BLACK AMERICANS' TRAJECTORIES OF PERCEIVED RACIAL DISCRIMINATION AND SELF-ESTEEM ACROSS THE TRANSITION TO ADULTHOOD

by

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(Under the Direction of Steven R.H. Beach and Justin A. Lavner)

ABSTRACT

Young adults may be particularly vulnerable to challenges to self-esteem during the period of emerging adulthood due to increased instability, self-focus, and identity exploration. Although Black adolescents and young adults have higher self-esteem on average than their White counterparts, they also experience more stressors, including frequent experiences of racial discrimination, that may negatively impact self-esteem. Racial discrimination is theorized to diminish self-esteem through internalization of negative messages about one's race, and cross-sectional research has generally found a negative relation between experiences of racial discrimination and self-esteem in Black Americans. Longitudinal research is needed, however, to clarify whether racial discrimination leads to lower self-esteem or whether higher self-esteem may lead young adults to choose environments in which they experience less racial discrimination. In addition, strengths common in Black communities, such as a strong positive ethnic-racial identity, may play an important role in explaining the apparent contradiction between findings of overall high self-esteem and high levels of discrimination in Black young adults. This study will therefore examine whether perceived racial discrimination (PRD) interferes with the development of self-esteem over the transition to adulthood, and whether a race-specific protective factor – positive ethnic-racial identity – buffers effects in a sample of Black Americans from rural Georgia and Iowa.

INDEX WORDS: Self-esteem, Perceived racial discrimination, Racism, Racial identity, Emerging adults, Black or African American

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CHAPTER 1

INTRODUCTION

Although Black adolescents and young adults have higher self-esteem on average than their White counterparts (e.g., Bachman et al., 2011; Erol & Orth, 2011), as a result of individual and systemic racism Black Americans also experience more stressful life events (Williams, 2018) that have been found to predict lower self-esteem (Baldwin & Hoffmann, 2002). Notably, Black Americans report more experiences of discrimination even when compared to other marginalized groups in the United States (Kessler et al., 1999). Repeated experiences of racial discrimination may influence psychological well-being as a source of chronic stress, and may specifically influence self-esteem through internalization of negative messages about one's race (Brown et al., 2002; David et al., 2019). Consistent with this hypothesis, researchers have generally found a negative relation between experiences of racial discrimination and self-esteem in Black Americans and other marginalized racial/ethnic groups (Carter et al., 2019).

Important questions remain about the association between racial discrimination and self-esteem. Much of the existing research is cross-sectional, and these associations have largely not been examined over the transition to adulthood. Given the nature of emerging adulthood, in which individuals may experience increased instability, self-focus, and identity exploration (Syed & Mitchell, 2013), young adults may be particularly vulnerable to challenges to self-esteem during this period. Additionally, there has been little research addressing the role that strengths common in Black communities, such as a strong positive ethnic-racial identity (Nicolas et al., 2008), may play in explaining the apparent contradiction between findings of overall high

self-esteem and high levels of discrimination among Black young adults. To address these gaps, the current study examines whether perceived racial discrimination (PRD) may interfere with the development of self-esteem over the transition to adulthood, and whether a race-specific protective factor – positive ethnic-racial identity – may buffer effects in a sample of Black Americans from rural Georgia and Iowa. In doing so, the study aims to contribute to understanding of the longitudinal effects of racial discrimination in early adulthood and the apparent paradox between high levels of self-esteem and high exposure to discrimination among Black Americans.

Racism During the Transition to Adulthood

Young people often face a range of novel challenges in the transition from late adolescence to early adulthood, from leaving grade school and the family home to navigating romantic relationships and establishing work or a career (Arnett, 2000). For Black Americans, layered on top of these challenges is exposure to systemic, institutional, and interpersonal racial discrimination (Hope et al., 2015). Although interpersonal racism, measured in the proposed study through perceived racial discrimination (PRD), represents only one mechanism by which racism affects health, it represents a pervasive and impactful chronic stressor for Black Americans (Williams et al., 2019). Nearly 90% of Black emerging adults report at least one discrimination experience per year, and over 50% report more than occasional discrimination encounters in a given year (Gibbons et al., 2012). The transition to adulthood may involve both higher likelihood of experiencing racial discrimination (e.g., as some individuals enter continued education or work environments with greater interactions with White individuals; Hurd et al., 2014) and particular vulnerability to negative effects of discrimination on psychological

functioning through interference with a critical period of identity development (Arnett & Brody, 2008).

Racial Discrimination and Self-Esteem Development

Prior research on trajectories of self-esteem has found that on average, self-esteem increases from ages 14 to 30, but that there is significant variation both in the level of self-esteem in late adolescence and in rates of change across early adulthood (Erol & Orth, 2011). In a national probability sample of over 7000 individuals, Erol and Orth found different self-esteem trajectories for White, Black, and Hispanic participants. Black participants' self-esteem was similar to that of White participants at age 14 but increased more sharply, such that by age 30 Black young adults had significantly higher self-esteem on average than White young adults. Considering that significant experiences of racial discrimination are common during this period (Hurd et al., 2014) and the evidence from cross-sectional studies that increased PRD is associated with lower self-esteem (e.g., Nyborg & Curry, 2003), the fact that Black young adults have increasingly higher self-esteem than their peers implies either that there may be a different relation between PRD and self-esteem when these variables are considered longitudinally, and/or that protective factors common in Black communities often serve to buffer and overpower negative effects of PRD on self-esteem.

Documented negative associations between PRD and self-esteem in cross-sectional studies (Nadal et al., 2014) may reflect several paths of influence. One possibility is that PRD may impair self-esteem, potentially through internalization of negative messages about one's race (Brown et al., 2002; David et al., 2019). Alternatively, it is also possible that self-esteem could predict PRD. As higher self-esteem may be associated with more adaptive coping strategies and control over one's environment (Rector & Roger, 1996), young adults with higher

self-esteem may be more likely to avoid situations in which they would experience more racial discrimination. To disentangle these possibilities, this study will investigate how the trajectories of self-esteem in Black emerging adults may be related to PRD across this period, including testing potential directional effects between initial levels of PRD and changes in self-esteem as well as between initial levels of self-esteem and changes in PRD.

Potential Moderation by Sex

This study will also explore whether the examined relations differ based on sex. It is possible that gender-specific racial discrimination or differences in coping responses could affect how experiences of discrimination impact self-esteem. For example, Black men tend to report higher levels of PRD than women (Lee et al., 2020), and specifically are more likely to experience victimization related to being perceived as threatening (Wilson et al., 2017). Black men are also often socialized to manage stress by suppressing negative emotions or externalizing distress (Hammond, 2012). In contrast, although Black women may be more frequently socialized to engage in adaptive coping strategies such as seeking social support (Lee et al., 2018), they also may be more likely than men to respond to stress with strategies such as ruminative coping that promote internalizing symptoms (Nolen-Hoeksema et al., 1999). Based on these differences, it is feasible that gender may influence not only frequency and type of racially discriminatory experiences but also psychological responses to such experiences.

Extant research has been mixed regarding sex differences in the associations between PRD and internalizing symptoms. A longitudinal study by Hurd and colleagues found associations between perceived discrimination and growth in internalizing symptoms in both young Black men and women during emerging adulthood but found a stronger association between perceived discrimination and anxiety symptoms among female as compared to male

participants (Hurd et al., 2014). Another study found that the association between racial discrimination and interpersonal sensitivity (a construct including feeling inferior to others and therefore overlapping with self-esteem) was strongest in some African American women [those with high socioeconomic status (SES) backgrounds] as compared to African American men or lower SES women (Neblett et al., 2016). Yet another study found an increase in racial discrimination from age 20 to 23 predicted increases in anxiety and depressive symptoms from age 20 to 32 among Black males but not Black females (Assari et al., 2017). Thus, although effects of PRD on psychological adjustment over time are likely robust regardless of sex, it is possible that Black female emerging adults could be at heightened risk of developing some types of internalizing symptoms, which could include low self-esteem, in the face of PRD as compared to their male counterparts. Examining potential interactions of PRD and sex provides an initial window on intersectionality in PRD, which is an important emerging topic in psychological research (e.g., Bowleg, 2012).

Given that previous research regarding sex differences in effects of PRD on internalizing symptoms has yielded mixed results, and differences in effects of PRD specifically on self-esteem across emerging adulthood have not previously been examined, this study will explore potential variance across sex in these relations. In addition, given that SES may influence these relations along with sex/gender (e.g., as evidenced by Neblett et al., 2016), the proposed study will also include SES as a covariate.

Potential Protective Role of Positive Ethnic-Racial Identity

Black Americans are not passive recipients of racially discriminatory experiences, and it is possible that strengths within Black communities may regularly buffer and/or override potential negative effects of racial discrimination on self-esteem. Black families and

communities frequently impart ethnic-racial socialization messages to Black children to help them develop a positive ethnic-racial identity (ERI) and cope with racial discrimination (Burt et al., 2012). ERI is a multidimensional construct that reflects individuals' beliefs and attitudes about their ethnic-racial group memberships (Umaña-Taylor et al., 2014). Crocker and Major (1989) found that use of the in-group as a source for standards about one's personal worth (in this case comparing oneself to other Black individuals instead of a standard of Whiteness) helped protect self-esteem against standards imposed by biased out-group members (i.e., as experienced through racial discrimination). Considering that for Black Americans one important aspect of ERI, positive ethnic-racial affect (Rivas-Drake et al., 2014), involves placing value on traits associated with being Black, this aspect of ERI may serve as a buffer in the relation between PRD and self-esteem, such that associations between PRD and self-esteem will be weaker for individuals higher in positive ethnic-racial affect.

Current Study

The proposed study will use parallel latent growth curve analyses to examine the associations between trajectories of PRD and trajectories of self-esteem across the transition to adulthood. Specifically, parallel latent growth curve analyses will address the following questions: 1) Do initial levels of PRD in late adolescence predict initial levels of self-esteem; 2) Do initial levels of PRD in late adolescence predict changes in self-esteem across emerging adulthood, controlling for initial self-esteem; 3) Do initial levels of self-esteem predict changes in PRD across emerging adulthood, controlling for initial levels of PRD; and 4) Do changes in PRD predict changes in self-esteem over time, over and above initial levels of PRD. We hypothesize that initial level of PRD will both be associated with initial level of self-esteem and predict changes in self-esteem across early adulthood, whereas initial level of self-esteem will

not predict changes in PRD. We also hypothesize that changes in PRD will be associated with changes in self-esteem, accounting for the effects of initial levels of self-esteem and PRD. Next, to explore potential sex differences in effects of PRD on self-esteem we will examine whether the supported model is invariant across male and female young adults. Given inconsistent previous findings, we make no specific hypotheses of differences in the pattern of results based on sex. Finally, racial identity in late adolescence will be examined as a potential moderator of relations between PRD and self-esteem. We hypothesize that racial identity will buffer any negative effects of PRD on self-esteem, such that relationships between PRD and self-esteem will be weaker for individuals with more positive racial identity in late adolescence.

CHAPTER 2

METHOD

Participants and Procedures

Analyses were conducted using data from the Family and Community Health Study (FACHS). FACHS is a longitudinal study of African American families that was initiated in 1997. The protocol and all study procedures were approved by the University of Georgia Institutional Review Board. At the first wave (1997–1998), the FACHS sample consisted of 889 African American fifth-grade children/targets (467 from Iowa and 422 from Georgia), their primary caregiver, and a secondary caregiver when one was present in the home. The current study includes data from the targets from Wave 4 (W4; M_{age} = 18.8) through Wave 7 (W7; M_{age} = 28.8) of FACHS, as these were the waves at which the variables of interest were measured. Due to attrition before W4, data from 793 participants were included in the analyses.

Measures

Perceived racial discrimination. A revised version of the Schedule of Racist Events (Landrine & Klonoff, 1996) was used to assess targets' PRD at each time point (W4-W7). The scale contains 13 items regarding negative experiences with others that the respondent experienced, or observed a family member experience, that they attributed to the fact that they (or their family) were African American (e.g., "How often have you been treated unfairly because you are African American?" rated from 1 = *never* to 4 = *frequently*). In order to make the scale more appropriate for non-adult respondents, the revision simplified some language, and items on workplace discrimination were replaced with items about general experiences in the

community. Cronbach's alpha in this sample was .95 at W4, .90 at W5, .91 at W6, and .95 at W7.

Self-esteem. Self-esteem was assessed at each time point (W4-W7) with 5 items from the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). This measure taps global self-esteem (e.g., "I take a positive attitude toward myself"). Participants were asked to respond on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), and responses were summed to obtain a total self-esteem score. There is significant evidence for the RSE's validity and reliability (e.g., Wheelock & Erikson, 1996). It has also been used in previous research with ethnically diverse adolescent samples (e.g., Greene & Way, 2005). Cronbach's alpha in this sample was .73 at W4, .76 at W5, .78 at W6, and .78 at W7.

Racial identity. An abbreviated (12 item) version of the self-report Multi-Construct African American Identity Questionnaire (MCAIQ; Smith & Brookins, 1997) was used to measure racial identity at W4. This scale was developed to examine attitudes toward African Americans as a group; in general, higher scores on the MCAIQ indicate in-group preferences, rejecting group stereotypes, and accepting positive portrayals of African Americans as a group (Smith & Brookins, 1997). Thus, this measure should reflect the degree to which individuals value traits associated with Blackness, and is well-suited for capturing positive ethnic-racial affect, the aspect of racial identity theorized to influence how individuals respond to PRD. Responses range from 1 (*strongly agree*) to 4 (*strongly disagree*) and were scored such that higher scores reflected more positive racial identity. Sample items include "Blacks should be proud of their race" (reverse coded) and "Most Blacks can't be trusted." Cronbach's alpha in this sample was .71 at W4.

Family socioeconomic status (SES). Primary caregivers' educational attainment (as self-reported by primary caregivers at W4) was used as an indicator of SES. Literature suggests that parental educational attainment can be utilized as a proxy of SES (Neblett et al., 2016).

Analytic Strategy

We used latent growth curves (LGC) in the structural equation modeling framework to estimate individual and parallel trajectories of PRD and self-esteem using Mplus (Version 8; Muthen & Muthen, 2012). Preliminary analyses established the form of individual growth curves and suitability for further analyses. Specifically, unconditional LGC models with and without a quadratic slope factor and correlated measurement errors between adjacent timepoints were compared to find the best fitting univariate model for each construct. To examine longitudinal relations between PRD and self-esteem, we then tested a parallel process model (PPM) with reciprocal effects and unidirectional effects between levels and slopes (Figure 1). This model included pathways from initial level of PRD to initial level and slope of self-esteem, from slope of PRD to slope of self-esteem, and from initial level of self-esteem to slope of PRD. This model also included correlations between level and slope of PRD and between level and slope of self-esteem, and included pathways from two exogenous covariates, family SES and participant age at W4, to all intercept and slope factors.

After fitting the full PPM for PRD and self-esteem, we tested whether the PPM was invariant across gender by using a multiple group model with gender as the grouping variable, constraining model parameters to be equal across groups and evaluating whether these constraints significantly worsened the model fit.

Finally, we explored whether any associations between PRD initial level or slope and self-esteem initial level or slope were moderated by positive racial identity.

For all models, missing data were accounted for using full information maximum likelihood (FIML), such that data from all participants with at least one non-missing variable were used for analyses. The chi-square statistic, root mean square error of approximation (RMSEA), comparative fit index (CFI), Tucker-Lewis index (TLI) and standardized root mean residual (SRMR) were used to evaluate model fit.

CHAPTER 3

RESULTS

Descriptive Statistics

Table 1 presents means, standard deviations, and ranges of demographic characteristics and the major study variables. Bivariate correlations between study variables are presented in Table 2.

Unconditional Univariate LGCs

Perceived Racial Discrimination. Unconditional LGC models containing linear and quadratic effects of time were constructed to explore the possible forms of growth for PRD in this population. The fixed quadratic effect was not significant (0.000, p = .962), and was therefore excluded from the model. Linear LGC models with and without correlated measurement errors between adjacent timepoints were also compared; the chi-square difference test indicated that incorporating correlated measurement errors in the linear growth model did not significantly improve the model fit [χ_{DIFF}^2 (3) = 1.240, critical value of χ^2 (3) = 7.815]. Therefore, a linear model without correlated errors was chosen as the best fitting, most parsimonious model (parameters are reported in Table 3). Model fit indices suggested good fit for this model [χ^2(5) = 3.294, p = .655; RMSEA = .000; CFI/TLI = 1.000 /1.000; SRMR = .012]. The coefficient for the linear slope for racial discrimination was significant and negative, indicating that on average PRD decreased over the period from the end of high school into early adulthood. Variances of both the level and the slope were significant, indicating variability

between participants in both the initial level of PRD at late adolescence and the rate of change into early adulthood, which supports the viability of the planned PPM analyses.

Self-esteem. Next, unconditional LGC models containing linear and quadratic effects of time were constructed to explore the possible forms of growth for self-esteem. The fixed quadratic effect was removed from the model as it was not significant (-0.001, p = .888), had non-significant, negative variance (-.002, p = .325), and negatively impacted the fit of the model to the data. Linear LGC models with and without correlated measurement errors between adjacent timepoints were also compared. The chi-square difference test indicated that incorporating correlated measurement errors in the linear growth model significantly improved the model fit [χ_{DIFF}^2 (3) = 12.799, critical value of χ^2 (3) = 7.815]; however, other fit indices indicated worse model fit for the model with correlated measurement errors [RMSEA (90% CI) = 0.154 (.114, .197); TLI = .804]. Therefore, a linear model without correlated errors was chosen as the best fitting, most parsimonious model (parameters are reported in Table 3). Model fit indices suggested fit for this model was still somewhat poor based on most indices, but adequate according to the CFI and TLI [$\chi^2(5) = 52.362$, $p < .001$; RMSEA (90% CI) = 0.109 (.084, .137); CFI/TLI = .918/ .901; SRMR = .109]. Means for the level and slope factors were both significant, indicating that on average, self-esteem may have increased slightly through the transition from adolescence to early adulthood. The variances for the growth factors were also statistically significant, indicating significant variation in the growth function between individuals. However, as the univariate LGC model fit the self-esteem data poorly, these parameter estimates should be interpreted cautiously.

PPM of Perceived Racial Discrimination and Self-Esteem

A PPM was then fit for PRD and self-esteem. A PPM was tested with reciprocal effects between the initial levels and slopes of perceived racial discrimination and self-esteem and unidirectional effects from initial level of PRD to initial level of self-esteem and from slope of PRD to slope of self-esteem. Participant age and family SES at W4 were included in the model as time-invariant covariates with paths to all latent growth factors. As several variables in the model had non-normal distributions, maximum likelihood estimation with robust standard errors was used and the Satorra-Bentler scaled chi-square difference test (Satorra & Bentler, 2010) was used to test differences in model fit. A model including measurement error correlations between simultaneously measured racial discrimination and self-esteem at each timepoint did not significantly improve model fit (χ_{DIFF}^2 (2) = 3.142, p = .208). The model without measurement error correlations was therefore used as the best-fitting PPM model (Figure 2). This model had good fit [χ^2(30) = 56.325, p = .003; RMSEA (90% CI) = .037 (.022, .052); CFI/TLI = .972/.959; SRMR = .051].

Results of this model indicated that initial level of PRD was significantly negatively associated with initial level of self-esteem, as expected. Additionally, initial level of PRD was negatively associated with the slope of self-esteem over time. The slope of self-esteem was also significantly predicted by the slope of PRD, controlling for the effects of initial PRD and self-esteem. Together, these findings indicate that the initial level of PRD in late adolescence was associated with significant decreases in self-esteem over early adulthood and that increases in PRD over early adulthood were associated with decreases in self-esteem (controlling for initial levels of PRD and self-esteem). Conversely, the slope of PRD was not significantly predicted by

initial level of self-esteem, providing longitudinal support for the hypothesized direction of effects—PRD influenced later self-esteem but self-esteem did not influence later PRD.

Moderation by Sex

To examine potential differences by sex, a multiple group analysis was then fit using the most parsimonious PPM (i.e., without measurement error correlations). An unconstrained model, in which all paths for women and men were free to vary, was compared to models constraining the four proposed paths between growth factors in the PPM. In the unconstrained model with grouping by sex, the slope factor for self-esteem had a small negative residual variance. Since this variance was also close to zero for men, variance of the slope factor for self-esteem was set to zero in all multiple group models in order to improve model estimation.

First, the unconstrained model was compared to a model in which all proposed paths between growth factors – from initial level of PRD to initial level of self-esteem, slope of PRD to slope of self-esteem, initial level of PRD to slope of self-esteem, and initial level of self-esteem to slope of PRD – were constrained to be equal for women and men. The constrained model significantly worsened model fit based on the Satorra-Bentler scaled chi-square difference test [χ_{DIFF}^2 (4) = 16.814, p = .002], and also had poorer fit based on other fit indices (see Table 4, Model 2). To determine which paths could not be constrained to be equal, separate models constraining each of the four paths to be equal across women and men were compared to the unconstrained model. The final model was formed by constraining any paths that did not significantly worsen model fit when constrained individually to be equal across women and men.

The most parsimonious multi-group model (Model 3 in Table 4) is depicted in Figure 3. When compared to the unconstrained model, this model did not significantly worsen model fit [χ_{DIFF}^2 (2) = .705, p = .703; Model 3 in Table 4]. In this model, the paths from initial level of

PRD to initial level of self-esteem and from slope of PRD to slope of self-esteem were constrained to be equal for women and men. However, the paths from initial level of PRD to slope of self-esteem and from initial level of self-esteem to slope of PRD could not be constrained to be equal across sex without significantly worsening model fit, indicating that these paths were moderated by sex. Specifically, for women initial level of PRD had a significant negative association with the slope of self-esteem, whereas for men this path was not significant. Conversely, for men there was a significant positive association between initial level of self-esteem and the slope of PRD, whereas for women this path was not significant.

Moderation by Racial Identity

Given that the models for women and men were significantly different, moderation by racial identity was examined separately for women and men (Table 5). An extreme outlier for racial identity (6 *SD*s below the mean) was removed from moderation analyses due to high leverage. Of the four paths – from initial level of PRD to initial level of self-esteem, slope of PRD to slope of self-esteem, initial level of PRD to slope of self-esteem, and initial level of self-esteem to slope of PRD – only the association between PRD and self-esteem slopes was significantly moderated by racial identity for women (β=-.288, p=.006) and for men (β=-.827, p<.001). Specifically, for women, increasing levels of PRD were associated with decreasing self-esteem over emerging adulthood regardless of level of racial identity, but this association was stronger for women with more positive racial identity (84^{th} percentile) in late adolescence (β= -1.392, p<.001) than for those with less positive racial identity (16^{th} percentile) in late adolescence (β=-.721, p=.001). For men, among those with more positive racial identity (84^{th} percentile) in late adolescence, increasing levels of PRD were associated with decreasing self-esteem over emerging adulthood (β= -1.276, p<.001). For men with less positive racial identity

(16th percentile) in late adolescence, there was no significant association between the trajectory of PRD and the trajectory of self-esteem over emerging adulthood (β=.458, p=.196).

CHAPTER 4

DISCUSSION

Based on prior literature, we hypothesized that the increased experience of racial discrimination by Black Americans during the transition to adulthood would adversely influence their self-esteem. Rather than examine concurrent associations at a single point in time, however, we utilized parallel latent growth models to examine how initial levels of self-esteem and discrimination predicted change in the other domain over time, and also how change in one domain was associated with change in the other. Given the nature of emerging adulthood, in which individuals may experience increased instability, self-focus, and identity exploration (Syed & Mitchell, 2013), we expected young adults to be particularly vulnerable to challenges (Arnett & Brody, 2008), especially the challenge of dealing with the increasing discrimination which is normative for Black young adults (Hurd, Varner, Caldwell, & Zimmerman, 2014). The hypothesized pattern of effects was that racial discrimination intercepts would predict slopes of self-esteem, and that slopes of increasing racial discrimination would further exacerbate impact on self-esteem over time.

Overall, this study of young Black women and men from rural Georgia and Iowa found strong support for the hypothesized pattern. The hypothesized direction of longitudinal effects between perceived racial discrimination and self-esteem was supported by the finding that initial level of perceived racial discrimination in late adolescence predicted initial levels of self-esteem and changes in self-esteem over time, whereas there was no significant effect of initial level of self-esteem on the trajectory of perceived racial discrimination across early adulthood. In

addition, there was a significant association between increasing perceived racial discrimination across early adulthood and decreasing self-esteem.

Two main conclusions seem warranted. First, those Black youth who experience more early discrimination and also increasing discrimination over time are likely to suffer with regard to normative self-esteem development. This is consistent with earlier cross-sectional findings and extends these findings by indicating that discrimination's effects on self-esteem continue to accumulate over time. The observed pattern is also consistent with the view that experiences of discrimination undermine and disadvantage Black youth in psychological and physical domains (see also Hart et al., 2021; Lavner et al., 2021). Second, there is no evidence that robust self-esteem in late adolescence will protect against increasing discrimination across young adulthood (i.e., initial self-esteem was not associated with slopes of discrimination). Thus, it does not appear that youth will experience less discrimination as they transition into adulthood simply by virtue of having higher self-esteem at the beginning of the transition. This suggests that the increased discrimination reported by Black young adults as they adopt adult roles is unlikely to be explained as a perceptual process.

In addition to understanding the overall pattern of effects, we also examined these associations separately for males and females. In doing so, we observed some differences that suggest caution in assuming that patterns of effects regarding the effect of discrimination on self-esteem are uniform for males and females. In particular, we found evidence supporting the hypothesis that the intersection of race and gender may influence how reciprocal relations between racial discrimination and self-esteem play out over time. Specifically, whereas the overall model supported the hypothesized direction of effects, with initial level of perceived racial discrimination predicting the trajectory of self-esteem but no significant effect of initial

self-esteem on the trajectory of perceived racial discrimination, a somewhat different pattern of reciprocal effects emerged when we examined women and men separately. The model for women followed the same pattern as the overall model, suggesting that for young Black women experiences of racial discrimination predict later changes in self-esteem and not the reverse. Moreover, the relation between initial discrimination and change in self-esteem was stronger in the gender specific model for women than in the general model. In contrast, for men, level of perceived racial discrimination in late adolescence did not significantly predict the trajectory of self-esteem. Instead higher self-esteem at late adolescence predicted increasing levels of perceived racial discrimination across early adulthood. Also, as for women, the association between men's initial levels of discrimination and self-esteem became non-significant. Notably, since the association between initial self-esteem and discrimination is positive, it does not suggest any protective role for greater initial self-esteem.

Sex differences in associations were not predicted, and so while the observed effect of men's initial self-esteem on later trajectory of discrimination was not hypothesized *a priori*, it is provocative. It is not uncommon for sex differences to prove unreliable and difficult to replicate. Accordingly, it would be unwise to make too much of this sex difference pending replication in other data sets. Nonetheless, it seems possible that male Black youth who have higher self-esteem in late adolescence may on average be more likely to enter environments in which they experience increasing racial discrimination during early adulthood. For example, if young Black men with higher self-esteem are more likely to end up in higher-prestige jobs by their late 20s, they may experience increasing levels of discrimination as they progress in a career path that is counter-stereotypical (e.g., being treated as though they do not belong in this position). Further research is needed to examine whether there are intersectional effects of race and gender on

longitudinal relations between racial discrimination and self-esteem for Black young adults, and to explicate potential mechanisms through which race-gender intersectionality may function.

The hypothesis that racial identity at late adolescence would buffer the effects of perceived racial discrimination on self-esteem across early adulthood was not supported in this study. The only significant interaction effect suggested the opposite of the hypothesized effect, such that Black women and men with more positive racial identity in late adolescence demonstrated a stronger negative association between changes in racial discrimination and changes in self-esteem over the transition to adulthood. It is possible that this could reflect confounding variables not included in the present study, such that positive racial identity may be associated with other factors that create greater vulnerability at the transition to adulthood when many young adults enter majority White spaces (e.g., predominantly White institutions) and face more frequent and insidious racial discrimination. Nonetheless, there must be other protective factors at play that protect Black youth from the negative effects of racial discrimination given that many Black young adults develop positive self-esteem during this time frame (Erol & Orth, 2011). Future studies of the transition to adulthood could help explicate these relations by accounting for demographic and cultural shifts in individuals' environments across this period. It could be useful to approach these relations from an ecological systems perspective (Bronfenbrenner, 1977), to examine the relative effects of different levels of environmental influence (e.g., relationships with close family and friends, campus or work climate, etc.) and their interactions.

Limitations

This study used a robust longitudinal design to examine relations between perceived racial discrimination, self-esteem, and racial identity in a relatively large sample of Black young

adults from rural Georgia and Iowa. However, several limitations should be acknowledged. First, current models of racial identity emphasize the multidimensional nature of racial identity (Schwartz et al., 2014), but the current study only included one of the broadly recognized dimensions of racial identity, positive racial affect or private regard (Rivas-Drake et al., 2014). The measure of racial identity used, the Multi-Construct African American Identity Questionnaire, includes orientation towards African Americans in terms of physical and social characteristics as well as attitudes towards African Americans as a group (Smith & Brookins, 1997), which can be considered part of private regard, but does not capture other theoretically important dimensions of racial identity, such as public regard or racial centrality. It is possible that other aspects of racial identity could have a more robust effect on the longitudinal association between perceived racial discrimination and self-esteem. In addition, racial identity was measured at only a single timepoint in this study, in late adolescence. Racial identity measured in late adolescence may reflect the efforts of caregivers and other influences on youth prior to leaving the home (as youth often do around late adolescence) on early adulthood trajectories, rather than reflecting continued changes or independent exploration over early adulthood. It is possible that changes in racial identity over early adulthood could impact the associations between perceived racial discrimination and self-esteem.

In addition, as mentioned above, the current study did not account for how different participants' environments likely underwent different types of changes across early adulthood. Findings may differ for young adults who spend this period in different types of college environments (e.g., a predominantly White institution versus a historically Black college or university) and those who enter trade school or work environments. It is also possible that there could be an association between self-esteem in late adolescence and changes in individuals'

environments. For instance, young people with higher self-esteem may be more likely to experience greater social and economic advancement across early adulthood, which could ultimately impact the frequency or type of racial discrimination experienced. If this is the case, based on preliminary findings from this study it will be important to account for environmental factors with consideration of potential intersections between race and gender.

Future Directions

There is a need for additional research to better understand strengths within Black communities that may buffer or outweigh the detrimental effects of racial discrimination on Black young adults' self-esteem, and how intersectionality between race and gender may impact these processes. In addition, there is a need for concerted attention to measurement of protective processes. Although the current study did not provide support for positive racial identity as a buffer of the association between racial discrimination and self-esteem, as previously mentioned it is possible that other aspects of racial identity or timing of racial identity measurement may influence these relations. Future research should also investigate other potential buffers, such as current social connectedness, parental bonding, coping strategies, and sources of affirmation. A recent study by Rose and colleagues found that Black adolescents with a pattern of greater social connectedness across family, peer, school, religion, and neighborhood settings had more positive self-esteem than adolescents with minimal or very low social connectedness or social connectedness solely within their family (Rose et al., 2019). Future research should therefore examine social connectedness across multiple settings as a potential buffer of the relation between racial discrimination and self-esteem.

This study also provided some evidence for differential longitudinal relations between perceived racial discrimination and self-esteem based on gender. It will therefore be important

for future research to continue to examine potential intersectionality in these relations, and when examining potential buffers. Low self-esteem may set the stage for depression and other psychological challenges, and may serve as a barrier to individuals pursuing valued goals. It is therefore important to understand not only how racial discrimination may influence the development of self-esteem in Black young adults, but also what cognitive, social, and emotional resources in Black communities may serve as protective or promotive factors in the development of high self-esteem within a context of oppression.

Table 1. Descriptive Statistics of Study Variables

Variable	Mean (or %)	SD	Range	N
Age W4	18.8	.91	16 – 21	714
SES W4	12.74	2.36	0 – 20	721
Sex (% Female)	46%	—	—	889
Racial identity W4	42.53	4.22	16 – 48	681
Racial discrimination W4	23.03	7.80	13 – 49	676
Racial discrimination W5	21.51	7.21	13 – 48	678
Racial discrimination W6	20.06	7.14	13 – 49	648
Racial discrimination W7	18.43	7.77	13 – 52	430
Self-esteem W4	20.76	3.34	5 – 25	714
Self-esteem W5	20.31	3.80	5 – 25	687
Self-esteem W6	21.40	3.20	8 – 25	695
Self-esteem W7	21.06	3.77	6 – 25	516

Notes. SES = Caregiver's highest level of education (in years). W4 = Wave 4, 2004; W5 = Wave 5, 2007; W6 = Wave 6, 2011; W7 = Wave 7, 2014.

Table 2. Bivariate Correlations of Study Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age W4	—											
2. SES W4	.04	—										
3. Sex	-.01	-.03	—									
4. Racial identity W4	-.07	.05	-.06	—								
5. Racial discrimination W4	.14**	.06	.04	-.02	—							
6. Racial discrimination W5	.09*	.10*	.12**	.00	.52**	—						
7. Racial discrimination W6	.09*	.05	.07	.00	.50**	.55**	—					
8. Racial discrimination W7	.22**	.08	.04	-.01	.41**	.47**	.56**	—				
9. Self-esteem W4	-.07	.05	-.03	.24**	-0.05	-.11**	-0.04	-0.02	—			
10. Self-esteem W5	-.03	-.04	.08*	.15**	-.10*	-.10**	-.09*	-0.10	.43**	—		
11. Self-esteem W6	-.05	-.07	-.03	.11**	-.08*	-.17**	-.12**	-.16**	.41**	.53**	—	
12. Self-esteem W7	-.10*	-.10*	.07	.19**	-.10*	-.18**	-.13**	-.25**	.38**	.49**	.53**	—

Notes. SES = Caregiver's highest level of education (in years). W4 = Wave 4. W5 = Wave 5. W6 = Wave 6. W7 = Wave 7. *$p < .05$. **$p < .01$.

Table 3. Estimates for Univariate Latent Growth Curve Models

	Racial Discrimination	Self-esteem
Level		
Mean	22.99***	20.62***
Variance	33.70***	4.98***
Slope		
Mean	-.44***	.07***
Variance	.18***	.02*
χ^2(df)	3.294 (5)	52.362 (5)
RMSEA	.000	.109
CFI/TLI	1.000 / 1.000	.918 / .901
SRMR	.012	.109

Note: Unstandardized coefficients are shown. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 4. Examining Moderation by Sex: Fit Indices of the Models Tested (N = 596)

Model	χ^2	*df*	RMSEA (90% CI)	CFI/TLI	SRMR
1. Model 1	91.50*	64	.038 (.018–.055)	.971/.960	.057
2. Model 2	104.78	68	.043 (.025–.058)	.961/.949	.070
3. Model 3	**92.11**	**66**	**.036 (.016–.053)**	**.972/.963**	**.058**

Notes. RMSEA = root-mean-square error of approximation; CI = confidence interval; CFI = comparative fit index; TLI = Tucker-Lewis Index; SRMR = standardized root mean square residual. *$p < .05$, **$p < .01$, ***$p < .001$. Model 1 is the unconstrained model. In Model 2, all four proposed paths between growth factors were constrained (i.e., paths from initial level PRD to initial level self-esteem, from slope PRD to slope self-esteem, from initial level PRD to slope self-esteem, and from initial level self-esteem to slope PRD constrained to be equal across groups). In Model 3, the paths from initial level PRD to initial level self-esteem and from slope PRD to slope self-esteem were constrained, and the paths from initial level PRD to slope self-esteem and from initial level self-esteem to slope PRD were free to vary. The final, most parsimonious multi-group model for sex is in bold.

Table 5. Moderation by Racial Identity for Women (N = 315)

	Dependent variables		
	Initial level SE	Slope SE	Slope PRD
Independent variables	β (SE)	β (SE)	β (SE)
Model 1			
Initial level PRD	-.13 (.08)	-.60 (.27)*	-.56 (.13)***
Slope PRD	—	-1.15 (.13)***	—
Initial level SE	—	—	-.10 (.13)
Initial level PRD x RI	.04 (.07)	—	—
Model 2			
Initial level PRD	-.12 (.08)	-.62 (.27)*	-.56 (.13)***
Slope PRD	—	-1.14 (.13)***	—
Initial level SE	—	—	-.09 (.13)
Initial level PRD x RI	—	.11 (.12)	—
Model 3			
Initial level PRD	-.13 (.08)	-.59 (.25)*	-.54 (.13)***
Slope PRD	—	-1.09 (.13)***	—
Initial level SE	—	—	-.05 (.13)
Slope PRD x RI	—	-.29 (.11)**	—
Model 4			
Initial level PRD	-.12 (.08)	-.61 (.27)*	-.56 (.13)***
Slope PRD	—	-1.15 (.13)***	—
Initial level SE	—	—	-.11 (.14)
Initial level SE x RI	—	—	-.07 (.10)

Note: *$p < .05$, **$p < .01$, ***$p < .001$. SE = self-esteem; PRD = perceived racial discrimination; RI = racial identity. Standardized coefficients are shown. Racial identity was median centered for all models. Participant age and primary caregiver's highest level education (as a proxy for socioeconomic status) at the first wave (Wave 4) were included in all models as time-invariant covariates predicting level and slope of PRD and SE (not shown).

Table 6. Moderation by Racial Identity for Men (N = 253)

	Dependent variables		
	Initial level SE	Slope SE	Slope PRD
Independent variables	β (SE)	β (SE)	β (SE)
Model 1			
Initial level PRD	-.12 (.14)	.38 (.50)	.28 (.56)
Slope PRD	—	-1.06 (.30)***	—
Initial level SE	—	—	.23 (.21)
Initial level PRD x RI	.00 (.15)	—	—
Model 2			
Initial level PRD	-.12 (.12)	.38 (.53)	.28 (.59)
Slope PRD	—	-1.07 (.32)***	—
Initial level SE	—	—	.23 (.15)
Initial level PRD x RI	—	-.01 (.17)	—
Model 3			
Initial level PRD	-.20 (.10)	-.03 (.16)	-.01 (.21)
Slope PRD	—	-.51 (.19)**	—
Initial level SE	—	—	.46 (.27)
Slope PRD x RI	—	-.83 (.16)***	—
Model 4			
Initial level PRD	-.10 (.12)	.41 (.46)	.38 (.46)
Slope PRD	—	-1.13 (.29)***	—
Initial level SE	—	—	.30 (.15)*
Initial level SE x RI	—	—	.20 (.13)

Note: *$p < .05$, **$p < .01$, ***$p < .001$. SE = self-esteem; PRD = perceived racial discrimination; RI = racial identity. Standardized coefficients are shown. Racial identity was median centered for all models. Participant age and primary caregiver's highest level education (as a proxy for socioeconomic status) at the first wave (Wave 4) were included in all models as time-invariant covariates predicting level and slope of PRD and SE (not shown).

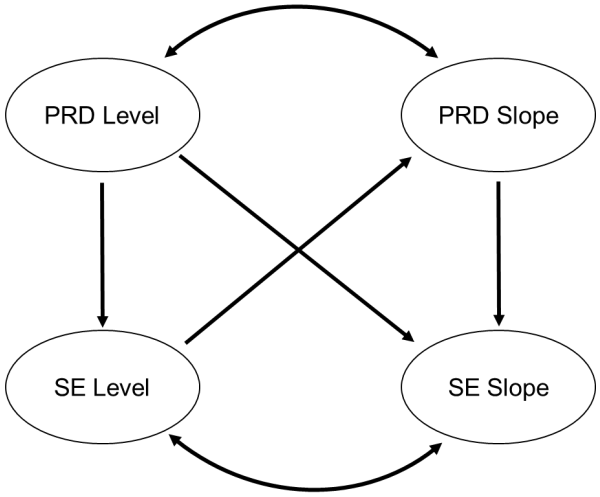


Figure 1. Proposed PPM with reciprocal effects and unidirectional effects from perceived racial discrimination to self-esteem. PRD = perceived racial discrimination, SE = self-esteem.

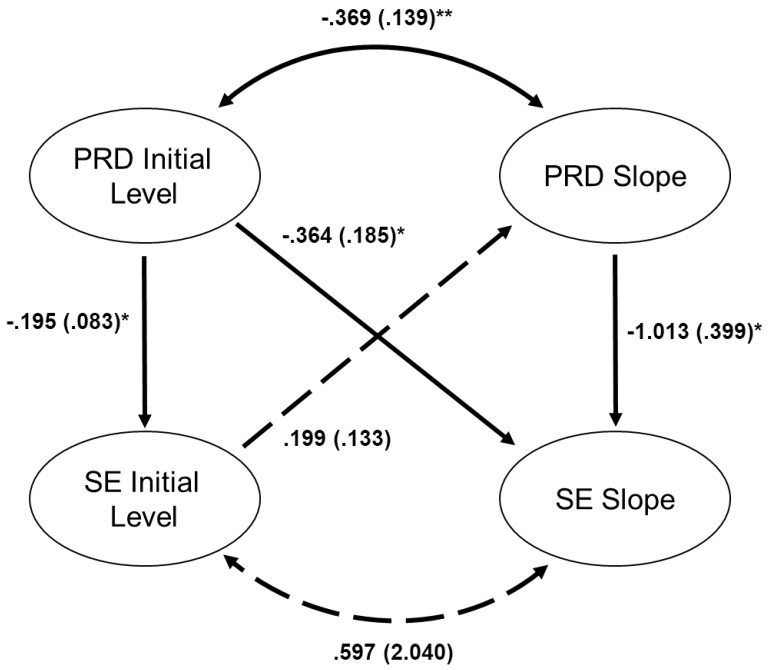
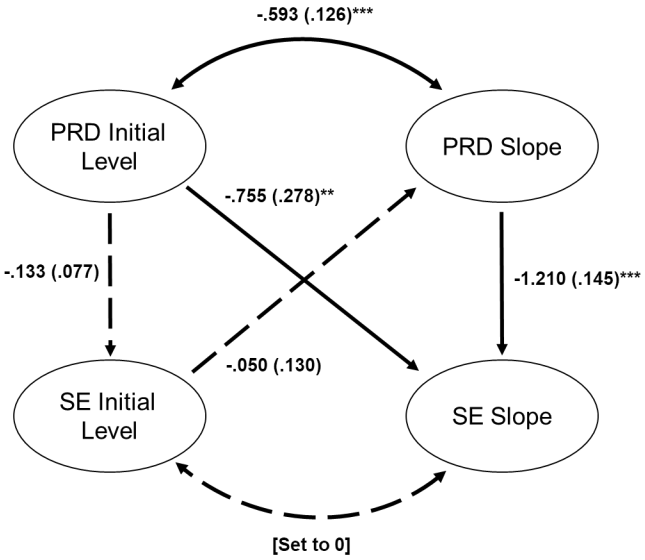


Figure 2. Overall PPM with reciprocal effects and unidirectional effects from perceived racial discrimination to self-esteem. PRD = perceived racial discrimination. SE = self-esteem. Participant age and primary caregiver's highest level education (as a proxy for socioeconomic status) at the first wave (Wave 4) were included in the model as time-invariant covariates predicting level and slope of PRD and SE (not shown). Standardized coefficients are shown with standard errors in parentheses for all paths. *p < .05. **p < .01.

Women



Men

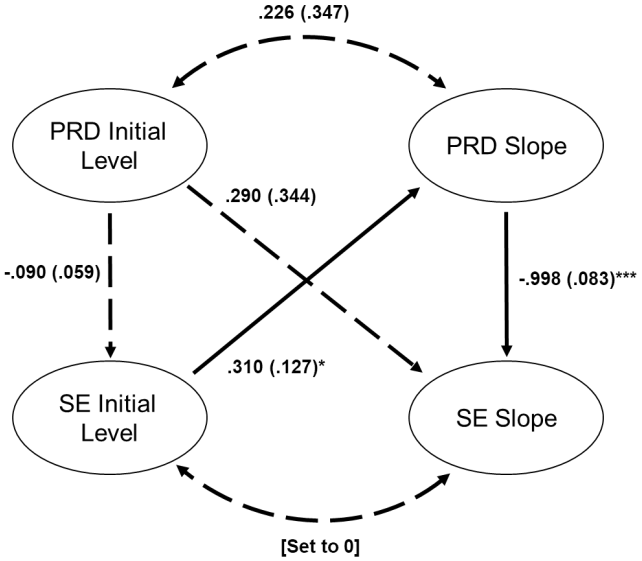


Figure 3. Multiple group model for women and men. PRD = perceived racial discrimination. SE = self-esteem. Paths from initial level PRD to initial level SE and from slope PRD to slope SE were constrained to be equal across groups. Standardized coefficients are shown with standard errors in parentheses for all paths. Because the variance of the slope factor for self-esteem was set to zero in these models, the covariance between initial level SE and slope SE was also set to zero by MPlus. *p < .05. **p < .01. ***p<.001.

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