration partially explain why Black college students may engage in more critical action during the following year of college. However, critical action does not explain the change in ERI exploration over time, although these factors consistently predict one another bidirectionally. One conclusion from these findings is that identity development processes (e.g., ERI exploration) appear to explain changes in behavioral outcomes (e.g., critical action), and these factors develop in tandem with one another. Therefore, identity processes and beliefs may be a fundamental component for promoting sustained changes in behavioral outcomes. Additionally, contextual factors may influence these processes. Opportunities for critical action in adolescence may enhance ERI exploration for Black college students because they are likely to experience a discrepancy between the racial composition of their home communities and the new educational institutions they attend (Chavous, Rivas, Green, & Helaire, 2002). Therefore, critical action may be a way to reconnect with Black communities and provide valuable opportunities to explore and affirm their ERI in ways that resemble their engagement with their local community. (Baber, 2012; Harper & Quaye, 2007).

Implications

This study expands research on ERI and critical action with several contributions. Most importantly, the findings document, for the first time, that ERI exploration and critical action are reciprocal processes for Black college students attending PWIs. These findings underscore theoretical assertions that ERI and critical action are intertwined in the development of Black youth (Aniywo et al., 2018; Mathews et al., 2019). These outcomes align with previous work that operationalizes ERI exploration as both identity search and participation, where participation in

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cultural activities may translate into a form of critical action (Syed et al. 2013). Further the examination of these processes using longitudinal methods provides a glimpse into how these processes overlap beyond adolescence. Some work explores ERI exploration processes in college students (Syed & Azmitia, 2009, 2010), but these studies often focus on academic rather than civic outcomes for Black students. Yet, given Black college students' unique race-related experiences at PWIs, it is important to examine how both processes help Black students to navigate campus racial climates in addition to positive academic outcomes.

This work directly responds to recent calls by youth development scholars to capture multiple developmental periods across the lifespan (Umaña-Taylor, 2014), and this work focuses on the period of emerging adulthood during the high school to college transition. Given the positive academic, socioemotional, and sociopolitical outcomes associated with a highly developed sense of ERI and critical consciousness, it is important to investigate how the transition to adulthood fosters greater cognitive complexity in individuals' understandings of their ERI and critical consciousness (Herbele, et al., 2020; Scottham et al. 2010).

Another contribution of this work is the use of a Black college sample to examine ERI exploration and critical action during the transition to college. The vast majority of ERI research relies on pooled racial samples, which can mask the unique experiences of specific racial groups. Further, using all-Black samples highlights the heterogeneity of experiences within a specific racial group (Chavous et al. 2018; Cox, 2020; Thelamour et al., 2019).

Finally, this study serves as an empirical test of the conceptual integration of ERI and critical consciousness development (Mathews et al., 2019). Given that both ERI exploration and critical action are associated with positive outcomes for Black youth and youth of color (Fuller-Rowell et al., 2011; Pinedo et al., 2021; Umaña-Taylor et al., 2018) it is important to examine

how these processes influence one another to support future positive development. Adulthood is characterized by numerous transitions that may spark re-engagement with salient developmental processes in adolescence, such as attending college. This is particularly true for Black individuals, as school transition in the sociopolitical context makes race and race-related experiences more salient. This salience may lead Black individuals to draw upon cultural assets such as ERI and critical action in more complex ways across the lifespan than during adolescence.

Limitations and Future Directions

One limitation is that of sample size. A larger sample size is necessary to fully disaggregate data across social identities (e.g., ethnic group, socioeconomic status, and gender) to highlight critical differences across each of these groups. Further, given the gender skew of our sample, it is possible that our results are not reflective of the experiences of Black males at PWI settings, emphasizing the need for larger, more balanced, samples to allow full disaggregation of data.

Future work should consider alternative longitudinal methods to highlight the dynamic intersections of ERI and critical consciousness, and how these constructs change over time. Latent growth curve modeling might be of particular interest to examine how college contextual factors are associated with advanced ERI and critical consciousness processes. Given current work that suggests that both ERI and critical consciousness likely increase with age (Bañales et al., 2020; Seider et al., 2020; Syed & Azmitia, 2009), thinking about how these factors grow or stabilize over time is an important contribution for future research.

Additionally, future work should consider how critical action changes during the transition from high school to college. This consideration is contextualized by our finding that

critical action did not achieve scalar invariance, indicating that there are differences in the intercepts (i.e., means) of critical action at each timepoint. This finding aligns with the assumption that average level of critical action may be different across time during adolescence and young adulthood (Bañales et al., 2020; Tyler et al., 2020).Though some Black youth may have access to critical action opportunities prior to college, such opportunities may be limited in scope given the various school and home demands (e.g., after school activities, watching siblings, employment obligations) that youth must meet. College campuses are filled with opportunities for student involvement that are often essential for positive college experiences and a greater sense of belonging (Arnett, 2016). These opportunities offer a unique space for critical action to shift. Students may try out different forms of involvement throughout the college years to learn which behaviors most align with their values and ambitions. Given that the college context facilitates the transition to adulthood, such involvement may indicate how Black students think about their future career and civic action. Thus, investigating how critical action is associated with future career aspirations may provide insight into how Black students think about adulthood.

Conclusion

ERI and critical action have largely been studied in early and middle adolescence given the dynamic developmental changes that occur in this time period (Umaña-Taylor et al., 2014; Watts & Hipolito-Delgado, 2015). Expanding ERI and critical action research to emerging adulthood is an important next step, as the trajectories of both processes suggest that youth continue to draw upon these factors as they transition into adulthood (Bañales, Mathews et al., 2020; Seider et al., 2020; Syed & Azmitia, 2009). By examining ERI exploration and critical action during the college transition period, this work highlights the nature of how ERI and

critical action remain relevant and reinforce one another during emerging adulthood. Investigating the reciprocal nature of ERI exploration and critical action can help inform university stakeholders of best practices to support the unique experiences of Black students attending PWIs. Such practices could include providing stronger support for Black-oriented spaces and courses that honor the historical and current legacies of Black students enacting systems change. As Black students continue to hold universities accountable to inclusive practices, it is critical to highlight how their engagement supports a deeper understanding of themselves across sociopolitical contexts. Such understandings likely promote engagement beyond college, as Black students recognize their role in holding larger public institutions (e.g., government) accountable to the promise of Black American citizenship.

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Table 1

Measurement Invariance Testing for Exploration

Model	χ^2 (df)	CFI	ΔCFI	TLI	ΔTLI	RMSEA	ΔRMSEA	SRMR	Δ SRMR
Model 1: Configural Invariance	49.88 (48)	.99		.99		0.01		0.04	
Model 2: Metric Invariance	59.49 (54)	.99	0	.99	0	0.02	0.01	0.05	0.01
Model 3: Scalar Invariance	68.67 (60)	.99	0	.99	0	0.03	0	0.05	0
Model 4: Strict Invariance	72.11 (63)	.99	0	.99	0	0.03	0	0.05	0

Model Comparisons	χ^2 diff	Δdf	p value
Models 1 vs 2	10.94	6	.09
Models 2 vs 3	9.74	6	.14
Models 3 vs 4	3.44	3	.33

Table 2

Measurement Invariance Testing for Critical Action

Model	χ^2 (df)	CFI	ΔCFI	TLI	ΔTLI	RMSEA	ΔRMSEA	SRMR	ΔSRMR
Model 1: Configural Invariance	331.02 (230)	0.94		0.93		0.04		0.07	
Model 2: Metric Invariance	353.94 (244)	0.93	-0.01	0.92	-0.01	0.04	0	0.08	0.01
Model 3: Scalar Invariance	495.54 (259)	0.85	-0.08	0.84		0.06	0.02	0.08	0
Model 4: Strict Invariance	-	-	-	-	-	-	-	-	-

Model Comparisons	χ^2 diff	Δ df	p-value
Models 1 vs 2	22.47	14	0.07
Models 2 vs 3	182.97	15	<.01
Models 3 vs 4	-	-	-

Table 3

*Model Fit Indices for CFA and SEM Models*

Indicator	CFA Ethnic Racial Identity Exploration and Critical Action	Model 1 Autoregressive Effects Only	Model 2 EX at T1-T3 Predicting CA at T2-T4	Model 3 CA at T1-T3 Predicting EX at T2-T4	Model 4 Fully Cross-Lagged Model
CFI	.95	.92	.92	.93	.94
TLI	.94	.91	.92	.92	.93
RMSEA	.04	.05	.05	.05	.04
SRMR	.06	.12	.10	.11	.08
χ^2(df)	599(425)	815(535)	790(532)	796(532)	763 (532)

Note. CFA=Confirmatory Factor Analysis; T1=college entry; T2=college year 1; T3=college year 2

EX=Exploration; CA=Critical Action

Figure 1: Full Cross Lagged Panel Model of Ethnic-Racial Identity Exploration and Critical Action Across Four Timepoints
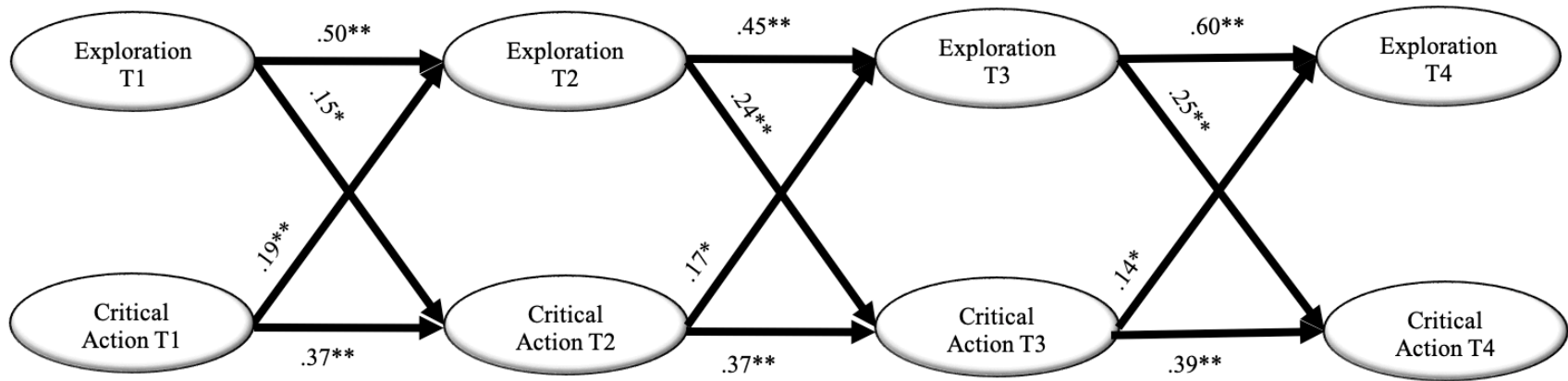
Note. Discrimination, Gender, and First Generation Status covariates are not represented for clarity
*p<.05. **p<.01