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## Racial Discrimination, John Henryism Coping, and Behavioral Health Conditions among Predominantly Poor, Urban African Americans: Implications for Community-Level Opioid Problems and Mental Health Services

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### Abstract

The current study examined the relationship between John Henryism Active Coping (JHAC), experiences of racial discrimination, and behavioral health outcomes in a community sample of 319 Black adults. Assessments included primary health care screenings as well as self-reported survey questions to assess JHAC, experiences of discrimination, and self-reported behavioral health. Logistic regressions model adjusted for control variables, found a significant relationship between JHAC and having an opioid problem ( $OR = 0.95$ ,  $p = 0.003$ ) as well as needing mental health services ( $OR = 0.95$ ,  $p < 0.001$ ) such that higher levels of coping were associated with lower odds of reporting an opioid problem and with needing mental health services. Notably, racial discrimination was not significantly independently associated with behavioral health. Implications for interventions and community programming are discussed.

### Keywords

Coping; Racism; Discrimination; African Americans; John Henryism; Mental Health Services; Opioids

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A number of recent, high-publicized incidents (e.g., Police calls for #LivingWhileBlack) have indicated that racism, “beliefs, attitudes, institutional arrangements, and acts that tend to denigrate individuals or groups because of phenotypic characteristics [e.g., skin color] or ethnic group affiliation” (Clark et al., 1999, p. 805), continues to be a pervasive reality for black people in America. Indeed, over 90% of black people report experiences with racial discrimination—the differential treatment component of racism (Jones, 1997)—across a variety of settings, including employment, financial, and educational institutions (NPR, 2017). Importantly, racial discrimination is not simply a nuisance for black people: these experiences are taxing stressors that have been found to have profound physical health and behavioral health consequences (Carter, Lau, Johnson, & Kirkinis, 2017; Jones & Neblett, in press; Williams and Mohammed, 2009; Zapolski, Faidley, & Beutlich, 2018). Several scholars have attempted to elucidate the ways in which racial discrimination might impact health (Clark et al., 1999; Gee, Walsemann, and Brondolo, 2012; Williams & Mohammed, 2009; Williams & Mohammed, 2013). Notably, most of these frameworks build upon Lazarus and Folkman’s (1984) stress and coping framework and consider both general (e.g., mindfulness) and culturally-relevant (e.g., racial socialization) coping processes that might serve to mediate or moderate the racism-health link. This study explores one such coping style, John Henryism Active Coping (JHAC), experiences with discrimination, and behavioral health outcomes within a black sample.

Coping responses to racial discrimination can be categorized along a multiaxial plane, including active/passive and adaptive/maladaptive (Nielsen & Knardahl, 2014). Active coping refers to cognitive or behavioral strategies to address the root causes of stressors while passive coping are cognitive and/or behavioral attempts to avoid stressors or reduce the resultant emotions that arise from such stress (Billings & Moos, 1981). It is possible for individuals to engage in active coping efforts (e.g., activism) to combat the stress that emerges from discrimination. At the same time, given the pervasiveness of racial discrimination, it is also possible for passive coping to be employed, given that these strategies are often used when it is assumed that one’s circumstances will not change (Blalock & Joiner, 2000). In addition to coping being considered active or passive, attempts to cope with racial discrimination can also be adaptive, meaning they lead to positive functioning and outcomes, or maladaptive, with either a maintenance or exacerbation in distress (Zeidner & Saklofske, 1996). Notably, the length of engagement in a particular coping strategy is important, as some strategies may be adaptive in the short-term, but impinge upon health status in the long-term.

One active coping strategy frequently employed by Black people to navigate racial discrimination is John Henryism (James et al., 1983; Matthews et al., 2013). The John Henryism hypothesis suggests that racism and oppression-related stressors (e.g., poverty, unequal access to employment) leads some Black people to display a coping triumvirate: “efficacious mental and physical vigor; a strong commitment to hard work; and a single-minded determination to succeed” (Bennett et al., 2004, p.371). In support of the racial nature of John Henryism, previous research has found that it is exhibited to a higher extent by blacks’ than Whites’ (Blackmon et al., 2016; James et al., 1987). While certainly an active coping strategy, John Henryism highlights the importance of considering the adaptive/maladaptive nature over time. In the short-term, research suggests that John Henryism can

be adaptive (e.g., Bonham, Sellers, & Neighbors, 2004; Bronder, Speight, Witherspoon, & Thomas, 2014). However, over time, the construct has been linked to negative physical health outcomes, such as hypertension (e.g., Bennett et al., 2004; Clark et al., 2001), as well as compromised behavioral health (i.e., psychological disorders and substance abuse; Hudson et al., 2016; Kiecolt et al., 2009). In particular, it is believed that prolonged use of John Henryism in the absence of changes to the underlying inequities that motivate use of John Henryism in the first place, will lead to worsened health outcomes (Merritt, 2011).

Substance use is often used as self-medication in addition to or as a substitute for active coping techniques such as John Henryism to navigate stress associated with racial discrimination. (Carliner et al., 2016; Clark, 2014; Parenteau et al., 2017; Williams & Mohammed, 2009). The majority of findings have centered on the relationship between racial discrimination and alcohol use (e.g., Parenteau et al., 2017) or cigarette use (Chavez et al., 2015), though studies have also included marijuana (e.g., Steele, 2016) and other illicit drug use (Carliner et al., 2016; Clark, 2014). Although no studies to date have examined the impact of racial discrimination on opiate use specifically, understanding such a relationship is critical, particularly amid the nation's opioid crisis, which, although centered in suburban and rural areas, has increasingly impacted Blacks living in Urban neighborhoods (NPR, 2018). In majority minority cities such as Washington, DC it has been found that upwards of 80% of Opioid deaths are amongst the Black community, a 245 percent increase within a three-year timespan (NPR, 2018). Other major cities such as Chicago also have noticed a 56% higher overdose rate in 2015 to 2016 amongst their black communities than their white (James & Jordan, 2018). Taken together, it is clear that racial discrimination is an uncontrollable stressor that can have a harmful impact on behavioral health. The purpose of the current study was to examine the extent to which Black, urban adults' endorsement of racial discrimination across a number of domains was associated with negative behavioral health outcomes, specifically need for mental health services (an indicator of psychological distress), and reporting an opioid problem (an indicator of substance use and abuse). In addition, we were interested in the extent to which John Henryism active coping contextualized these relationships, seeking to identify potential protective factors to disrupt this deleterious dynamic.

## Methods

This cross-sectional analysis explored the relationship between coping, discrimination, and behavioral health conditions, including active opioid problems and need for mental health services in a poor, predominantly Black sample. A local community behavioral health center (herein referred to as The Center) in Baltimore, Maryland that specializes in comprehensive health care for individuals with substance use disorders participated in a community health Fair in August 2014 in East Baltimore, Maryland. The Center, which at the time was still in its planning stages, sought to understand the basic physical and behavioral health needs in this high-risk community

A total of 369 respondents participated in the screenings. Eligibility included being a resident of Baltimore City, at least 18 years of age, and the ability to speak and understand English. Two respondents were excluded; one was 17 and the other did not speak English.

Each respondent read and signed a HIPAA release form, agreeing to have their data released for medical or research purposes. All respondents received a \$20 gift card for participating in the screening and answering additional items about their past and current use of behavioral health services, their need for behavioral or health care services, their experiences of racial discrimination, John Henryism, and demographic questions (age, sex, race, and education). The survey took approximately seven minutes to complete. The data were deemed exempt from human subjects review by the Johns Hopkins Institutional Review Board in June 2015, and deemed exempt by the Michigan State Institutional Review Board in July 2018.

## Measures

Demographic variables such as age (age at time of survey completion), gender (male or female), race (Black, White, or Other) and highest education attained (college graduate, some college, high school graduate/GED, and less than high school) were self-reported. Participants were also asked if they were Hispanic (yes or no).

The *John Henryism Scale for Active Coping* measures includes twelve items that measure high effort or high-energy coping. The scale measures three themes: efficacious mental and physical vigor, a strong commitment to hard work, and a single-minded determination to succeed (James et al., 1994). The scale includes twelve items answered on a Likert Scale with responses ranging from 1 “completely false” to 5 “completely true.” Sample items include, “*hard work has really helped me to get ahead*”; “*it’s not always easy, but I manage to find a way to do the things I really need to get done*”; and “*once I make up my mind to do something, I stay with it until the job is completely done*.” The items were summed, with higher scores indicating a higher degree of high-effort coping. The scale has demonstrated acceptable validity as a measure of active coping and has been associated with conditions related to the current study including substance use (Stevens-Watkins et al., 2016) and depression (Hudson et al., 2016). Reliability for John Henryism has been confirmed (Fernander et al., 2003) for both low-SES (James et al., 1983) and high-SES Blacks (Bonham et al., 2004). The Cronbach’s alpha for scale in the current sample was 0.96.

The *Experience of Discrimination Scale* was used to assess participants’ experiences of discrimination in a variety of settings (Krieger, 1990; Krieger & Sidney, 1996). Participants were asked to indicate their lifetime experiences with discrimination due to race, color, or ethnicity in eight domains (e.g., at school; getting hired; at work; getting service in a restaurant). If an experience was indicated, frequency included “once”, “2-3 times” or “4 or more times”. This scale also has acceptable metric properties (Krieger & Sidney, 1996; Krieger et al., 2005) and has been used widely in other published reports examining mood, anxiety and substance use disorders (McLaughlin et al., 2010), discrimination in the medical setting (Benamins & Whitman, 2014), and child and youth health (Priest et al., 2013). The items were summed to create a scale with higher values indicating more experiences of discrimination. The discrimination scale for this sample had a Cronbach’s alpha of 0.93 for the eight items.

Behavioral health was assessed through two binary, “Yes/No” questions: need for mental health services (*Do you have a need for mental health services?*) and self-reported opioid problems (*Do you have an opiate or heroin problem?*).

## Statistical Analysis

Missing data for the variables of interest ranged from 1% to 11.1%. To determine the patterns of missingness we compared demographics and the variables of interest among participants with complete data to the participants with any missing data. There were no statically significant differences in demographics (e.g. gender, race, employment status, Medicaid status) nor the discrimination scale or John Henryism ( $p > 0.05$ ). Based on the patterns of missingness we classified the data as missing at random. Instead of excluding cases with missing value, we used multiple imputation to methods to maximize power. We only included participants with data for gender and age in the imputation ( $n = 352$ ; 95.4% of the total sample). To maximize the efficiency of the estimates, we created 20 data sets using the imputation by chained equations (ice) method in STATA Version 13 (StataCorp LP, College Station, TX). We did not impute values for having a primary care physician or Medicaid status (however, these variables were used in the imputation model). Twenty imputations obtained 99% efficiency, even when the missing data proportion was as high as 30% (Rubin, 1987).

Logistic regressions models were used to assess the relationship between the John Henryism score, racial discrimination score, and two behavioral health outcomes – self-reported need for mental health treatment and opioid problems. Analyses were restricted to Blacks ( $n = 319$ ) given the low percentage of non-Blacks included in the sample (~7%). Regression models controlled for age, gender, if the participant was receiving Medicaid insurance (a proxy for socioeconomic status), and if the participant had a primary care physician. Odds ratios were used to assess the strength of the association and significant findings reported for alpha levels below 0.05.

## Results

### Descriptive Analysis

The analytic sample was 67% female ( $n = 215$ ) with a mean age of 44.6 ( $SD = 13.3$ ). Approximately one fifth of the sample had less than a high school diploma/GED (19.9%) and 49.6% had a high school diploma or a GED. Nearly a third of the sample had some college or college degree (30.5%). The majority of the participants were unemployed (63.7%). Approximately half of participants reported Medicaid use and 81.5% reported having a primary care physician. The imputed data were used for the descriptive data on health outcomes as well as *John Henryism* and experiences of discrimination. The mean *John Henryism* score was 36.8 and the mean score for the experiences of discrimination was 9.4. Notably, there was a significant, albeit small correlation between JHAC and experiences of discrimination  $r(317) = .014$ ,  $p < .01$ . Approximately 13% of patients reported an opioid/heroin problem, 13.7% reported a need for substance abuse treatment, and 18% were currently in treatment. About one fifth of participants reported needing mental health treatment and 28% had received mental health treatment in their lifetime.

## Regression Models

**Self-reported opioid problems**—In the unadjusted regression models, older-aged individuals (OR = 1.03,  $p = 0.013$ ) and males (OR = 2.89,  $p = 0.002$ ) were more likely to report an opioid problem. Higher scores on the *John Henryism* scale, indicative of high effort coping, was negatively associated with having an opioid problem (OR = 0.96,  $p = 0.006$ ), such that as coping increased the likelihood of having an opioid problem decreased. The relationship between experiences of discrimination and having an opioid problem was not statistically significant.

The fully adjusted regression models controlled for age, gender, Medicaid status (proxy for SES), if the participant had a primary care physician, and one of the two primary predictors (i.e., *John Henryism* or experiences of racial discrimination). The negative relationship between *John Henryism* and reporting an opioid problem persisted, even after adjusting for demographic control variables and experiences of racial discrimination (OR = 0.95,  $p = 0.004$ ). Semi-adjusted models that only adjusted for demographic variables were run but are not reported here since they were not significantly different from the fully adjusted regression models.

The relationship between racial discrimination experiences and having an opioid problem was positive and became statistically significant after statistical adjustment for *John Henryism* and demographic variables (OR = 1.05,  $p = 0.043$ ). Simply adjusting for demographic variables made no difference on the main effect of discrimination and having an opioid problem, indicating partial mediation by *John Henryism* between experiences of discrimination and an opioid problem.

**Need for mental health services**—There was an independent and negative association between *John Henryism* and the need for mental health services, that is, higher scores on the *John Henryism* scale, considered higher coping, were associated with a decreased odds of reporting a need for mental health services (OR = 0.96,  $p = 0.003$ ). There was no independent relationship between experiences of racial discrimination and reported need for mental health services.

The fully adjusted regression models controlled for age, gender, Medicaid status, if the participant had a primary care physician, and experiences of racial discrimination. The inverse relationship between *John Henryism* and need for mental health services persisted after statistical adjustment for demographic variables (OR = 0.96,  $p = 0.001$ ). Controlling for experiences of discrimination was associated with needing mental health services, (OR = 1.04,  $p = 0.049$ ).

**Sensitivity Analysis**—We reran the adjusted regression models with the non-imputed data (i.e. participants with completed data, case-wise deletion). There were no differences in the magnitude or significance of the relationship between *John Henryism* (OR = 0.92,  $p < 0.001$ ) and reporting an opioid problem nor needing mental health services (OR = 0.95,  $p = 0.005$ ). The relationship between experiences of discrimination and reporting an opioid problem was not statistically significant (OR = 1.05,  $p = 0.149$ ) when using the non-imputed

data. There were no differences in the relationship between experiences of discrimination and needing mental health services using the non-imputed data (OR = 1.08,  $p = 0.004$ ).

## Discussion

The findings from our logistic regression analyses revealed several interesting findings. Regarding the connection between discrimination and opioid problems, unadjusted analyses found no significant relationship, although after adjusting for John Henryism and demographic variables there was a statistically significant positive relationship. Moreover, when using non-imputed data, a positive and significant relationship emerged. Notably, while there has been a fairly robust relationship between racial discrimination and substance use in the literature (e.g., Carliner et al., 2016), this current study simply asked participants to indicate whether they had a *problem*, with no behavioral markers of this problem assessed. It may be the case that a stronger and more persistent relationship may have emerged if actual opiate use/misuse had been assessed. Relatedly, most of the research between racial discrimination and substance use has centered on use rather than abuse, problems, or disorder per se (Jones & Neblett, in press). Nevertheless, given the public health significance of opioid misuse, with more than 115 people per day in the United States overdosing (NIDA, 2018), it is important to further explore the relationship of discrimination experiences and opioid use as a form of coping.

An independent relationship between racial discrimination and need for mental health services was also not identified. Again, it could be the case that racial discrimination may impinge upon the psychological health of this sample, but not at a level leading them to report the need for mental health services. For example, Bowser (1981) and Fernando (1984) posit that black people have developed adoptive strategies to reduce the discrimination they experience by processing it as psychological stress rather than an internalizing symptom like depression, thereby preventing the experience of discrimination from turning into long-term mental disorders. Importantly, studies have shown that despite high mental health problems (e.g., depression), Blacks are 50% less likely to receive mental health treatment and services than Whites (McGuire & Miranda, 2014). In addition, help-seeking behavior, even when problems are present, may be blunted, particularly if one feels they may face discrimination in such spaces (Woodward et al., 2010). Therefore, it may be instructive for future research to investigate the level of psychological burden (e.g., distress) related to experiences of discrimination, as has been done in previous studies, in addition to need for services.

Our findings add to the small literature that has identified John Henryism active coping as adaptive (e.g., Bonham et al., 2004; Bronder et al., 2014): high-effort coping was negatively associated with opioid use or need for mental health services. Previous research has found an association between John Henryism and psychological health indicators (e.g., depression, self-esteem; Bronder et al., 2014; Stevens-Watkins et al., 2014); however, to our knowledge this is the first study to demonstrate John Henryism coping as related to substance use or abuse per se, though a recent study that evaluated women with substance use disorder identified less treatment seeking as their John Henryism scores increased (Stevens-Watkins, et al., 2016). Interestingly, as Stevens-Watkins and colleagues posited, the hard work and self-reliance that typifies John Henryism may lead individuals to avoid help-seeking.

Relatedly, it could be that our sample has opiate use, but is not identifying this use as problematic. This distinction has great implications for whether to view John Henryism as a protective factor that, with other supports and coping, can be used to mitigate negative behavioral health outcomes, or as a factor that exacerbates these outcomes.

In interpreting these findings, there are some limitations that should be considered. As a cross sectional study, the data can only speak to relationships shaped at a given moment in time. It would be important as a future direction for this line of research to establish temporality and discern whether discrimination precedes John Henryism coping, which in turn proceeds behavioral health outcomes. In addition, although we found statistical significance for our adjusted models, the actual change between the adjusted and unadjusted models was minimal. It will be important for future research to replicate these findings to confirm practical, as well as statistical, significance. Moreover, there may be other important indicators of behavioral health that were not reported here. With regard to generalizability, our sample is drawn from a convenience sample that, while consistent in size with similar studies, may have lacked the heterogeneity to detect significant effects. For example, the mean endorsement of lifetime racial discrimination was on average “once” across the eight domains. Previous research has indicated that both neighborhood racial composition and individual socioeconomic standing is associated with racial discrimination experiences (English, Lambert, Evans, & Zonderman, 2014). Moving forward, more strategic sampling may yield a sample that has more diversified experiences (e.g., those living in more racially heterogeneous environments, higher SES urban blacks), which may improve the external validity of these findings. A final set of limitations that have been discussed previously concerns the nature of the behavioral health indicators, both of which were derived from a self-report survey and are prone to respondent biases. The potential for such biases is further exacerbated by the sensitive nature of the questions and the method of data collection (i.e., paper and pencil). Future research should consider obtaining more objective measures of behavioral health, as well as take greater strides to reduce biases (e.g., by using Audio Computer-Assisted Self-Interviewing survey methods). Despite these limitations, the strengths of this study lie in the uniqueness and importance of its population—Black, urban participants, at the intersection of high and unmet need for behavioral health intervention in the wake of the opioid crisis. It is our hope that this work will inspire continued investigations into the role of racial discrimination on the mental health and substance abuse burden experienced within these communities, while continuing to elucidate culturally relevant mechanisms and future preventive interventions.

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**Table 1:****Imputed Descriptive Statistics**

	<b>n (%)</b>
Female	215 (67.4)
Mean Age (SD)	44.6 (13.3)
Education	
Less than High School	51 (19.2)
High School/GED	127 (49.6)
Some College	59 (23.1)
College Graduate	19 (7.4)
Employment	
Unemployed	186 (63.7)
Part-time	37 (12.7)
Full-time	41 (14.0)
Retired	20 (9.6)
Medicaid Use	50.4%
Primary Care Physician	81.4%
Have you ever been diagnosed with:	
Hypertension	43.3%
Diabetes	14.0%
COPD	7.7%
Substance Use	
Opioid Problem	12.6%
Do you have need for substance abuse treatment?	13.7%
Currently in treatment?	17.9%
Ever in treatment?	33.6%
Need Mental Health Treatment	19.2%
Ever receive mental health treatment?	30.0%
Mean John Henryism Score (SE)	36.8 (.59)
Mean Racial Discrimination Score	9.4 (.43)

**Table 2**

## Unadjusted Regression Models

	Opioid Problem		Need Mental Health Services	
	OR	<i>p</i>	OR	<i>p</i>
Age	1.03	0.013	1.01	0.186
Male	2.89	0.002	1.04	0.891
Has Medicaid	1.03	0.922	0.75	0.319
Primary care physician	0.57	0.163	1.65	0.234
John Henryism	0.96	0.006	0.96	0.003
Racial Discrimination	1.04	0.112	1.03	0.152

**Table 3**

## Semi-adjusted Regression

	Opioid Problem		Need Mental Health Services	
	OR	<i>p</i>	OR	<i>p</i>
John Henryism	0.95	0.002	0.96	0.001
Racial Discrimination	1.05	0.038	1.04	0.055

**Table 4**

## Adjusted Regression Models

	Opioid Problem		Need Mental Health Services	
	OR	<i>p</i>	OR	<i>p</i>
Age	1.03	0.042	1.01	0.505
Male	2.30	0.023	0.98	0.941
Has Medicaid	1.15	0.704	0.71	0.257
Primary care physician	0.61	0.252	1.84	0.163
John Henryism	0.95	0.004	0.96	0.001
Racial Discrimination	1.05	0.043	1.04	0.049