Taking a Heavier Toll? Racial Differences in the Effects of Workplace Mistreatment on Depression

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Abstract

Previous studies have found that workplace mistreatment positively relates to depression, a critical mental health disorder. However, it is unknown whether mistreatment affects all individuals' depressive symptoms equally. Drawing from the hopelessness theory of depression and the stigma literature, we suggest that Blacks suffer from greater depression than Whites when they experience similar levels of workplace mistreatment because Blacks, as members of a racial minority group, are more likely to attribute workplace mistreatment to their race. This, in turn, causes them to make a pessimistic attribution (i.e., attributions that are internal, stable, and global) about themselves that, ultimately, leads to depression. We tested these predictions across two studies. In Study 1, we used a multi-year time-lagged design and multiple indicators of depression (i.e., self-reported clinical depression scale, device-traced sleep quantity, and self-reported sleep quality) and found that the positive relationship between workplace mistreatment and depression was stronger for Blacks than Whites, and that these patterns were consistent across the various indicators (although only results with the clinical depression scale and sleep quantity were statistically significant). In Study 2, we found that the influence of workplace mistreatment on depression is partly due to racial differences in how workplace mistreatment is attributed. We conclude by discussing the theoretical and practical implications of these findings, and directions for future research.

Keywords: race, mistreatment, depression, attribution

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Depression

Depression is a multisystem disorder that affects how people think, feel, and act (Insel &

Charney, 2003), and its symptoms include feelings of sadness, loss of interest, and sleep

problems (American Psychiatric Association, 2020). Depression affects nearly 280 million

people worldwide (World Health Organization, 2021) and is the third leading cause of disability

(G. B. D. Disease Injury Incidence Prevalence Collaborators, 2016). For organizations, the

economic burden of depression is over $190 billion annually in the U.S. (Greenberg et al., 2021),

and workers suffering from depression have higher rates of turnover and absenteeism, and lower

job performance (Lerner & Henke, 2008). Given the prevalence and toll of depression on

individuals and firms, a number of scholars have studied workplace features affecting depression

among workers (e.g., Gonzalez-Mulé & Cockburn, 2021; Kelloway, Dimoff, & Gilbert, 2023).

An important workplace event related to the incidence of depression is workplace

mistreatment, which encompasses any unjust treatment at work (Olson-Buchanan & Boswell,

2008) and is a "specific, antisocial variety of organizational deviance, involving a situation in

which at least one organizational member takes counternormative negative actions—or

terminates normative positive actions—against another member" (Cortina & Magley, 2003, p.

247). Research over the past two decades has shown that workplace mistreatment acts as a

stressor that can harm employee mental health by eroding resources and increasing susceptibility

to illness (e.g., Conway & Briner, 2002; see Robbins, Ford, & Tetrick, 2012 for a meta-analysis).

Although the link between workplace mistreatment and depression is well-established, it

is unclear whether mistreatment at work impacts all employees the same way, or whether

employees of certain marginalized groups are more susceptible to the negative consequences

associated with workplace mistreatment than others. Indeed, this possibility aligns with significant variance around the estimated correlations in the aforementioned meta-analysis. However, extant studies have typically examined either subgroup differences (e.g., White vs. Black) in the occurrence of workplace mistreatment (Avery, Hall, Preston, Ruggs, & Washington, 2023) or the direct relationship between workplace mistreatment and health outcomes (e.g., Robbins et al., 2012). Integrating these approaches begs the question of whether the relationship between workplace mistreatment and depression varies as a function of one's social group membership. In fact, scholars have called for future studies examining "whether there are differential outcomes for those who have perceived mistreatment" (McCord, Joseph, Dhanani, & Beus, 2018, p. 151) contingent on majority or minority group membership.

In the current study, we answer this call and suggest that workplace mistreatment takes a heavier toll on racial minority (i.e., Blacks in the U.S.) than majority members (i.e., Whites in the U.S.). Indeed, there are strong theoretical reasons to expect that members of racial minority and majority groups might react differently to workplace mistreatment. According to the stigma literature, historical devaluation and discrimination against their social groups can lead members of racial minority groups to interpret events differently from their racial majority group counterparts (Crocker, Major, & Steele, 1998). Specifically, when negative events (e.g., workplace mistreatment) occur, members of racial minority groups are more likely to ascribe those events to discrimination against their racial group, leading them to perceive the situation as an indictment of their identity and reflection of structural problems (Schmitt & Branscombe, 2002a; Williams et al., 2012). In contrast, racial majority groups, who have not been subject to historical discrimination, are less likely to view experiences of mistreatment as a racial issue and more likely to view them as anomalies or localized occurrences (Schmitt & Branscombe, 2002b).

Combined with the hopelessness theory of depression (Abramson, Metalsky, & Alloy, 1989), which argues that characteristics of the attributions individuals make to events affect the relationship between experiencing negative events and developing depression, we suggest that there may be racial differences in how workplace mistreatment relates to depression.

　　　Our study makes several important theoretical contributions to the literature. First, our study offers an integral yet largely overlooked perspective to understand the harmful influences of workplace mistreatment on racial minorities. Deviating from prior studies that have predominantly focused on whether racial minorities are more likely to experience workplace mistreatment than racial majorities (for a review, see Avery et al., 2023), we spotlight the perspective of racial minorities through their attribution of workplace mistreatment and show that their experience of workplace mistreatment is phenomenologically different from that of racial majorities, resulting in differential mental health outcomes. Second, we highlight the important role of attributions in understanding the consequences of workplace mistreatment. By drawing from the hopelessness theory of depression (Abramson et al., 1989), our study shows that a pessimistic attribution is one of several key mechanisms that connect workplace mistreatment to depression. Third, through a synthesis of insights from the stigma literature and the hopelessness theory of depression, we move theory forward in both strands of research. We extend the stigma literature by uncovering how racial differences in interpreting events can lead to an important outcome (i.e., depression). Regarding the hopelessness theory of depression, we introduce membership in a stigmatized racial group as a factor that makes a difference in attribution and, consequently, the development of depression. We conducted two field studies that examine the differential outcomes of workplace mistreatment across racial groups (Study 1) and the underlying mechanisms linking mistreatment to depression (Study 2).

Theoretical Framework and Hypotheses

Workplace Mistreatment and Depression

Workplace mistreatment refers to interpersonal behaviors that are unjust or deviate from prosocial norms (Olson-Buchanan & Boswell, 2008). Examples of workplace mistreatment include being ignored by others at work, assigned to a task that nobody else wants to do, or unfairly passed over for promotion. Researchers have proposed that workplace mistreatment acts as a stressor that can lead to depression (Robbins et al., 2012) because workplace mistreatment signals social rejection by other members of the organization; this can undermine individuals' basic need to belong (Penhaligon, Louis, & Restubog, 2009). Further, individuals perceive they are unfairly treated at work when they receive inadequate rewards (Colquitt, 2001). An imbalance between individuals' effort and reward can harm mental health (Siegrist, 1996). An array of studies have documented the positive relationship between various types of perceived workplace mistreatment and depression (e.g., Bowling & Beehr, 2006; Robbins et al., 2012).

Hopelessness Theory of Depression and Stigma

Although workplace mistreatment can expose individuals to the risk of developing depression, clinical psychologists have shown that stressful life events do not always lead to depression, and various theoretical perspectives have been proposed to explain this heterogeneity (cf. Hammen, 2015). One such perspective is Abramson and colleagues' hopelessness theory of depression (Abramson et al., 1989; Abramson, Seligman, & Teasdale, 1978), which highlighted the critical role of attributions. A basic argument of attribution theory is that people tend to seek causal explanations, or attributions, when things happen to them, especially for negative and unexpected events (e.g., being mistreated at work; Heider, 1958; Wong & Weiner, 1981). These attributions then influence their emotions and expectations about the future (Weiner, 1985).

Building upon this notion, the hopelessness theory of depression suggests that people who attribute experienced negative events to internal (i.e., something about themselves), stable (i.e., not transient), and global (i.e., across different situations) factors (collectively known as a pessimistic attribution) are more likely to develop depression. This is because a pessimistic attribution generates a set of expectations that negative outcomes will occur and that one cannot change the likelihood of occurrence (Abramson et al., 1978; Abramson et al., 1989). Supporting these arguments, past studies have found that a pessimistic attribution of negative life events relates to depressive symptoms (e.g., Sweeney, Anderson, & Bailey, 1986).

Stigma researchers argue that membership in particular social groups shapes individuals' unique reactions to life experiences (Crocker et al., 1998). Specifically, a hierarchical social structure exists whereby certain social groups are positioned as being lower in status than others (Sidanius & Pratto, 1999). For example, in the United States, Blacks have been targets of negative stereotypes regarding their intelligence and interpersonal skills, and treated as second-class citizens (King, Fattoracci, Hollingsworth, Stahr, & Nelson, 2022). A long history of discrimination against Blacks in the U.S. introduces context for how similar experiences may be interpreted differently between Blacks and Whites (Emerson & Murphy, 2014). That is, Blacks are aware that they might be a target of unfair treatment due to their racial group membership (Steele, 1997; 2010), and this awareness leads them to be more likely to attribute negative life events to prejudice against their race (Major & Crocker, 1993). In contrast, Whites are less likely to make such an attribution since their racial group has not been subject to society-wide devaluation (Crocker & Major, 1989). Indeed, Williams and colleagues (2012) found that Blacks, compared to Whites, were more likely to attribute unfair treatment in various contexts to their race.

Considering the potential racial difference in how workplace mistreatment is interpreted, we integrate the hopelessness theory of depression with stigma research to suggest that workplace mistreatment has a stronger impact on Blacks' depressive symptoms than Whites' because Blacks are more likely to make a pessimistic (i.e., internal, stable, and global) attribution of mistreatment (Abramson et al., 1989; Schmitt & Branscombe, 2002b) than Whites. First, interpreting workplace mistreatment as being racially motivated implies an internal cause (i.e., "I am being mistreated because of my race") rather than a purely external cause (i.e., "I am being mistreated because the person mistreating me is a jerk"; Schmitt & Branscombe, 2002a; 2002b). Given that racial group membership is an important aspect of one's identity (Tajfel & Turner, 1986) and that one's race is a necessary condition for race-based mistreatment to occur, Blacks will be more likely to make an internal attribution than Whites when experiencing workplace mistreatment, even if the event is not explicitly racially motivated. Second, perceiving mistreatment as racially motivated would lead to a stable attribution as race does not change. Furthermore, racial prejudice and stereotypes have persisted throughout history and are relatively slow to change (Schmidt & Nosek, 2010). Thus, Blacks are more likely to attribute workplace mistreatment to stable and permanent causes (i.e., their race) than Whites. Third, Blacks are also more likely to make global attributions about experienced workplace mistreatment than Whites. When workplace mistreatment is attributed to racial causes, its implication is broader than the immediate context of workplaces since it mirrors society-wide devaluation against their racial group (Schmitt & Branscombe, 2002a; 2002b). In contrast, Whites, who are less likely to interpret experienced workplace mistreatment as being racially motivated, may view these events as localized and idiosyncratic occurrences (Schmitt & Branscombe, 2002b).

In sum, combining the hopelessness theory of depression and stigma research, we argue that workplace mistreatment and race will interact to affect depression, such that the relation between workplace mistreatment and depression will be stronger for Blacks than Whites. Given that depression is a multisystem disorder with psychological and physiological symptoms (Insel & Charney, 2003), we adopted multiple indicators of depression: a clinical depression scale, sleep quantity, and sleep quality (see Supplementary Materials for our rationale). We suggest:

Hypothesis 1. Workplace mistreatment and race will interact to predict a) scores on a clinical depression scale, b) sleep quantity, and c) sleep quality such that workplace mistreatment will be more harmful (i.e., lead to higher scores, less sleep, and poorer sleep) for Blacks than Whites.

Study 1 Method

Participants and Procedure

We used data from the Midlife in the United States Refresher (MIDUS-R; Ryff et al., 2017) study, which was based on a nationally representative sample of 3,577 adults and conducted by the University of Wisconsin-Madison's Institute on Aging. The data used in this study were collected at two time points. At Time 1 (T1), participants completed surveys on workplace mistreatment, race, and the control variables. At Time 2 (T2), between 8 and 53 months later, a subset completed a clinical depression scale, and another subset underwent a study where sleep quantity and quality were measured. We only included participants who had complete data on workplace mistreatment and the depression measures, and were not retired as of T1. Our final sample sizes were 398, 115, and 120 for the clinical depression scale, sleep quantity, and sleep quality, respectively. In each sample, 6 to 7% were Black (N=28 for the clinical depression scale, 7 for sleep quantity, and 7 for sleep quality). In the largest sample, the

average age of the respondents was 47.94 years (SD = 12.11), 52.06% were female, and 65.24%

had at least a four-year college degree.

Transparency and Openness

We described data collection procedures, exclusions, measures, and analyses, and

adhered to the *Journal of Applied Psychology* methodological checklist. Due to the terms of use

regarding the MIDUS-R data, we are not allowed to share the data (the original data and surveys

are available on their website[1]). Analyses were conducted using STATA 16.1. The syntax is

available at https://osf.io/pt6nx/?view_only=2548df9c9af340bd90f0da6039309b88. This study's

design and analysis were not preregistered. A review from the Institutional Review Board was

not required as this study used publicly available data.

Measures and Analyses

Race was measured at T1 by asking respondents to report their primary racial origin. In

this study, we included individuals self-identifying as "White" (coded as 0) or "Black and/or

African American" (coded as 1). *Workplace mistreatment* was measured at T1 using an adapted

six-item inventory originally developed by McNeilly et al. (1996) on a 1 (never) to 5 (once a

week or more) frequency scale (α = .79; e.g., "How often do you feel that you are ignored or not

taken seriously by your boss?; "How often do you think you were unfairly given the jobs that no

one else wanted to do?"; see Supplementary Materials for how we adapted from the original

measure). *Depression* was measured at T2 using the 20-item Center for Epidemiologic Studies

Depression Scale (CESD; Devins et al., 1988). The scale asks respondents to rate the frequency

of 20 statements on a scale of 1 (rarely or none of the time) to 4 (most or all of the time) over the

past week (α = .88; e.g., "During the past week… I felt depressed", "…I had crying spells"). We

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[1] The original data and surveys are publicly available at http://midus.wisc.edu/refresher/index.php.

averaged scores on both scales for the analyses. *Sleep quantity* was the average of nightly

readings measured in minutes using the ActiWatch wearable device over the course of seven

nights at T2 (Mini-Mitter, Bend, OR; α = .70). *Sleep quality* was measured with a single item

where respondents rated the quality of their sleep the prior night, which they completed in the

morning using a 1 (very poor) to 5 (very good) scale (Chung, 2017). We averaged the single-

item reports across seven nights at T2 (α = .77). We included several control variables (all

measured at T1; see Supplementary Materials for more information): binary gender, socio-

economic status (operationalized as education, income, and occupation), negative affect (α

= .88), and the time lag between the two measurement episodes (in months).

Considering the relatively small sample sizes for the analyses involving the sleep

variables (N = 115 for sleep quantity; 120 for sleep quality), we sought to avoid dropping

participants because of missing data on the control variables to preserve statistical power. Thus,

we implemented the full information maximum likelihood (FIML) procedure in a structural

equation modeling (SEM) framework in STATA 16.1. The FIML procedure is appropriate when

data is missing at random or missing not at random, which are the most common cases in applied

psychology research, and is robust across a variety of missing data conditions (Newman, 2014).

This resulted in our "imputing" 28, 11, and 11 participants with some missing data on the control

variables for the analyses with CESD, sleep quantity, and sleep quality, respectively (i.e., these

participants had complete data on the independent and dependent variables, but were missing

data on one or more of the control variables)[2]. We regressed the T2 dependent variables (clinical

depression scale scores, sleep quantity, and sleep quality) on the T1 independent variables (race

and workplace mistreatment), the interaction between the independent variables, and the control

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[2] We also conducted the analyses without using FIML and found the same pattern.

variables in separate equations (i.e., one for each dependent variable). We mean-centered the

workplace mistreatment variable before creating the interaction term.

Study 1 Results and Discussion

Table 1 shows descriptive statistics and pair-wise correlations for the control and study

variables[3]; we found the correlations between race and the three depression indicators were weak

(CESD: $r = .09$; sleep quantity: $r = -.09$; sleep quality: $r = -.10$). The regression results are shown

in Table 2. The interactions between race and workplace mistreatment in predicting CESD scores

(b = .27; $p = .001$) and sleep quantity (b = -63.62; $p = .03$) were significant, supporting

Hypotheses 1a and 1b. These results are graphed in Figures 1 and 2, with separate lines for

Whites and Blacks plotted from -1 SD (low) to +1 SD (high) on workplace mistreatment. We

also computed simple slopes for each line using formulae from Cohen, Cohen, West, & Aiken

(2003). We found that workplace mistreatment was positively related to CESD scores for Blacks

(b = .31, $p < .001$) but for Whites the effects just missed the .05 alpha threshold (b = .04, p

$= .06$). We also found that workplace mistreatment was negatively related to sleep quantity for

Blacks (b = -58.37, $p = .049$) but not for Whites (b = 5.23, $p = .35$). Hypothesis 1c was not

supported as the interaction on sleep quality was not statistically significant (b = -.67; $p = .11$).[4]

Insert Tables 1 and 2, and Figures 1 and 2 about here

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[3] Separate statistics for Black and White participants are available in Supplementary Materials. We also conducted a one-way ANOVA on each of the focal variables (workplace mistreatment, clinical depression scale, sleep quantity, and sleep quality) as a function of race, and found no statistically significant difference across racial groups.
[4] We conducted the analyses without the control variables and found similar results for CESD scores and sleep quality: the interaction was significant in predicting CESD scores ($p = .04$) and not in predicting sleep quality ($p = .18$). In contrast, removing all control variables made the p-value of the interaction effect on sleep quantity move over the .05 threshold ($p = .07$). We found that the absence of negative affect as a control variable had the biggest impact on the sleep quantity results (i.e., p-value for the interaction is less than .05 with it, and .07 without it). However, we think it is critical to control for negative affect, given the central role the construct has in models of employee health and well-being, and for ruling out alternative explanations due to dispositional effects (Ganster & Rosen, 2013; Moyle, 1995). Thus, we believe that the better-specified model *does* include negative affect in order to control for its potential confounding effect.

In Study 1, we found partial support for our hypotheses. Blacks who experienced workplace mistreatment reported higher scores on the CESD and less hours of (objectively measured) sleep than Whites who experienced a similar level of workplace mistreatment. Notably, Blacks who face higher workplace mistreatment are predicted to get about 100 minutes less sleep per night than Blacks facing lower workplace mistreatment, or Whites facing any level of workplace mistreatment. In contrast, we did not find a significant interaction between workplace mistreatment and race on sleep quality. Although largely supportive of hypotheses and even non-significant results at least trending in the predicted direction, Study 1 does not provide information on our proposed mechanisms (i.e., racial attribution of mistreatment and a pessimistic attribution). Thus, we directly test whether these theory-grounded mechanisms drive the differential depressive outcomes of mistreated Blacks and Whites in Study 2.

Study 2

Drawing upon the stigma literature and the hopelessness theory of depression (Abramson et al., 1989; Crocker et al., 1998), we theorized that the Black-White differences in depression after experiencing workplace mistreatment would be due to different attributional processes the two groups make: Blacks are more likely to attribute workplace mistreatment to their race and, in turn, make a more pessimistic attribution than Whites. Thus, we hypothesized:

Hypothesis 2. Attribution to race and pessimistic attribution will serially mediate the

effect of mistreated individuals' race on a) scores on the clinical depression scale, b)

sleep quantity, and c) sleep quality.

Study 2 Method

Participants and Procedure

We recruited 499 U.S. adults who identified themselves as either White (N = 255) or Black (N = 244) and who have had an experience of being mistreated at work through Prolific Academic in exchange for payment ($2.00; see Supplementary Materials for details). After consenting, participants were asked to think and write about an event where they were mistreated by their boss or coworker at work (e.g., being assigned to jobs that no one else wants to do; McNeilly et al., 1996)[5]. Following this, we included an open-ended question asking why they thought the particular event they wrote about happened to them, which we coded as either referring to their race or not. Next, participants provided their ratings on pessimistic attribution, clinical depression scale, sleep quantity, sleep quality, and control variables. We excluded any of the following cases: 1) individuals who failed an attention check question (i.e., select a particular response on a 1 to 7 scale); 2) individuals who wrote nonsensical or irrelevant responses to the open-ended questions; 3) individuals who identified themselves as being members of racial groups other than Black/African American or White (e.g., mixed race). As a result, we excluded 19 individuals (4%). In the final sample (N = 480), the average age of respondents was 37.61 years (*SD* = 13.10), 48.1% were Black or African American, 46.3% were women, 1.9% were non-binary, 0.2% were other gender, and 57.5% had at least a four-year college degree.

Transparency and Openness

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[5] We originally designed Study 2 as an experiment where we randomly assigned Black and White participants to either the workplace mistreatment condition or the control condition. In the workplace mistreatment [control] condition, participants were asked to think and write about a mistreatment event [a generic event] they experienced at work. However, in the control condition when writing about a work experience with no mistreatment prompt, there was zero variance regarding racial attribution for Whites. *None (0%) of the 243 White participants in the control condition attributed their recalled experiences at work to their race.* Thus, although a zero variance event prohibits any sort of multivariate tests such as logistic regression (Agresti, 2012), these data are nevertheless quite telling. Alternatively, 20 (8.3%) of the 240 Black participants in the same condition mentioned race as a potential cause of their recalled event, and of these 20, 19 (95%) wrote about a (potentially) racially motivated workplace mistreatment event. Thus, members of the dominant racial group in society may find race to be a less prominent factor in attributing mistreatment. See Supplementary Materials for the distribution of racial attributions.

We described data collection procedures, exclusions, measures, and analyses, and adhered to the *Journal of Applied Psychology* methodological checklist. Data, syntax, and surveys are available at https://osf.io/pt6nx/?view_only=2548df9c9af340bd90f0da6039309b88. Analyses were performed using STATA 16.1. This study's design and analysis were not preregistered. This study received Institutional Review Board approval from Indiana University ("Work Experience and Well-being"; #17918).

Measures and Analyses

Race was measured by asking respondents to report the racial group with which they most closely identify (White coded as 0; Black and/or African American coded as 1). *Attribution to race* was measured based on participants' responses to the open-ended question, "Why do you think this particular event you just wrote about happened to you?". Responses that mentioned racial discrimination (e.g., racism, being Black or White, skin color) as a potential cause were coded as 1 (otherwise as 0). Following previous studies (e.g., Peterson et al., 1982), we measured *pessimistic attribution* as a higher-order factor composed of internality, stability, and globality dimensions of attribution scales (Coffee & Rees, 2008; McAuley, Duncan, & Russell,1992; Schmitt & Branscombe, 2002a), using three items for each dimension on a 1-5 scale anchors varied by the dimension [e.g., internality: "The cause(s) of this event was something that… 1 (did not at all reflect an aspect of myself) – 5 (completely reflected an aspect of myself)"; stability: "… 1 (is temporary) – 5 (is permanent)"; globality: "… 1 (influenced just this particular situation) – 5 (influences all situations I encounter)"; see Supplementary Materials for CFA results]. *Depression* was measured using the same 20-item CESD Scale as in Study 1 (α = .94). *Sleep quantity* was measured with a single item ("How much did you sleep following the event?") using a 1 (much less than I normally sleep) to 5 (much more than I normally sleep)

scale. *Sleep quality* was measured using a single item ("How was the overall quality of your sleep following the event?") on a scale of 1 (very poor) to 5 (very good). We included the following control variables: gender, education, income, and negative affect (measured using the same scale as Study 1; α =.91).

Because we had a mix of dichotomous (i.e., racial attribution) and continuous (e.g., pessimistic attribution) endogenous variables, we tested the hypothesis using path analysis in a generalized structural equation modeling framework in STATA 16.1. The path model was fitted using the mistreated individual's race as the independent variable, attribution to race as the first-stage mediator, pessimistic attribution as the second-stage mediator, and depression indicators (i.e., CESD, sleep quantity, and sleep quality) as the outcome variables. The relationship between race and attribution to race was analyzed assuming a Bernoulli response distribution and logit link function. The other relationships in the path model were analyzed assuming a Gaussian response distribution and identity link function. The serial mediation effects on the outcome variables were tested using the Monte Carlo method with 20,000 repetitions to estimate 95% confidence intervals around each of the indirect effects (Preacher & Selig, 2012).

Study 2 Results and Discussion

Table 3 shows descriptive statistics and intercorrelations for the control and study variables, and we found the correlations between race and the three depression indicators are weak (CESD: $r = -.03$; sleep quantity: $r = .05$; sleep quality: $r = .08$). Table 4 shows the path model and serial mediation results. As expected, we found that Blacks were significantly more likely to attribute workplace mistreatment to their race than Whites (b = 2.30, $p < .001$). Specifically, 51 out of 231 Blacks attributed mistreatment to their race, while only 7 out of 249 Whites did so (relative risk ratio = 7.85). A racial attribution was also positively related to a

pessimistic attribution (b = .41, *p* < .001), which is consistent with our prediction. The

relationships between a pessimistic attribution and depression indicators showed mixed results: a

pessimistic attribution was positively related to CESD scores (b = .13, *p* = .01), but its relations

with sleep quantity and quality were not statistically significant (sleep quantity: b = -.02, *p* = .73;

sleep quality: b = -.06, *p* = .41). The indirect effect of race of mistreated individuals on CESD

scores was statistically significant (indirect effect = .12, 95% CI = .03, .26), whereas the indirect

effects on sleep quantity and quality were not (sleep quantity: indirect effect = -.02, 95% CI =

-.17, .11; sleep quality: indirect effect = -.06, 95% CI = -.23, .08). Thus, Hypothesis 2a was

supported, but Hypotheses 2b and 2c were not[6].

Insert Tables 3 and 4 about here

Study 2 showed that attributional processes explain race differences in the magnitude of

depressive symptoms after experiencing workplace mistreatment. Based on a relative risk ratio

of 7.85, mistreated Blacks (compared to mistreated Whites) were almost 8 times more likely to

think that prejudice against their race is a potential cause of the mistreatment they experienced,

which led them to make a more pessimistic attribution. These attributional differences resulted in

a higher score on the clinical depression scale for Blacks than Whites. Contrary to our

expectations (yet consistent with Study 1 results in the case of sleep quality), the indirect effects

on sleep quantity and quality were not statistically significant. It may be the case that the effects

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[6] We conducted the analyses without the control variables and found similar results. The indirect effect of race of mistreated individuals on CESD scores was statistically significant (indirect effect= .21, 95% CI = .07, .40), while the indirect effects on sleep quantity and sleep quality were not (sleep quantity: indirect effect = -.03, 95% CI = -.19, .11; sleep quality: indirect effect = -.08, 95% CI = -.27, .07).

are particularly weak in the population and to detect them we need larger samples with extended (e.g., multi-month or even multiyear) sleep data.

General Discussion

Depression has garnered intense scholarly interest in the field of applied psychology because of its high individual and organizational costs (Greenberg et al., 2021; Lerner & Henke, 2008), and the proliferation of evidence indicating that workplace mistreatment is detrimental to mental health. However, the literature is currently silent on the possibility that the negative outcomes of workplace mistreatment may vary across different racial groups, despite strong theoretical reasons to expect this to be the case and the critical implications of such a possibility. We examined this idea through two studies, and largely found support that the relationship between workplace mistreatment and depression was stronger for Blacks than Whites due to differences in attributional processes: Blacks are more likely to attribute experienced workplace mistreatment to racial prejudice and make a pessimistic attribution than Whites.

Theoretical and Practical Implications

This study makes several important theoretical contributions. First, we expand on our previous understanding of the harm racial minorities experience from workplace mistreatment. Researchers have mainly examined whether racial minorities (compared to racial majorities) are more likely to be the victims of workplace mistreatment (Avery et al., 2023; McCord et al., 2018). While this stream of study is essential, it does not fully capture the complex nature of stigma: stigma affects not only how others view the stigmatized, but also how the stigmatized view events that happen to them (Crocker et al., 1998; Major & O'Brien, 2005). Drawing upon the stigma literature, our study found that Blacks are more likely to interpret workplace mistreatment as racially motivated and, thus, make a pessimistic attribution, which renders them

more vulnerable to depression. Moreover, the differential effect of mistreatment across racial groups is especially important given that a recent meta-analysis found that race differences in perceived workplace mistreatment have been decreasing over time (McCord et al., 2018). Although this is certainly a positive development, the differential susceptibility to similar environments between racial minorities and majorities indicates that the history of discrimination can impair Black workers' health in a more complicated and subtle manner than previously known.

This finding is consistent with Emerson and Murphy's (2014) conclusion that, "different social groups can experience exactly the same physical setting in psychologically distinct ways because of sociocultural and historical legacies tied to these groups" (p. 510). Given this concept, it would be a mistake to misinterpret our results as indicative that Black workers are overly sensitive or less resilient than their White counterparts. The history of racial discrimination in the U.S. understandably shapes many Black workers' attributions (which drives the differential influence), and seemingly-race-irrelevant mistreatment targeted to Black workers can be racially motivated (Cortina, 2008). Put differently, the greater magnitude of depression resulting from workplace mistreatment is a predicament that stigma generates for Blacks at a disproportionately higher rate than Whites.

Second, we contribute to workplace mistreatment research by examining the attributional pathway that connects workplace mistreatment to its downstream consequences. The role of the victim's attribution in the influence of workplace mistreatment has received relatively little attention (Han, Harold, Oh, Kim, & Agolli, 2021), even though individuals tend to look for a causal explanation regarding unexpected negative events, and these attributions have important implications (Weiner et al., 1971; Wong & Weiner, 1981). Drawing upon the hopelessness

theory of depression, which argues that stressful events can lead to depression when individuals make pessimistic attributions, we found that attributional processes play a critical role in the differential impact (by race) of workplace mistreatment. By incorporating a pessimistic attribution (i.e., a multidimensional construct that consists of internal, global, and stable attributions) into the organizational behavior literature, we not only spotlight an important type of attribution directly associated with depressogenic beliefs about the self, the world, and the future (Beck & Bredemeier, 2016) but also expand the scope of attributional dimensions in organizational behavior research beyond the often-considered locus of causality (Harvey, Madison, Martinko, Crook & Crook, 2014; Martinko & Thomson, 1998).

Third, by combining insights from the stigma literature and the hopelessness theory of depression, we make theoretical inroads into both streams of research. The stigma literature has reported that racial minorities are more likely to interpret negative interpersonal treatment as discrimination against their race than racial majorities (e.g., Hoyt, Aguilar, Kaiser, Blascovich, & Lee, 2007; see Major & Crocker, 1993 for review). Through our finding that interpreting workplace mistreatment as racially motivated leads to a pessimistic attribution, we reveal the meaning of race-based mistreatment from the victim's perspective (i.e., the cause is about the aspect of themselves, is not changeable, and applicable to other situations), which leads to an important racial difference in its downstream consequences (i.e., depression). Further, we broaden the scope of the hopelessness theory of depression by considering a factor that reflects societal contexts (i.e., stigmatized racial group membership) to explain the differential attributions of stressful events that individuals make.

For managers, the results of our study suggest that efforts to reduce workplace mistreatment may be particularly impactful to Black employees' mental health. Many

contemporary organizations promote diversity, equity, inclusion, and belonging as imperative business goals (Bartels, Nadler, Kufahl, & Pyatt, 2013), but many of them have predominantly focused on the diversity aspect, with most attention paid to simply staffing a more diverse workforce (Repko, 2020). However, we encourage managers to heed the oft-quoted line that, "Diversity is being invited to the party; inclusion is being asked to dance" (Myers, 2015). Workplace mistreatment is the antithesis of inclusiveness even if consistently applied across racial lines. Thus, in order to foster a more inclusive culture, organizations should consider a multipronged approach. This could include highlighting the deleterious effects of workplace mistreatment on mental health to employees, adopting necessary accountability measures to ensure workplace mistreatment – although likely impossible to completely eradicate – is a rare occurrence, and implementing bystander intervention training to help employees spot and address mistreatment when it occurs (particularly when it seems to be happening across racial lines) (Dobbin & Kalev, 2022). By creating an organizational culture where respect and collegiality are the norm and members of all racial groups are equally valued, organizations could reduce the likelihood of mistreatment (when it does occur) being attributed to internal, stable, and global causes, and ultimately mitigate the risk of depression.

Limitations and Future Directions

Although our research designs had several strengths, and we attempted to compensate for individual study weaknesses with a multi-study design, there are nevertheless noteworthy limitations. First, the lag between measurement episodes in Study 1 could generate concern that participants' retirement or job changes might bias results. Although we controlled for the time lag in Study 1 (and collected data without a time lag in Study 2), the results in Study 1 should be considered under this limitation. Second, we cannot make causal attributions as race cannot be

manipulated in an experimental context and, given the embeddedness of race as a social

construct, it is difficult to identify strong instruments, valid differences-in-differences tests, or

other statistical approaches to establish causality. Third, although we adopted multiple

operationalizations of depression, there are other symptoms of depression (e.g., functional

impairment) that could also be considered. Fourth, sleep quality (and, in Study 2, sleep quantity)

was measured using a single item based on five scale points, which could have restricted their

variances and led to lower reliabilities. Additionally, these sleep variables are measured through

self-reports, and prior studies have found that depressed individuals tend to estimate their sleep

quantity and quality less accurately than healthy individuals (Armitage, Trivedi, Hoffman, &

Rush, 1997; Tsuchiyama, Nagayama, Kudo, Kojima, & Yamada, 2003). Such limitations might

have contributed to the non-significant results for these variables. Thus, we recommend that

future studies use multiple items and scale points with wider ranges, or objective measures. Fifth,

we focused only on differential attributions to mistreatment by Blacks and Whites, but future

studies should test this logic with other disadvantaged groups. For example, women have been a

target of prejudice and discrimination at work as their gender stereotype often does not fit the

characteristics required in professional settings (Heilman, 2012; see Supplementary Materials for

further discussion). Sixth, other mechanisms, such as locus of control, could drive the effect of

workplace mistreatment on depression. We recommend future studies investigate these

possibilities. Finally, given that different interpretations of negative events can lead to different

coping strategies (Lazarus & Folkman, 1984), future researchers could also examine whether

coping strategies differ between Blacks and Whites.

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Table 1

Descriptive Statistics and Pair-wise Correlations (Study 1)

Variable	N	M	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Gender	398	.48	.50	-										
2. Education	397	8.84	2.26	-.03	-									
3. Log (income)	381	11.35	.74	-.14*	.32*	-								
4. Occupation	389	2910.06	2322.23	-.03	-.37*	-.28*	-							
5. Negative affect	395	1.48	.62	-.02	-.19*	-.17*	.05	(.88)						
6. T1-T2 time lag	398	22.90	9.35	.16*	.06	-.08	.02	-.04	-					
7. Workplace mistreatment	398	1.88	.80	-.09	-.21*	-.11*	.14*	.33*	-.02	(.79)				
8. Race	398	.07	.26	.13*	-.11*	-.20*	.06	.03	.05	-.04	-			
9. Clinical depression scale	398	1.42	.36	.07	-.15*	-.18*	.01	.55*	.05	.28*	.09	(.88)		
10. Sleep quantity	115	382.81	50.74	.24*	.07	.10	-.28*	-.19*	.01	-.05	-.09	-.13	(.70)	
11. Sleep quality	120	3.66	.71	.06	-.01	.10	-.06	-.35*	-.06	-.09	-.10	-.40*	.14	(.77)

Note. Alpha reliabilities shown in parentheses. Gender was coded 0 = female 1 = male. Race was coded 0 = White 1 = Black.

*p < .05, two-tailed

Table 2

Path Model Results Relating Workplace Mistreatment and Race to Depression (Study 1)

Variable	Clinical depression scale (N=398)	Sleep quantity (N=115)	Sleep quality (N=120)
	b (SE / p)	b (SE / p)	b (SE / p)
Intercept	1.45 (.27 / .00)	356.27 (77.76 / .00)	4.09 (1.09 / .00)
Gender	.05 (.03 / .13)	24.74* (9.05 / .01)	.07 (.12 / .54)
Education	-.00 (.01 / .54)	.20 (2.03 / .92)	-.03 (.03 / .34)
Log (Income)	-.04 (.02 / .07)	3.04 (6.40 / .63)	.04 (.09 / .62)
Occupation	-.00 (.00 / .08)	-.01* (.00 / .01)	.00 (.00 / .89)
T1-T2 time lag	.00 (.00 / .15)	.24 (.40 / .55)	-.01 (.01 / .36)
Negative affect	.29* (.03 / .00)	-8.54 (7.30 / .24)	-.41* (.10 / .00)
Workplace mistreatment (WM)	.04 (.02 / .06)	5.23 (5.61 / .35)	.03 (.08 / .42)
Race	.10 (.06 / .10)	-39.47 (24.00 / .10)	-.49 (.34 / .16)
WM x Race	.27* (.08 / .001)	-63.62* (29.83 / .03)	-.67 (.41 / .11)
R^2	.35	.19	.17

Note. SE = standard errors; p are exact p-values. Unstandardized (b) coefficients are reported. Gender was coded 0 = female 1 = male.

Race was coded 0 = White 1 = Black. *$p < .05$, two-tailed

Table 3

Descriptive Statistics and Variable Intercorrelations (Study 2)

Variable	M	S.D.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Gender minority	.48	.50	-									
2. Education	3.62	.89	.04	-								
3. Income	3.06	1.46	-.10*	.34*								
4. Negative affect	2.22	1.02	.14*	-.14*	-.24*	(.91)						
5. Race	.48	.50	-.02	.01	.01	.00	-					
6. Attribution to race	.12	.33	.06	-.02	-.02	.08	.30*	-				
7. Pessimistic attribution	2.83	.79	-.03	.06	-.02	.20*	.18*	.22*	-			
8. Clinical depression scale	2.75	.87	.16*	-.06	-.10*	.45*	-.03	.09*	.19*	(.94)		
9. Sleep quantity	2.53	.88	-.22*	.08	.04	-.16*	.05	-.05	-.03	-.46*	-	
10. Sleep quality	2.68	1.12	-.25*	.07	.05	-.20*	.08	-.04	-.05	-.61*	.65*	-

Note. N = 480. Gender minority was coded 0 = man 1 = woman, non-binary, or other. Race was coded 0 = White 1 = Black. *$p < .05$, two-tailed
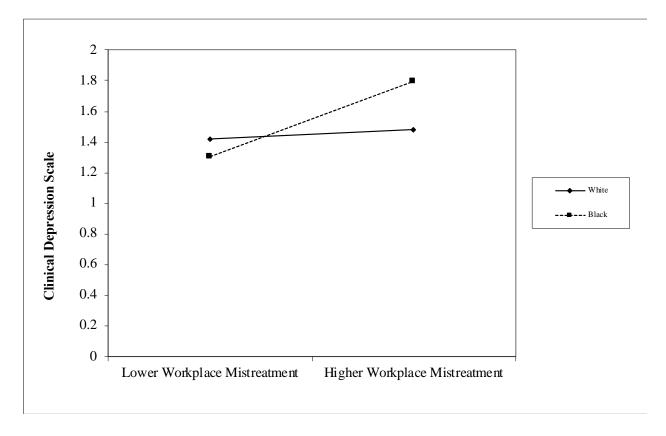
Table 4

Path Model Results (Study 2)

Variable	Attribution to race	Pessimistic attribution	Clinical depression scale	Sleep quantity	Sleep quality
	b (SE / p)	b (SE / p)	b (SE / p)	b (SE / p)	b (SE / p)
Intercept	-4.02 (.86 / .00)	2.09 (.18, .00)	1.57 (.21 / .00)	2.74 (.25, .00)	3.16 (.30, .00)
Gender minority	.41 (.30 / .18)	-.11 (.07 / .11)	.19* (.07 / .01)	-.37* (.08 / .00)	-.52* (.10 / .00)
Education	-.05 (.18 / .77)	.08* (.04 / .046)	-.02 (.04 / .64)	.08 (.05 / .08)	.08 (.06 / .16)
Income	.00 (.11 / .99)	-.00 (.03 / .96)	.01 (.03 / .58)	-.02 (.03 / .45)	-.02 (.04 / .49)
Negative affect	.19 (.14 / .18)	.16* (.03 / .00)	.35* (.04 / .00)	-.11* (.04 / .01)	-.17* (.05 / .00)
Race	2.30* (.42 / .00)	.21* (.07 / .00)	-.11 (.07 / .12)	.10 (.08 / .23)	.21* (.10 / .04)
Attribution to race		.41* (.11 / .00)	.13 (.11 / .24)	-.10 (.13 / .43)	-.09 (.16 / .55)
Pessimistic attribution			.13* (.05 / .01)	-.02 (.07 / .73)	-.06 (.08 / .41)

Serial mediation via attribution to race and pessimistic attribution	Indirect effect	95% CI
Outcome variable: clinical depression scale	.12	.03, 26
Outcome variable: sleep quantity	-.02	-.17, .11
Outcome variable: sleep quality	-.06	-.23, .08

Note. N = 480. SE = standard errors; *p* are exact p-values. Unstandardized (b) coefficients are reported. Gender minority was coded 0 = man 1 = woman, non-binary, or other. Race was coded 0 = White 1 = Black. *p < .05, two-tailed

Figure 1.

Interaction between workplace mistreatment and race on clinical depression scale.

Figure 2

Interaction between workplace mistreatment and race on sleep quantity.