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# The Influence of Internalized Racism on the Relationship Between Discrimination and Anxiety

#### Effua E. Sosoo.

Department of Psychology and Neuroscience, University of North Carolina at Chapel Hill;

#### Donte L. Bernard,

Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina;

#### Enrique W. Neblett Jr.

Department of Psychology and Neuroscience, University of North Carolina at Chapel Hill.

Department of Health Behavior and Health Education, University of Michigan School of Public Health.

#### **Abstract**

**Objectives:** This study used 2 waves of data to longitudinally examine whether internalized racism moderated the association between racial discrimination and anxiety symptom distress.

**Method:** Participants were 157 Black college students attending a predominantly White institution who completed measures of racial discrimination, internalized racism, and psychological distress.

**Results:** Using hierarchical linear regression, results indicated a positive association between racial discrimination and subsequent anxiety symptom distress for individuals with moderate and high levels of internalization of negative stereotypes and hair change.

**Conclusions:** Findings suggest that experiences of anxiety symptom distress, in the context of racial discrimination, may differ as a function of one's acceptance and internalization of dominant White culture's actions and beliefs toward Black people.

#### **Keywords**

internalized racism; internalized racial oppression; racial discrimination; anxiety

Racial discrimination is a normative and pervasive experience for Black youth (García Coll et al., 1996; Hope, Hoggard, & Thomas, 2015) that is associated with negative outcomes such as mood disorders (Paradies et al., 2015), decreased self-esteem (Yip, 2015), and cardiovascular diseases (DeLilly & Flaskerud, 2012). As Black youth transition to adulthood and begin to navigate contexts such as college, employment, and housing, they may experience more racial discrimination (Mouzon, Taylor, Woodward, & Chatters, 2017). While there is variability in the ways in which individuals are affected by racial

discrimination, certain sociocultural factors may render Black individuals vulnerable to its negative psychological effects. *Internalized racism*, the process by which people internalize and accept dominant White culture's actions and beliefs toward Black people while simultaneously rejecting African culture and ideas, is one such factor (Bailey, Chung, Williams, Singh, & Terrell, 2011).

Numerous studies have linked internalized racism to metabolic health (e.g., Chambers et al., 2004), but it has also been associated with psychological distress (Molina & James, 2016; Szymanski & Obiri, 2011). While an abundance of research has examined the psychological correlates of racial discrimination among Black individuals (Carter et al., 2018), little is known about the moderating influence of internalized racism over time. It is important to investigate which factors combine with racial discrimination to understand which individuals are most vulnerable to the noxious psychological effects of racial discrimination (Paradies, 2006b). This study examined whether internalized racism moderated the relation between racial discrimination and anxiety symptom distress in a population of Black emerging adults in college.

## **Theoretical Frameworks**

Two theoretical models guide this investigation. Clark, Anderson, Clark, and Williams's (1999) biopsychosocial model of racism proposes that the perception of an environmental stimulus as racist leads to negative health outcomes that may be moderated by psychological and/or behavioral factors. These exaggerated stress responses ultimately influence health outcomes over time. In the context of the current study, repeated exposure to racial discrimination may lead to anxiety symptom distress in the presence of a psychological and/or behavioral factor such as internalized racism. The risk and resilience framework (Rutter, 1987) recognizes that although risk factors are likely to lead to maladaptive outcomes, there are individual variations in response to risk. Specifically, vulnerability and protective processes can intensify or ameliorate, respectively, one's response to risk. In the context of the current study, racial discrimination is a risk factor for anxiety symptom distress, and internalized racism may be a vulnerability factor that renders individuals even more susceptible to negative psychological effects.

It is also important to consider the significance of emerging adulthood when examining the associations among racial discrimination, internalized racism, and anxiety symptom distress. Emerging adulthood represents a critical developmental stage that is demarcated by increased autonomy and identity exploration, often within novel collegiate settings (Arnett & Brody, 2008). Unfortunately, for Black youth, emerging adulthood is also associated with increased exposure and vulnerability to racial discrimination and other negative race-related experiences (Hope et al., 2015; Pearlin, Schieman, Fazio, & Meersman, 2005). Literature suggests that chronic experiences of discrimination within emerging adulthood may increase vulnerability to negative psychological adjustment (Bernard, Lige, Willis, Sosoo, & Neblett, 2017). This is especially important to consider for Black emerging adults attending predominantly White institutions (Neblett, Bernard, & Banks, 2016), who must contend with race-related stressors (e.g., negative stereotypes) within settings in which they are underrepresented (Smith, Mustaffa, Jones, Curry, & Allen, 2016). As such, while Black

students are exploring and making sense of their identity, they are also navigating unique stressors that may lead to the internalization of negative race-related messages and detract from positive psychological development.

# **Racial Discrimination and Mental Health Functioning**

Racial discrimination has been defined in a variety of ways (Berman & Paradies, 2010; Paradies, 2006a). Harrell (2000) defined it as a system of power and privilege based on racial group designations that are rooted in the historical oppression of a group perceived as inferior. Researchers have suggested there are several levels of racism. Jones (2000) conceptualized racism as occurring at three levels: internalized (acceptance of negative messages about abilities and worth), personally mediated (intentional and unintentional prejudice and discrimination), and institutionalized (e.g., differential access to goods and services). Analogously, Berman and Paradies (2010) conceptualized racism as internalized (acceptance of negative stereotypes about one's group), interpersonal (interactions between individuals and groups), and systemic (inequalities embedded in social systems and structures). This article is guided by a conceptualization of racial discrimination that reflects an amalgamation of these definitions: It is a race-related stressor that simultaneously functions on multiple levels to negatively impact the well-being of people of color (Jones, 2000).

Concordant with the theoretical frameworks proposed by Clark et al. (1999) and Rutter (1987), several studies have documented an inverse association between racial discrimination and favorable mental health (Priest et al., 2013). While discrimination may confer an increased risk for poor psychological adjustment, the association between discrimination and anxiety has been found to be particularly robust (Hurd, Varner, Caldwell, & Zimmerman, 2014; Lee, Neblett, & Jackson, 2015; Levine et al., 2014). A study by Soto, Dawson-Andoh, and BeLue (2011) found that while non-race-based discrimination predicted generalized anxiety disorder (GAD) for African Americans, Afro Caribbeans, and non-Hispanic Whites, race-based discrimination was associated with significantly higher odds of endorsing GAD for African Americans only.

Racial discrimination may increase symptoms of anxiety, in part, because discriminatory experiences can deplete cognitive resources (Salvatore & Shelton, 2007; Smith, Allen, & Danley, 2007), increase sensitivity within interpersonal interactions (Neblett et al., 2016), and reduce self-esteem (Yip, 2015). Moreover, racial discrimination can lead to psychological and biological stress responses (Sawyer, Major, Casad, Townsend, & Mendes, 2012) that exacerbate anxiety. For example, racial discrimination can evoke negative emotional responses and physiological arousal that lead to activation of the hypothalamic–pituitary–adrenal axis and release of cortisol (Berger & Sarnyai, 2015). Cortisol transmission can, in turn, result in structural changes that lead to sustained hypervigi-lance, triggering stress responses to nonthreatening stressors, and chronic vigilance that leads to worry, a core characteristic of anxiety (Brosschot, Gerin, & Thayer, 2006). Given the strong association between racial discrimination and anxiety symptoms relative to other psychiatric symptoms (Pieterse, Todd, Neville, & Carter, 2012) and the overall prevalence of anxiety in

the general population (Kessler, Chiu, Demler, Merikangas, & Walters, 2005), this study focused on anxiety symptom distress as our primary outcome.

# **Conceptualization of Internalized Racism**

Internalized racism, the process by which people accept and internalize dominant White culture's actions and beliefs toward Black people, may be one factor that increases the risk of experiencing anxiety symptoms in the presence of racial discrimination. In fact, Speight (2007) contended that an understanding of racism, without understanding how it is internalized, is incomplete. The use of the term internalized racism first surfaced in the 1980s, likening internalized racism to the oppression of Black individuals in the 1800s: "The slavery that captures the mind and incarcerates the motivation, perception, aspiration, and identity in a web of anti-self images, generating a personal and collective self-destruction, is more cruel than the shackles on the wrists and ankles" (Akbar, 1984, p. 2). In other words, internalized racism is a form of psychological slavery that is potentially more pernicious than physical slavery. Lipsky (1987) further described internalized racism as the way in which Black people "agree" with their own oppression and internalize the distress patterns resulting from the racism perpetuated by the majority society. Specifically, she posited that internalized racism manifests itself as internalizing stereotypes, mistrusting the self and other Black individuals, and narrowing one's view of authentic Black culture. This was the first attempt to propose specific dimensions of internalized racism.

Although the use of the term *internalized racism* did not emerge until the 1980s, researchers studied Black identity change theories and examined Black self-hatred, a negative component of racial identity, for years (Fanon, 1952/1967; Milliones, 1973; Thomas, 1971). One example is Cross's (1991) Nigresence model, an important foundation for racial/ethnic identity theory that encapsulated psychological changes in the consciousness of Black individuals. This model included an Anti-Black dimension as one component of the Pre-Encounter stage, a stage in which one is unaware of their race and its social implications. The Anti-Black dimension depicts an individual who holds very negative views about Black people and internalizes these views as Black self-hatred. The Pre-Encounter stage has been significantly and positively related to self-reported anxiety among other negative outcomes (Carter, 1991).

More recently, internalized racism has been examined independently of other aspects of Black racial identity but is still conceptualized as a negative component of Black racial identity (Bailey et al., 2011). Bailey and colleagues (2011) departed from previous conceptualizations by hypothesizing that internalized racism is more multifaceted than the internalization of White stereotypes and self-hatred, and they therefore sought to identify other dimensions of this phenomenon. Specifically, they used confirmatory and exploratory factor analyses to identify a four-factor model. *Internalization of negative stereotypes* reflects the extent to which individuals accept negative stereotypes about Black people. *Belief in the biased representation of history* reflects the extent to which individuals accept fabricated historical facts. *Alteration of physical appearance* reflects the extent to which participants desire to alter their physical appearance to conform to a Eurocentric aesthetic. *Hair change* reflects the extent to which participants prefer straight (i.e., chemically

processed) hair to natural hair. Although Lipsky (1987) proposed theoretical dimensions of internalized racism, Bailey et al.'s (2011) conceptualization represents the first attempt to distill internalized racism into measurable dimensions. Alteration of physical appearance and hair change may be two particularly important dimensions of internalized racism. Anglo features, lighter skin, and straight hair are cultural standards of physical attractiveness that are transmitted across generations of African American families (Parmer, Arnold, Natt, & Janson, 2004). The continual comparison of the self to societal ideals and belief that one's worth is connected to one's appearance can increase shame and anxiety (Buchanan, Fischer, Tokar, & Yoder, 2008).

# The Role of Internalized Racism as a Vulnerability Factor

Several studies have established a link between internalized racism and maladaptive outcomes. For example, higher internalized racism has been associated with greater risk for heart disease, stroke, and diabetes among Black youth (Chambers et al., 2004). Internalized racism has also been associated with increased alcohol consumption (e.g., Taylor & Jackson, 1990), waist circumference, and cardiovascular disease (e.g., Chae, Lincoln, Adler, & Syme, 2010; Tull, Cort, Gwebu, & Gwebu, 2007). These findings suggest that negative in-group racial attitudes may exacerbate the link between racial discrimination and physical health. Although fewer in number, studies that have examined the link between internalized racism and mental health outcomes are consistent with those examining physical health. Specifically, internalized racism has been associated with depressive symptoms (Mouzon & McLean, 2017; Taylor, Henderson, & Jackson, 1991), psychological distress (Szymanski & Obiri, 2011), and decreased self-esteem (Szymanski & Gupta, 2009) among adults. Given the limited number of studies, it is essential to gain a greater understanding of whether internalized racism exacerbates the link between racial discrimination and mental health outcomes.

Two studies to date have examined the influence of internalized racism on the link between racial discrimination and psychological symptoms. The first study conducted by Molina and James (2016) examined the moderating role of internalized racism and found it did not moderate the link between racial discrimination and past-year major depressive disorder. However, this study used depression diagnoses rather than depressive symptoms as an outcome. This may conceal important relationships between racial discrimination, internalized racism, and mental health outcomes given that Black individuals consistently report lower rates of any mood disorder but have higher levels of symptom persistence and severity (Barnes & Bates, 2017). The second study conducted by Graham, West, Martinez, and Roemer (2016) found that internalized racism mediated the link between the past-year frequency of racist events and anxious arousal in a sample of Black Americans, concluding that internalized racism may be a target for clinicians to reduce the anxiety elicited by racial experiences. However, consistent with risk and resilience approaches (Rutter, 1987), it is also important to investigate whether internalized racism worsens, not only explains, the association between past discrimination and mental health. Additionally, the use of the Cross Racial Identity Scale (CRIS; Vandiver, Cross, Worrell, & Fhagen-Smith, 2002) limits our understanding of internalized racism as it does not permit the examination of specific dimensions of internalized racism.

# **Limitations of Existing Literature**

There are several gaps in the literature that necessitated the current study. First, it is important to examine how racial discrimination and internalized racism combine to adversely affect health status as it is unlikely that these racial stressors function in isolation (Smedley, 2012; Williams & Mohammed, 2009). Second, it is essential to understand how internalized racism operates over time given that previous work has exclusively employed cross-sectional designs (Molina & James, 2016). Therefore, this study used a longitudinal design to establish temporal precedence. Third, studies examining internalized racism (Graham et al., 2016; Molina & James, 2016) have utilized measures such as the Nadanolitization Scale (Taylor & Grundy, 1996) or the CRIS (Vandiver et al., 2002). These scales produce a "total" internalized racism score and engender a limited understanding of internalized racism as they focus on the internalization of White stereotypes and self-hatred as a singular concept but neglect the various dimensions of internalized racism (Bailey et al., 2011). Fourth, studies examining internalized racism have primarily focused on physical health outcomes but have neglected the examination of mental health. The few studies that have examined mental health have focused on global and emotional measures of functioning (e.g., self-esteem and psychological distress), and only a few have focused on specific psychological outcomes (Graham et al., 2016; Molina & James, 2016; Taylor et al., 1991). Thus, this study examined internalized racism as a moderator of the link between racial discrimination and anxiety symptom distress over time and is unique relative to previous work due to its longitudinal design and focus on mental, rather than physical, health outcomes.

# **The Current Study**

The first aim of this study was to longitudinally examine the effects of racial discrimination on anxiety symptom distress. Consistent with previous research (Paradies, 2006b), we hypothesized that racial discrimination would be associated with increases in anxiety symptom distress. The second aim was to explore the moderating role of internalized racism in the link between racial discrimination and changes in anxiety symptom distress. In line with previous research (Szymanski & Obiri, 2011), we hypothesized that internalized racism would moderate the link between racial discrimination and anxiety symptom distress such that there would be a stronger link between racial discrimination and increases in anxiety symptom distress for individuals with higher initial levels of internalized racism. We also predicted that alteration of physical appearance and hair change, two dimensions of internalized racism, would emerge as moderators. We predicted that racial discrimination would be most distressing for individuals with higher levels of acceptance of White ideals of beauty. Possessing lighter skin, straight hair, and European facial features have been considered unspoken and contentious beauty standards among African Americans (Parmer et al., 2004). Therefore, individuals with higher levels of alteration of physical appearance and hair change may be especially vulnerable to anxiety. This would be consistent with literature that has found that devaluing what it means to be Black or emphasizing mainstream identity over one's own Black identity was related to poor psychological adjustment (Banks & Kohn-Wood, 2007; Seaton, 2009).

# **Method**

#### **Participants**

To be eligible for the study, participants were required to be a college student at the university where the study was conducted, be at least 18 years of age, and self-identify as Black. The study sample comprised 157 students: 107 females (68.2%) and 50 males (31.8%), representing roughly one fifth of the first-year students at the institution where the study was conducted (a public predominantly White university in the southeastern United States). The sample consisted of two cohorts of first-year students ( $M_{age} = 18.31$ , SD = 0.48) and was collected in two waves, approximately 8 months apart. Sample attrition was 13.5% across the two waves. Students who participated in both waves did not differ in age, maternal educational attainment, racial discrimination experiences, internalized racism, or mental health symptom distress from those who dropped out after Time 1 (T1).

Across both cohorts, the median highest maternal educational attainment was "bachelor's or 4-year college degree." Approximately 80.7% of students were in state, 91.8% were born in the United States, 28.7% were first-generation college students, and 69.6% described their family structure as "two parents." Self-reported cumulative grade point average was 2.81 (SD = 0.51).

#### **Procedure**

Participants were recruited via a list of self-identified first-year Black students provided by the university registrar's office, following institutional review board approval. Students were emailed and invited to participate in a longitudinal study examining the impact of stressful life experiences on the physical and mental health of Black college students. Participants completed a battery of online and paper questionnaires including the measures in this study during individual and group survey administrations lasting approximately 1 hour. Participants completed the same battery of questionnaires during the second wave of data collection. All surveys were completed in the presence of a research assistant. Participants received a payment of \$15 at each wave of data collection.

#### Measures

**Racial discrimination.**—The Daily Life Experiences Scale (DLE; Harrell, 1994) is a subscale of Harrell's (1994) Racism and Life Experiences Scales (RaLES). The RaLES is used to assess past experiences with racial discrimination. The DLE subscale (T1  $\alpha$  = .92; Time 2 [T2]  $\alpha$  = .93) is a self-report measure used to assess the frequency of 18 racial microaggressions. As noted by Sue et al. (2007), microaggressions represent subtle expressions of racial discrimination and can be defined as "brief, everyday exchanges that send denigrating messages to people of color because they belong to a racial minority group" (p. 273). Responses on the DLE are rated from 0 = never to 5 = once a week or more, with higher scores corresponding to more frequent experiences of racial discrimination. Scores were averaged, and this measure was treated as a continuous variable. Previous studies have shown the DLE to possess reliable and valid psychometric properties with Black young adults (e.g., Willis & Neblett, 2018).

Internalized racism.—The Internalized Racial Oppression Scale (IROS; Bailey et al., 2011) is a 28-item measure used to assess several dimensions of internalized racial oppression. The IROS is composed of four dimensions of internalized racism, with responses rated from 1 = strongly disagree to 5 = strongly agree. Higher scores reflect higher levels of internalized racism across each dimension. Scores were averaged, with some items reverse-coded, and this measure was treated as a continuous variable. The internalization of negative stereotypes subscale (T1  $\alpha$  = .86; T2  $\alpha$  = .85) consists of seven items measuring the acceptance of negative stereotypes (e.g., "Most Black people are on welfare"). The belief in the biased representation of history (T1  $\alpha = .61$ ; T2  $\alpha = .66$ ) subscale consists of seven items measuring the acceptance of fabricated historical facts (e.g., "Cannibalism was widely practiced in Africa"). The alteration of physical appearance subscale (T1  $\alpha$  = .83; T2  $\alpha$ = .82) consists of nine items measuring the desire to alter one's physical appearance to be more consistent with a Eurocentric aesthetic (e.g., "It is fine to use skin care products to lighten skin color"). The hair change subscale (T1  $\alpha$  = .67; T2  $\alpha$  = .69) consists of five items measuring the preference for straight hair versus natural hair (e.g., "Straight hair is better than my natural hair texture"). Reliability estimates in previous studies have ranged from .68 to .90 for the total IROS and its subscales (Bailey et al., 2011; Brown & Segrist, 2015).

**Mental health functioning.**—The Symptom Checklist 90– Revised (SCL-90–R; Derogatis, 1996) is a 90-item self-report measure used to assess psychological symptom distress (Schmitz, Hartkamp, & Franke, 2000). Participants were asked to indicate how much each item had distressed them during the past 7 days ( $0 = not \ at \ all \ to \ 4 = extremely$ ). The SCL-90–R comprises nine subscales (i.e., Somatization, Obsessive–Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism). The current study focused on anxiety (e.g., trembling, feeling fearful, restlessness; T1  $\alpha$  = .79; T2  $\alpha$  = .69). Higher scores reflect increased distress from anxiety symptoms. Scores were averaged, and this measure was treated as a continuous variable. The SCL-90–R has demonstrated good reliability and validity (e.g., Peveler & Fairburn, 1990).

#### Results

#### **Descriptive Statistics and Preliminary Analyses**

MPlus Version 8.1 was used for analyses. Preliminary analyses examined the means and standard deviations of racial discrimination and internalized racism beliefs (see Table 1). Participants reported experiencing 18 different racial discrimination experiences an average of once to a few times in the past year at T1 (M= 1.33; SD= 1.00). In terms of each subscale, participants, on average, endorsed low to moderate levels of internalization of negative stereotypes (M= 1.87; SD= .76), belief in the biased representation of history (M= 2.40; SD= .57), alteration of physical appearance (M= 1.95; SD= .72), and hair change (M= 2.67; SD= .81).

Next, significant bivariate (Pearson) correlations among racial discrimination (T1) and internalized racism variables (T1) and mental health outcomes (T2) were examined (see Table 1). Racial discrimination was negatively associated with T1 hair change (r=–.16; p

= .049). Racial discrimination was positively associated with T2 anxiety (r= .33; p< .01) symptom distress.

# Associations Between Racial Discrimination, Internalized Racism, and Anxiety Symptom Distress

We used full-information maximum likelihood estimation with missing data to conduct a hierarchical multiple regression analysis examining internalized racism as a moderator of the racial discrimination-anxiety symptom distress link. Cohort, age, gender, socioeconomic status (as indexed by maternal educational attainment and not self-reported socioeconomic status), and T1 anxiety symptom distress were included as covariates on the first level of the model. Cohort, gender, and socioeconomic status were coded as categorical variables, while age was coded as a continuous variable. We controlled for T1 anxiety to adjust for initial levels of anxiety symptom distress. Step 2 included racial discrimination frequency (T1) and the four internalized racism subscales (T1): internalization of negative stereotypes, belief in the biased representation of history, alteration of physical appearance, and hair change. Step 3 included all two-way interactions between racial discrimination and the internalized racism predictors to control for the effects of each subscale and to reduce the chance of Type I errors. All continuous predictors and interaction terms were centered. In follow-up analyses, we also ran the same models controlling for depressive symptom distress given well-known links between depression and anxiety (Kessler et al., 2003). Model results did not change with the inclusion of depressive symptom distress; thus, we present the most parsimonious model (i.e., not controlling for depressive symptom distress) below.

Racial discrimination as a risk factor for anxiety symptom distress.—Analyses revealed that racial discrimination at T1 was positively associated with anxiety symptom distress at T2 ( $\beta = .18$ , p = .025), net the effect of T1 anxiety distress.

**Internalized racism as a moderator.**—The hierarchical multiple regression analysis (see Table 2) revealed that at Step 1, which included demographic and control variables, the model had an  $R^2 = .31$ , R(5, 123) = 4.55, p = .001. The second step, which included all racial discrimination and internalized racism predictors, reflected an  $R^2$  change of .046, p < .01. The third step, which included the interaction terms, resulted in an  $R^2$  change of .05, p < .001.

Analyses revealed a significant interaction between racial discrimination and internalization of negative stereotypes in predicting anxiety symptom distress at T2 ( $\beta$  = .18, p = .042, eta squared = .02) after controlling for demographic variables and T1 anxiety symptom distress. The slopes of the line at the mean (b = .07, p = .03) and one standard deviation above the mean for internalization of negative stereotypes (b = .17, p = .002) were significant, whereas the slope of the line one standard deviation below the mean (b = -.02, p = .69) was not. As shown by Figure 1, racial discrimination predicted increases in anxiety symptom distress at moderate and high, but not low, levels of internalization of negative stereotypes. A similar pattern was found for the interaction between racial discrimination and hair change on anxiety distress at T2 ( $\beta$  = .16, p = .03, eta squared = .01) after controlling for demographic variables and T1 anxiety symptom distress. The slopes of the line at the mean (b = .07, p

= .026) and one standard deviation above the mean for hair change (b = .17, p = .005) were significant, whereas the slope of the line one standard deviation below the mean (b =-.02, p = .701) was not significant. As shown by Figure 2, racial discrimination scores positively predicted T2 anxiety symptoms distress at moderate and high, but not low, levels of hair change.

#### **Discussion**

This study examined the associations between racial discrimination, internalized racism, and anxiety symptom distress in a sample of Black college students attending a predominantly White university. The first aim of this study was to longitudinally examine the effects of racial discrimination on anxiety symptom distress. The second aim was to explore the moderating role of internalized racism in the link between racial discrimination and anxiety symptom distress. We found that greater experiences of racial discrimination at T1 were associated with increases in anxiety symptom distress at T2 for individuals who endorsed moderate and high levels of internalization of negative stereotypes and those who endorsed moderate and high levels of hair change. These findings extend the prior internalized racism literature by examining how racial discrimination and internalized racism combine to adversely affect mental health outcomes over time, using a longitudinal design to establish temporal precedence.

#### Racial Discrimination as a Risk Factor for Anxiety Symptom Distress

Consistent with previous research, racial discrimination was a significant predictor of anxiety symptom distress over time prior to considering internalized racism as a moderator. This finding is consistent with theory suggesting that racial discrimination leads to negative health outcomes and exaggerated stress responses (Clark et al., 1999). This finding is also consistent with previous research suggesting that racial discrimination is positively associated with anxiety symptoms (e.g., Banks, Kohn-Wood, & Spencer, 2006; Lee et al., 2015).

#### Internalized Racism as a Vulnerability Factor

Analyses revealed that the relation between racial discrimination and psychological distress may depend on other factors such as levels of internalized racism. A significant interaction was found between racial discrimination and internalization of negative stereotypes such that racial discrimination was associated with increased anxiety symptom distress at T2 for individuals with moderate and high, but not low, levels of internalization of negative stereotypes. This finding suggests that individuals who endorse higher levels of cognitions such as "Black women are confrontational" and "money management is something that Black people cannot do" are more vulnerable to the pernicious psychological effects of racial discrimination. Specifically, they are more likely to report experiences of anxiety symptom distress, such as distress from feeling tense or scared. One explanation for this finding is that individuals with high levels of internalization of negative stereotypes have accepted negative stereotypes about Black people. Given these beliefs about their own race, they may hold negative views toward themselves and have lower levels of self-esteem. Consequently, experiences of racial discrimination may serve as a confirmation of these

negative views, leading to psychological and physiological symptoms of anxiety (i.e., nervousness, fear, trembling, heart racing). Individuals who have internalized these beliefs may not actively challenge the messages conveyed through experiences of racial discrimination. Additionally, these individuals may be less likely to seek validation and support from same-race peers (Bailey et al., 2011).

A significant interaction was also found between racial discrimination and hair change such that racial discrimination was associated with increased anxiety symptom distress at T2 for individuals with moderate and high, but not low, levels of hair change. This finding suggests that individuals who endorse higher levels of cognitions such as "straight hair is better than my natural hair texture" and "I like it when my partner wears/(I would like it if my partner wore) his/her hair natural" are more likely to report experiences of anxiety symptom distress in the context of racial discrimination. Given the media's exaltation of Eurocentric standards of beauty and predominant portrayal of White individuals, the dissonance between one's actual versus desired appearance may lead to psychological distress. Of note, racial discrimination at T1 was negatively correlated (albeit weakly) with hair change at T1. Although speculative, this could suggest that racial discrimination experiences play a minor role in the extent to which negative attitudes about hair change are endorsed, preferences for straight versus natural hair might play a role in perceptions of discrimination, or perhaps there is some "third" variable that accounts for these links.

Analyses did not reveal any significant interactions between racial discrimination and alteration of physical appearance or biased representation of history. This may be because internalization of negative stereotypes and hair change are the most pernicious aspects of internalized racism, particularly in a predominantly female sample, given Eurocentric standards of beauty and the salience of negative stereotypes about Black individuals in society. It is interesting to note that while both physical appearance and hair change relate to external appearance, evidence was only found for the moderating influence of hair change. Although speculative, one possibility is that hair change may be more pernicious given the ongoing contentious discourse regarding hair both within and outside of Black communities. One study found that Black women indicated they were ridiculed for wearing their hair in its natural state by family members, strangers, and friends (Johnson & Bank-head, 2013). Additionally, there are numerous documented instances of individuals being disciplined or sanctioned for wearing braids, locs, and afros (e.g., Lattimore, 2017; Washington, 2019). The toll of receiving negative messages from kin, friends, and strangers, as well as the potential consequences for wearing hair in its natural state, may solidify one's preference for straight hair and elicit anxiety. Second, it may be more feasible for Black individuals to alter their hair texture (i.e., via straightening, relaxers, or extensions) relative to their physical appearance (i.e., via surgery or skin bleaching) as alteration of physical appearance can be more challenging, costly, and dangerous. Future research should further examine the significance of hair relative to other aspects of physical appearance given that there have been few published examinations of the internalized racism subscales since the validation of the IROS (cf. Brown, Rosnick, & Segrist, 2017; Brown & Segrist, 2015).

#### Study Strengths, Limitations, and Future Directions

This study has several strengths and makes a meaningful contribution to the internalized racism literature. It is the first study, to our knowledge, that has examined the interplay of racial discrimination and dimensions of internalized racism longitudinally. Also, it is one of just a handful of studies that examined indicators of mental rather than physical health symptom distress in relation to internalized racism.

Yet, there are several limitations. First, the reliabilities for the belief in the biased representation of history and hair change subscales were modest, which may have compromised power or ability to detect effects in the study. Second, the present study did not have a large enough sample to examine within-group ethnic or gender differences. Previous work has suggested that internalized racism may operate differently in certain groups. Specifically, Mouzon and McLean (2017) found that internalized racism was positively associated with depression and psychological distress for both foreign-born and American-born Black individuals, but this association was strongest among American-born Black individuals. These findings emphasize that Black individuals are not a monolithic group, and it is important to examine racial discrimination and internalized racism across the diaspora as context may play an important role in these associations. Additionally, research has indicated that Black men and women self-report different levels of racial discrimination experiences as well as different levels of subsequent mental health difficulties (e.g., Brownlow et al., 2019; Harnois & Ifatunji, 2011), suggesting racial discrimination is a gendered phenomenon. Dimensions of internalized racism, particularly hair change, may also operate uniquely across gender. Unfortunately, the small and female-skewed sample did not allow the examination of a three-way interaction including gender.

Third, the present study did not control for factors that may be conceptually similar to internalized racism such as Africentric worldview, self-esteem, and dimensions of racial identity. Future research should examine whether discriminant validity can be established for the IROS as it is important to determine whether internalized racism is indeed empirically distinct from these constructs. Finally, future research should take a person-, rather than variable-, centered approach to examining internalized racism. This would enable us to identify unique combinations of internalized racism dimensions across individuals. By understanding these combinations, we can then examine how they may correlate with or shape developmental outcomes. For example, future work could investigate how profiles of internalized racism may impact health outcomes over time.

#### Implications and Conclusion

This study examined the associations among racial discrimination, internalized racism, and anxiety symptom distress. Through the use of a longitudinal design, this study adds to the current literature by examining the interplay of racial discrimination and internalized racism over time. Results revealed a significant interaction between racial discrimination and internalization of negative stereotypes, as well as hair change, in predicting increases in anxiety symptom distress.

These findings have clinical implications that are worth noting. First, this study adds to the litany of research illustrating the deleterious nature of racial discrimination among Black emerging adults and highlights the need for such experiences to be validated and processed within the therapeutic context. Given the ubiquitous and evolving nature of racism in the contemporary United States, it is crucial that clinicians probe and address topics of discrimination when indicated. Second, findings suggest that the internalization of racism may exacerbate the noxious effects of discrimination. As illustrated by the current study, internalized racism is multifaceted and can take many forms to detract from positive psychological well-being in the context of racial discrimination. Therefore, it is important for clinicians to understand what societal messages have been internalized and how these maladaptive beliefs may be contributing to presenting concerns. Discussing such information is crucial within the context of therapy, as research suggests that discussing race-related experiences may bolster client engagement (Burkard, Knox, Groen, Perez, & Hess, 2006) and therapeutic alliance (PettyJohn, Tseng, & Blow, 2019). In addition, such discussions may better equip therapists to assist their clients in adaptively coping with racism (Harrell, 2000). Furthermore, collecting this information is important as the clinician develops a case conceptualization given that negative thoughts about one's self or racial group (internalized racism) may be directly related to experiences with racial discrimination and function as maladaptive cognitions. These cognitions may go largely unnoticed and cause psychological distress. Thus, clinicians should be willing to assess the internalization and acceptance of negative messages as they can serve as secondary targets of treatment.

In sum, internalized racism is a crucial factor to consider when examining the link between racial discrimination and mental health outcomes among Black emerging adults. Future work should continue to examine how various dimensions of internalized racism relate to additional indices of mental health functioning so that the mental health services provided to Black young adults can be optimized.

#### References

- $Akbar\ N\ (1984).\ Chains\ and\ images\ of\ psychological\ slavery.\ Jersey\ City,\ NJ:\ New\ Mind\ Productions.$
- Arnett JJ, & Brody GH (2008). A fraught passage: The identity challenges of African American emerging adults. Human Development, 51, 291–293. 10.1159/000170891
- Bailey T-KM, Chung YB, Williams WS, Singh AA, & Terrell HK (2011). Development and validation of the Internalized Racial Oppression Scale for Black individuals. Journal of Counseling Psychology, 58, 481–493. 10.1037/a0023585 [PubMed: 21728412]
- Banks KH, & Kohn-Wood LP (2007). The influence of racial identity profiles on the relationship between racial discrimination and depressive symptoms. Journal of Black Psychology, 33, 331–354. 10.1177/0095798407302540
- Banks KH, Kohn-Wood LP, & Spencer M (2006). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. Community Mental Health Journal, 42, 555–570. 10.1007/s10597-006-9052-9 [PubMed: 16897412]
- Barnes DM, & Bates LM (2017). Do racial patterns in psychological distress shed light on the Black-White depression paradox? A systematic review. Social Psychiatry and Psychiatric Epidemiology, 52, 913–928. 10.1007/s00127-017-1394-9 [PubMed: 28555381]
- Berger M, & Sarnyai Z (2015). "More than skin deep": Stress neurobiology and mental health consequences of racial discrimination. Stress: The International Journal on the Biology of Stress, 18, 1–10. 10.3109/10253890.2014.989204

Berman G, & Paradies Y (2010). Racism, disadvantage and multiculturalism: Towards effective antiracist praxis. Ethnic and Racial Studies, 33, 214–232. 10.1080/01419870802302272

- Bernard DL, Lige QM, Willis HA, Sosoo EE, & Neblett EW (2017). Impostor phenomenon and mental health: The influence of racial discrimination and gender. Journal of Counseling Psychology, 64, 155–166. 10.1037/cou0000197 [PubMed: 28182493]
- Brosschot JF, Gerin W, & Thayer JF (2006). The perseverative cognition hypothesis: A review of worry, prolonged stress-related physiological activation, and health. Journal of Psychosomatic Research, 60, 113–124. 10.1016/j.jpsychores.2005.06.074 [PubMed: 16439263]
- Brown DL, Rosnick CB, & Segrist DJ (2017). Internalized racial oppression and higher education values: The mediational role of academic locus of control among college African American men and women. Journal of Black Psychology. Advance online publication. 10.1177/0095798416641865
- Brown DL, & Segrist D (2015). African American career aspirations: Examining the relative influence of internalized racism. Journal of Career Development. Advance online publication. 10.1177/0894845315586256
- Brownlow BN, Sosoo EE, Long RN, Hoggard LS, Burford TI, & Hill LK (2019). Sex differences in the impact of racial discrimination on mental health among Black Americans. Current Psychiatry Reports, 21, 112 10.1007/s11920-019-1098-9 [PubMed: 31686220]
- Buchanan TS, Fischer AR, Tokar DM, & Yoder JD (2008). Testing a culture-specific extension of objectification theory regarding African American women's body image. The Counseling Psychologist, 36, 697–718. 10.1177/0011000008316322
- Burkard AW, Knox S, Groen M, Perez M, & Hess SA (2006). European American therapist self-disclosure in cross-cultural counseling. Journal of Counseling Psychology, 53, 15–25. 10.1037/0022-0167.53.1.15
- Carter RT (1991). Racial identity attitudes and psychological functioning. Journal of Multicultural Counseling and Development, 19, 105–114. 10.1002/j.2161-1912.1991.tb00547.x
- Carter RT, Johnson VE, Kirkinis K, Roberson K, Muchow C, & Galgay C (2018). A meta-analytic review of racial discrimination: Relationships to health and culture. Race and Social Problems, 11, 15–32. 10.1007/s12552-018-9256-y
- Chae DH, Lincoln KD, Adler NE, & Syme SL (2010). Do experiences of racial discrimination predict cardiovascular disease among African American men? The moderating role of internalized negative racial group attitudes. Social Science & Medicine, 71, 1182–1188. 10.1016/j.socscimed.2010.05.045 [PubMed: 20659782]
- Chambers EC, Tull ES, Fraser HS, Mutunhu NR, Sobers N, & Niles E (2004). The relationship of internalized racism to body fat distribution and insulin resistance among African adolescent youth. Journal of the National Medical Association, 96, 1594–1598. [PubMed: 15622689]
- Clark R, Anderson N, Clark V, & Williams D (1999). Racism as a stressor for African Americans: A biopsychosocial model. American Psychologist, 54, 805–816. 10.1037/0003-066X.54.10.805 [PubMed: 10540593]
- Cross WE Jr. (1991). Shades of black: Diversity in African-American identity. Philadelphia, PA: Temple University Press.
- DeLilly CR, & Flaskerud JH (2012). Discrimination and health outcomes. Issues in Mental Health Nursing, 33, 801–804. 10.3109/01612840.2012.671442 [PubMed: 23146015]
- Derogatis LR (1996). SCL-90-R: Symptom Checklist-90-R: Administration, scoring, and procedures manual. Baltimore, MD: NCS Pearson.
- Fanon F (1967). Black skin, white masks New York, NY: Grove Press.(Original work published 1952)
- García Coll C, Lamberty G, Jenkins R, McAdoo HP, Crnic K, Wasik BH, & Vázquez García H (1996). An integrative model for the study of developmental competencies in minority children. Child Development, 67, 1891–1914. 10.2307/1131600 [PubMed: 9022222]
- Graham JR, West LM, Martinez J, & Roemer L (2016). The mediating role of internalized racism in the relationship between racist experiences and anxiety symptoms in a Black American sample. Cultural Diversity and Ethnic Minority Psychology, 22, 369–376. 10.1037/cdp0000073 [PubMed: 26750994]

Harnois CE, & Ifatunji M (2011). Gendered measures, gendered models: Toward an intersectional analysis of interpersonal racial discrimination. Ethnic and Racial Studies, 34, 1006–1028. 10.1080/01419870.2010.516836

- Harrell SP (1994). The racism and life experience scales. Unpublished manuscript.
- Harrell SP (2000). A multidimensional conceptualization of racism-related stress: Implications for the well-being of people of color. American Journal of Orthopsychiatry, 70, 42–57. 10.1037/h0087722 [PubMed: 10702849]
- Hope EC, Hoggard LS, & Thomas A (2015). Emerging into adulthood in the face of racial discrimination: Physiological, psychological, and sociopolitical consequences for African American youth. Translational Issues in Psychological Science, 1, 342–351. 10.1037/tps0000041
- Hurd NM, Varner FA, Caldwell CH, & Zimmerman MA (2014). Does perceived racial discrimination predict changes in psychological distress and substance use over time? An examination among Black emerging adults. Developmental Psychology, 50, 1910–1918. 10.1037/a0036438 [PubMed: 24730378]
- Johnson TA, & Bankhead T (2013). Hair it is: Examining the experiences of Black women with natural hair. Open Journal of Social Sciences, 2, 86–100. 10.4236/jss.2014.21010
- Jones CP (2000). Levels of racism: A theoretic framework and a gardener's tale. American Journal of Public Health, 90, 1212–1215. 10.2105/AJPH.90.8.1212 [PubMed: 10936998]
- Kessler RC, Berglund P, Demler O, Jin R, Koretz D, Merikangas KR, ... the National Comorbidity Survey Replication. (2003). The epidemiology of major depressive disorder: Results from the National Comorbidity Survey Replication (NCS-R). Journal of the American Medical Association, 289, 3095–3105. 10.1001/jama.289.23.3095 [PubMed: 12813115]
- Kessler RC, Chiu WT, Demler O, Merikangas KR, & Walters EE (2005). Prevalence, severity, and comorbidity of 12-month *DSM–IV* disorders in the National Comorbidity Survey Replication. Archives of General Psychiatry, 62, 617–627. 10.1001/archpsyc.62.6.617 [PubMed: 15939839]
- Lattimore K (2017). When Black hair violates the dress code. Retrieved from https://www.npr.org/sections/ed/2017/07/17/534448313/when-black-hair-violates-the-dress-code?t=1532003220129
- Lee DB, Neblett EW Jr., & Jackson V (2015). The role of optimism and religious involvement in the association between race-related stress and anxiety symptomatology. Journal of Black Psychology, 41, 221–246. 10.1177/0095798414522297
- Levine DS, Himle JA, Abelson JM, Matusko N, Dhawan N, & Taylor RJ (2014). Discrimination and social anxiety disorder among African-Americans, Caribbean blacks, and non-Hispanic whites. Journal of Nervous and Mental Disease, 202, 224–230. 10.1097/NMD.0000000000000099 [PubMed: 24566508]
- Lipsky S (1987). Internalized racism. Seattle, WA: Rational Island Publishers.
- Milliones J (1973). Construction of the developmental inventory of black consciousness (Unpublished doctoral dissertation) University of Pittsburgh, PA.
- Molina KM, & James D (2016). Discrimination, internalized racism, and depression: A comparative study of African American and Afro-Caribbean adults in the U.S. Group Processes & Intergroup Relations, 19, 439–461. 10.1177/1368430216641304 [PubMed: 28405176]
- Mouzon DM, & McLean JS (2017). Internalized racism and mental health among African-Americans, U.S.-born Caribbean Blacks, and foreign-born Caribbean Blacks. Ethnicity & Health, 22, 36–48. 10.1080/13557858.2016.1196652 [PubMed: 27354264]
- Mouzon DM, Taylor RJ, Woodward A, & Chatters LM (2017). Everyday racial discrimination, everyday non-racial discrimination, and physical health among African Americans. Journal of Ethnic & Cultural Diversity in Social Work: Innovation in Theory, Research & Practice, 26, 68–80. 10.1080/15313204.2016.1187103
- Neblett EW Jr., Bernard DL, & Banks KH (2016). The moderating roles of gender and socioeconomic status in the association between racial discrimination and psychological adjustment. Cognitive and Behavioral Practice, 23, 385–397. 10.1016/j.cbpra.2016.05.002
- Paradies YC (2006a). Defining, conceptualizing and characterizing racism in health research. International Journal of Epidemiology, 35, 888–901. 10.1093/ije/dyl056 [PubMed: 16585055]
- Paradies Y (2006b). A systematic review of empirical research on self-reported racism and health. International Journal of Epidemiology, 35, 888–901. 10.1093/ije/dyl056 [PubMed: 16585055]

Paradies Y, Ben J, Denson N, Elias A, Priest N, Pieterse A, ... Gee G. (2015). Racism as a determinant of health: A systematic review and meta-analysis. PLoS ONE, 10, e0138511 10.1371/journal.pone.0138511 [PubMed: 26398658]

- Parmer T, Arnold MS, Natt T, & Janson C (2004). Physical attractiveness as a process of internalized oppression and multigenerational transmission in African American families. The Family Journal, 12, 230–242. 10.1177/1066480704264931
- Pearlin LI, Schieman S, Fazio EM, & Meersman SC (2005). Stress, health, and the life course: Some conceptual perspectives. Journal of Health and Social Behavior, 46, 205–219. 10.1177/002214650504600206 [PubMed: 16028458]
- PettyJohn ME, Tseng CF, & Blow AJ (2019). Therapeutic utility of discussing therapist/client intersectionality in treatment: When and how? Family Process. Advance online publication 10.1111/famp.12471
- Peveler RC, & Fairburn CG (1990). Measurement of neurotic symptoms by self-report questionnaire: Validity of the SCL-90R. Psychological Medicine, 20, 873–879. 10.1017/S0033291700036576 [PubMed: 2284395]
- Pieterse AL, Todd NR, Neville HA, & Carter RT (2012). Perceived racism and mental health among Black American adults: A meta-analytic review. Journal of Counseling Psychology, 59, 1–9. 10.1037/a0026208 [PubMed: 22059427]
- Priest N, Paradies Y, Trenerry B, Truong M, Karlsen S, & Kelly Y (2013). A systematic review of studies examining the relationship between reported racism and health and wellbeing for children and young people. Social Science & Medicine, 95, 115–127. 10.1016/j.socscimed.2012.11.031 [PubMed: 23312306]
- Rutter M (1987). Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry, 57, 316–331. 10.1111/j.1939-0025.1987.tb03541.x [PubMed: 3303954]
- Salvatore J, & Shelton JN (2007). Cognitive costs of exposure to racial prejudice. Psychological Science, 18, 810–815. 10.1111/j.1467-9280.2007.01984.x [PubMed: 17760778]
- Sawyer PJ, Major B, Casad BJ, Townsend SSM, & Mendes WB (2012). Discrimination and the stress response: Psychological and physiological consequences of anticipating prejudice in interethnic interactions. American Journal of Public Health, 102, 1020–1026. 10.2105/AJPH.2011.300620 [PubMed: 22420818]
- Schmitz N, Hartkamp N, & Franke GH (2000). Assessing clinically significant change: Application to the SCL-90-R. Psychological Reports, 86, 263–274. 10.2466/pr0.2000.86.1.263 [PubMed: 10778279]
- Seaton EK (2009). Perceived racial discrimination and racial identity profiles among African American adolescents. Cultural Diversity and Ethnic Minority Psychology, 15, 137–144. 10.1037/a0015506 [PubMed: 19364200]
- Smedley BD (2012). The lived experience of race and its health consequences. American Journal of Public Health, 102, 933–935. 10.2105/AJPH.2011.300643 [PubMed: 22420805]
- Smith WA, Allen WR, & Danley LL (2007). "Assume the position ... you fit the description": Psychosocial experiences and racial battle fatigue among African American male college students. American Behavioral Scientist, 51, 551–578. 10.1177/0002764207307742
- Smith WA, Mustaffa JB, Jones CM, Curry TJ, & Allen WR (2016). 'You make me wanna holler and throw up both my hands!': Campus culture, Black misandric microaggressions, and racial battle fatigue. International Journal of Qualitative Studies in Education, 29, 1189–1209. 10.1080/09518398.2016.1214296
- Soto JA, Dawson-Andoh NA, & BeLue R (2011). The relationship between perceived discrimination and generalized anxiety disorder among African Americans, Afro Caribbeans, and non-Hispanic Whites. Journal of Anxiety Disorders, 25, 258–265. 10.1016/j.janxdis.2010.09.011 [PubMed: 21041059]
- Speight SL (2007). Internalized racism: One more piece of the puzzle. The Counseling Psychologist,  $35, 126-134.\ 10.1177/0011000006295119$
- Sue DW, Capodilupo CM, Torino GC, Bucceri JM, Holder AM, Nadal KL, & Esquilin M (2007). Racial microaggressions in everyday life: Implications for clinical practice. American Psychologist, 62, 271–286. 10.1037/0003-066X.62.4.271 [PubMed: 17516773]

Szymanski DM, & Gupta A (2009). Examining the relationship between multiple internalized oppressions and African American lesbian, gay, bisexual, and questioning persons' self-esteem and psychological distress. Journal of Counseling Psychology, 56, 110–118. 10.1037/a0013317

- Szymanski DM, & Obiri O (2011). Do religious coping styles moderate or mediate the external and internalized racism-distress links? The Counseling Psychologist, 39, 438–462. 10.1177/0011000010378895
- Taylor J, & Grundy C (1996). Measuring black internalization of white stereotypes about African Americans: The Nadanolitization Scale. Handbook of Tests and Measurements of Black Populations, 2, 217–226.
- Taylor J, Henderson D, & Jackson BB (1991). A holistic model for understanding and predicting depressive symptoms in African-American women. Journal of Community Psychology, 19, 306–320. 10.1002/1520-6629(199110)19:4<306::AID-JCOP2290190403>3.0.CO;2-Z
- Taylor J, & Jackson B (1990). Factors affecting alcohol consumption in Black women. Part II. International Journal of the Addictions, 25, 1415–1427. 10.3109/10826089009056228 [PubMed: 2094681]
- Thomas C (1971). Boys no more. Beverly Hills, CA: Glencoe.
- Tull ES, Cort MA, Gwebu ET, & Gwebu K (2007). Internalized racism is associated with elevated fasting glucose in a sample of adult women but not men in Zimbabwe. Ethnicity & Disease, 17, 731–735. [PubMed: 18072387]
- Vandiver BJ, Cross WE Jr., Worrell FC, & Fhagen-Smith PE (2002). Validating the Cross Racial Identity Scale. Journal of Counseling Psychology, 49, 71–85. 10.1037/0022-0167.49.1.71
- Washington J (2019, Septemeber 18). The untold story of wrestler Andrew Johnson's dreadlocks. The undefeated. Retrieved from https://theundefeated.com/features/the-untold-story-of-wrestler-andrew-johnsons-dreadlocks/
- Williams DR, & Mohammed SA (2009). Discrimination and racial disparities in health: Evidence and needed research. Journal of Behavioral Medicine, 32, 20–47. 10.1007/s10865-008-9185-0 [PubMed: 19030981]
- Willis HA, & Neblett EW Jr. (2018). OC symptoms in African American young adults: The associations between racial discrimination, racial identity, and obsessive-compulsive symptoms. Journal of Obsessive-Compulsive and Related Disorders, 19, 105–115. 10.1016/j.jocrd.2018.09.002
- Yip T (2015). The effects of ethnic/racial discrimination and sleep quality on depressive symptoms and self-esteem trajectories among diverse adolescents. Journal of Youth and Adolescence, 44, 419– 430. 10.1007/s10964-014-0123-x [PubMed: 24682960]

## **Public Significance Statement**

Different types of race-related stress, particularly racial discrimination and internalized racism, may combine to adversely impact mental health over time. Specifically, Black participants who endorsed greater levels of internalized racism (i.e., internalization of negative stereotypes and preferences for straight hair) experienced greater anxiety symptom distress in the context of racial discrimination compared to those who endorsed lower levels.

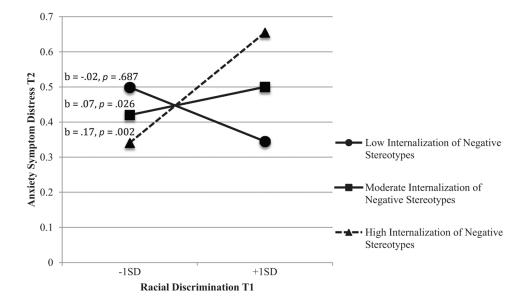


Figure 1. The interaction of racial discrimination and internalization of negative stereotypes on Time 2 (T2) anxiety symptom distress. T1 = Time 1.

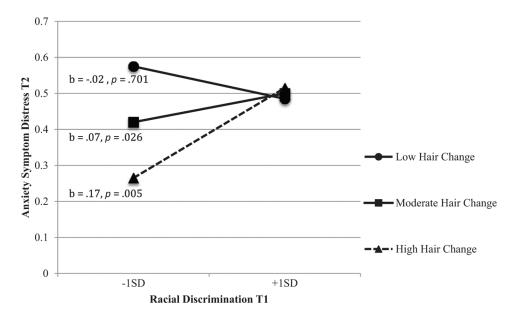


Figure 2. The interaction of racial discrimination and hair change on Time 2 (T2) anxiety symptom distress. T1 = Time 1.

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Table 1.

Descriptive Statistics and Intercorrelations Among Study Variables

Variable	1	2	3	4	s.	9	7	<b>∞</b>	6	10	11	12	13	41	15	16
1. Cohort																
2. Age	.430"															
3. Gender	010	.024	1													
4. Maternal education	.114	.001	.146													
5. RD T1	060	097	.155	.026												
6. RD T2	025	103	.190*	650.	.767											
7. BRH T1	281**	162*	019	111	030	110										
8. APA T1	139	193*	.046	.103	090.	.125	.366**	I								
9. INS T1	190	176*	.135	.035	.120	.109	.458**	.499								
10. HC T1	022	071	.283 **	040	158*	089	.219**	.251"	.177*							
11. BRH T2	122	201*	027	136	119	061	.641"	.213*	.351"	.235 **						
12. APA T2	033	124	.203*	.224"	.035	.041	.236**	.730**	.373"	960:	.242*					
13. INS T2	121	173*	.202*	.055	.149	.119	.448"	.416"	.650	.166	.320"	.466"				
14. HC T2	.015	114	211*	.039	120	089	.275**	.304 **	.211*	.752**	.273 **	.299	.197			
15. Anxiety T1	.039	.056	.004	076	.396**	.341 **	.108	.261"	.186*	.048	.061		.264"	.092	1	
16. Anxiety T2	001	.021	015	055	.325**	.381**	.103	.127	.130	074	.047	.132	.266**	.036	.560**	
Mean	.57	18.30	1.31	4.54	1.34	1.22	2.40	1.95	1.87	2.67	2.20	1.87	1.76	2.60	.47	.43
SI)	.50	.47	.46	1.43	1.00	1.04	.57	.72	92.	.81	.55	.67	.67	62.	.43	.41

Note. T1= Time 1; T2 = Time 2; RD = racial discrimination; BRH = belief in the biased representation of history; APA = alteration of physical appearance; INS = internalization of negative stereotypes; HC = hair change.

p < .05.

p < .05.\*\* p < .01.

 Table 2.

 Hierarchical Multiple Regression Analysis Predicting Anxiety Symptoms From Racial Discrimination and Dimensions of Internalized Racism

Predictor	B(SE)	β	P
Step 1			
Intercept	.47 (.10)	1.15	.00**
Cohort	02 (.07)	03	.75
Age	.02 (.07)	.03	.75
Gender	09 (.07)	10	.20
Maternal education	.01 (.02)	.04	.57
Anxiety T1	.45 (.07)	.50	.00"
Step 2			
RD T1	.07 (.03)	.18	.03*
BRH T1	.07 (.06)	.10	.24
APA T1	05 (.05)	08	.35
INS T1	.03 (.05)	.05	.60
HC T1	07 (.04)	14	.08
Step 3			
$RD \times BRH$	02 (.06)	03	.67
$RD \times APA$	.00 (.04)	.01	.95
$\text{RD} \times \text{INS}$	.10 (.05)	.18	.04*
$RD \times HC$	.09 (.04)	.16	.03*

Note. T1 = Time 1; T2 = Time 2; RD = racial discrimination; BRH = belief in the biased representation of history; APA = alteration of physical appearance; INS = internalization of negative stereotypes; HC = hair change.

p < .05.

<sup>\*\*</sup> p < .01.