Perceived Discrimination is Associated with Capability for Suicide

By

Jasmin Roelle Brooks

_____

A Thesis

Submitted to

the Department

of Psychology

University of Houston

_____

In Partial Fulfillment

of the Requirements for the Degree of

Master of Arts

_____

Chair of Committee: Rheeda L. Walker, Ph.D.

Committee Member: Anka Vujanovic, Ph.D.

Committee Member: Quenette Walton, Ph.D.

_____

University of Houston

October, 2019

ACKNOWLEDGMENTS

Throughout the writing of this thesis I have received a great deal of support and assistance. I would first like to thank my thesis advisor, Dr. Rheeda Walker, whose expertise and supervision has been invaluable on both an academic and personal level, for which I am extremely grateful. I would like to thank my committee members, Dr. Anka Vujanovic and Dr. Quenette Walton, as this thesis would not have been possible without their support, assistance, and guidance.

Additionally, I would like to express my profound gratitude to my parents, family, and friends for providing me with unfailing support and continuous encouragement throughout my years of study and career. This unbelievable accomplishment would not have been possible without everyone who has believed in and supported me along the way.

ABSTRACT

The Interpersonal Theory of Suicide proposes two necessary components for an individual to engage in suicidal behavior: a desire for suicide as well as the capability to attempt suicide. Developing the capability to enact lethal self-injury and overcoming one's natural instinct of self-preservation is thought to occur as a result of habituation to the fear and pain that would arise from self-injury. Current research suggests this process occurs through repeated exposure to painful and provocative events, including previous suicidal behaviors and exposure to extreme violence or trauma. However, investigations of suicide capability have yet to examine unique painful and provocative event that occurs for marginalized persons. The purpose of the current study is to examine the association for perceived experiences of discrimination and suicide capability for African American adults. Participants are 173 African American adults (67.6% female; M_{age} = 23.18, *SD* = 5.74) and 272 European American adults (60.7% female; M_{age} = 22.80, *SD* = 5.90). Each participant completed a questionnaire battery consisting of measures of perceived discrimination, depression, suicide ideation, and painful and provocative events. Regression analyses revealed for African Americans perceived discrimination was significantly associated with an increased capability for suicide after accounting for age, gender, level of depressive symptomatology, suicide ideation, and non-discriminatory painful and provocative events experienced (β = .226, t = 3.154, p = .002). As this represents the first study to demonstrate a link between perceived discrimination and capability for suicide, these findings further illustrate the need for theoretically informed models that address the needs of racial/ethnic minority persons.

TABLE OF CONTENTS

LIST OF TABLES

Perceived discrimination is associated with capability for suicide

In 2016, suicide was the tenth leading cause of death in the United States, claiming the lives of approximately 45,000 individuals (Center for Disease Control [CDC], 2016). Additionally, over 800,000 individuals annually die by suicide (World Health Organization [WHO], 2014). Historically, it has been assumed that suicidal behavior is lower among African Americans as compared to other ethnic groups (Gibbs, 1997; Schlebusch, 1988); however, contemporary research has demonstrated that suicide is a leading cause of death for African Americans. Available reports reveal that approximately 1,900 African Americans die annually by suicide (Crosby & Molock, 2006), and shows that suicide is the 8th leading cause of death among African American adults (Heron, 2007). In particular, research posits that during emerging adulthood the risk for suicide among Blacks approaches that of the general population and serves as the 3rd leading cause of death for African Americans ages 15-24 (Castle, Conner, Kaukeinen, & Tu, 2011). Understanding the risk factors of suicide, as well as identifying the best modes of assessment, prevention, and treatment of suicidal behaviors for racial and ethnic minorities, remains imperative and serves as a critical public health priority.

The most widely-cited theoretical framework for suicide, the Interpersonal—Psychological Theory of Suicide (IPTS; Joiner, 2005), expands upon previous theories of suicide by providing an explanation for not just why people think about suicide, but specifically why people die by suicide. In particular, this theory posits two necessary conditions for an individual to die by suicide. The first condition is a desire for death; the second condition is the capability to enact lethal self-injury (Joiner, 2005). Developing the capability to attempt suicide, and overcoming one's natural instinct of self-preservation, is hypothesized to occur as a result of repeated exposure to physically painful and psychologically provocative life events, as this

contributes to an overall increase in fearlessness regarding death (Van Orden, Witte, Gordon, Bender & Joiner, 2008; Ribeiro et al., 2014; Ribeiro, Yen, Joiner & Siegler, 2015). Studies to date have identified specific painful and provocative events that contribute to an increased capability for suicide. Most studies, however, have investigated these predictors of suicide capability in predominantly White participant samples. Additionally, no known study has examined unique painful and provocative events for racially or ethnically marginalized persons. The present study will examine whether perceived experiences of discrimination, a common painful and provocative event that occurs for marginalized persons, will be associated with capability for suicide.

The Interpersonal-Psychological Theory of Suicide

Despite increasing annual suicide deaths worldwide (WHO, 2014), few theoretical models have been proposed to understand contributing factors to suicidal behavior (Beck, Brown, & Steer, 1989; Rudd, 2000; Orbach, 1994). Additionally, available theories center on the premise that identifying risk factors for suicide ideation (i.e. hopelessness, emotion dysregulation) will improve prevention for suicide-related behavior (Beck et al., 1989; Linehan, 1993). Only a small proportion of individuals who contemplate suicide, however, develop, plan and follow through with an attempt; and, even fewer individuals die by suicide (Van Orden et al., 2010). As extant literature has primarily focused on suicidal ideation, knowledge of circumstances in which individuals are at an elevated risk for enacting a suicide attempt is still needed.

The Interpersonal-Psychological Theory of Suicide (IPTS) was proposed, in part, to address the limitations of previous models. Specifically, the IPTS aims to comprehensively identify and distinguish between the underlying mechanisms of suicidal ideation, or thoughts of

suicide, and suicidal behavior. According to the IPTS, thwarted belongingness and perceived burdensomeness increase suicide desire or ideation (Joiner, 2005; Van Orden et al., 2010). Thwarted belongingness refers to feeling interpersonally disconnected and alienated from others. As available literature suggests, a lack of a positive social support network can result in adverse psychological outcomes and suicidal ideation (e.g., Vanderhorst & McLaren, 2005; Harris & Molock, 2010). By contrast, perceived burdensomeness encompasses feelings of inadequacy, feelings of being a burden to others and often involve statements such as, "My death will be worth more than my life to others" (Van Orden et al., 2010). The IPTS posits, however, that these experiences alone are not sufficient to account for suicide attempt behavior, but that one must also have acquired a capability for suicide—a critical dimension of suicide behavior (Joiner, 2005).

Capability for Suicide

Capability for suicide is defined as the physical capacity to inflict lethal self-injury. Importantly, this capability to overcome one's inherent fear of death and instinct to survive is proposed to be the primary difference between those who consider suicide and those who carry out a suicide plan. It is important to note that capability is distinct from perceived burdensomeness and thwarted belongingness and thus independent from the desire for death by suicide. Specifically, capability for suicide is hypothesized to occur as a result of repeated exposure to physically painful and psychologically provocative life events. Prolonged exposure to these events have been suggested to facilitate a habituation of the fear and pain surrounding the events, as well as the fear and pain involved in suicide (Joiner, 2005; Bender, Gordon, Bresin, & Joiner, 2011; Mitchell, Cukrowicz, Van Allen, & Seegan, 2015).

One of the strongest and most reliable predictors of capability for suicide is suggested to be previous suicidal behaviors (e.g., suicide attempts, aborted suicide attempts, or practicing/preparing for suicidal behavior), as each behavior directly contributes to a lowered fear of death (Joiner, 2005). Other painful and provocative experiences associated with capability for suicide include childhood maltreatment (Joiner, Sachs-Ericsson, Wingate, et al., 2007), non-suicidal self-injury (Willoughby, Heffer, & Hamza, 2015), exposure to physical violence and combat (Anetis, Bryan, Cornette, & Joiner, 2009), impulsivity (Bender et al., 2011) as well as fear-inducing risky behaviors including self-injecting drug use and prostitution (Van Orden et al., 2010). Recently, literature has expounded upon these by identifying painful and provocative events unique to certain populations. For example, provocative work experiences (e.g., placing sutures, withdrawing life support) was shown to contribute to an increased capability for suicide in physicians (Fink-Miller, 2015). Current literature fails to identify, however, specific painful and provocative events that may contribute to an increased capability to attempt suicide in racially and ethnically marginalized populations. This leads to a significant limitation in suicide risk assessment for persons of color, in particular.

Discrimination as a Painful and Provocative Event

Discrimination is a particularly important factor to consider when examining capability for suicide in marginalized populations. Discrimination is defined as negative actions and behaviors that are directed at another person or group as a result of their marginal social status membership (Pieterse, Neville, Todd, & Carter, 2012; Jones & Carter, 1996). Available research postulates racial discrimination is a stressor that continues to be experienced daily by persons of color, and African American adults in particular. Specifically, Sellers, Copeland-Linder, Martin, and Lewis (2006) found, on average, 70% of African American adolescents reported occurrences

of racialized experiences where they felt as if others perceived them as a threat. Additionally, Black Americans typically report higher levels of exposure to racism and discrimination than other racially marginalized groups (Pieterse et al., 2012; Kessler, Mickelson, & Williams, 1999; Sanders Thompson, 2006).

Physical and psychological consequences occur when members of the stigmatized group begin to internalize the discrimination, accept the negative messages, doubt their sense of self-worth, and resign to a state of helplessness or hopelessness (Jones, 2000). Specifically, research suggests that self-reported discrimination experiences are associated with numerous adverse mental health outcomes for persons of color, and African Americans in particular (Outlaw, 1993; Clark et al., 1999; Pascoe & Richman, 2009; Mays, Cochran, & Barnes, 2007). These unfavorable outcomes include a diminished self-esteem and self-worth (Utsey, Giesbrecht, Hook, & Stanard, 2008), increased psychological distress and poorer mental health outcomes (Gee, Ryan, Laflamme, & Holt, 2006; Brown, Williams, Jackson, et al., 2000). Furthermore, perceived discrimination has been associated with increased suicide ideation in African American adults (Walker, Salami, Carter, & Flowers, 2014), as well as increased depressive symptoms in African American men (Wheaton, Thomas, Roman, & Abdou, 2018). Of note, chronic discrimination has been shown to have even more wide-ranging effects on the mental and physical health of African Americans (Ong, Fuller-Rowell, & Burrow, 2009). In particular, African Americans who report exposure to chronic discrimination are more likely to report higher numbers of stressful life events (Harrell, 2000; Ong et al., 2009), to engage in maladaptive coping behaviors (Martin, Tuch, & Roman, 2003), and to have higher rates of hypertension, cardiovascular disease, and diabetes (Utsey, Belvet, Hubbard, et al., 2013). Given the robust associations between racial discrimination and psychological distress, research

suggests that perceived discrimination could serve as a significant physically painful and psychologically provocative event that could contribute to a capability for suicide.

Present Study: Aim and Hypothesis

Available studies reveal unique differences between African American risk factors for suicide, and those of the majority, European American population. In particular, although discrimination has been shown to have numerous adverse effects on African Americans physical and psychological well-being, it remains a largely understudied risk factor for suicide vulnerability. Extant literature has failed to account for how pervasive experiences for marginalized populations, such as discrimination, might influence suicidality. In order to address this gap in the literature, the current study directly measured the association between lifetime experiences of discrimination and one's level of capability for suicide. The explicit hypotheses for the current study were: (1) higher levels of perceived discrimination are associated with higher levels of capability for suicide among African American adults but not among European American adults and; (2) perceived discrimination will be associated with suicide capability, for African American adults, above and beyond potential effects of broader (non-discriminatory) painful and provocative events. In order to examine the specificity of the impact of perceived discrimination on capability, depressive symptomatology and suicide ideation were utilized as covariates in this model, as these factors have been shown to be highly predicative of capability (Van Orden et al., 2010).

Method

Participants

The present study included 173 African American adults (67.6% female) and 272 European American adults (60.7% female) recruited from a moderately-sized southwestern U.S.

university. The mean age for the total sample is 22.95 years (*SD* = 5.83 years) with age range 18-63 years. The majority of participants were characterized as "single, never married" (82.2%) and at least a second generation U.S. citizen (74.4%). Regarding education, 10.6% of the participants received a high school diploma or equivalent, 70.8% completed some college, 17.1% earned a bachelor's degree, less than 1% completed some graduate school, and less than 1% did not graduate high school or earn an equivalent diploma.

Measures

Everyday discrimination scale (EDS). The Everyday Discrimination Scale (Williams, Yu, Jackson, & Anderson, 1997) is a 9-item self-report measure designed to assess more routine and relatively minor experiences of perceived discrimination. Example items include, "You have been treated with less courtesy than other people," and "You have been threatened or harassed." Participants were asked to respond on a four-point scale regarding the frequency of encounters from 1 (*never*) to 4 (*four or more times*). A total score was produced by summing the ratings, with higher scores reflecting more experiences of discrimination. The scale has shown high reliability and validity for national and community adult samples (Lewis, Aiello, Leurgans, Kelly, & Barnes, 2010; Williams, Yu, Jackson, & Anderson, 1997). In the current study, this measure was found to have good alpha reliability ($\alpha = .90$).

Beck Depression Inventory-II (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996) is a 21-item self-report instrument designed to assess severity of depressive symptomatology within the past week. Respondents' scores are rated on a 0 to 3 scale with higher scores indicating more severe symptoms. The BDI-II is scored by summing the ratings; total scores range from 0 to 63. The BDI-II's test-retest reliability have been shown to be stable, ranging from .60 to .93 (Beck, Steer, & Garbin, 1988). Past research using the BDI-II have reported high internal consistency

whereby alpha values range from .89 to .93 (*M*=.91) in college and community samples (Abela, Webb, Wagner, Ho, & Adams, 2006; Segal et al., 2008). For the current sample, the measure was found to have good alpha reliability (α = .94).

Adult Suicidal Ideation Questionnaire. The Adult Suicidal Ideation Questionnaire (ASIQ) is a 25-item self-report measure of suicide ideation experienced over the past month for adults aged 18 years and older (Reynolds, 1991). Responses are assessed on a Likert scale ranging from 0 (never had the thought) to 6 (had the thought almost every day). Total scores are acquired by summing the ratings for items 1–25. Total scores range from 0 to 150 with higher scores indicating greater levels of suicide ideation. The scale has shown high reliability and validity across settings (Fu & Yip, 2007; Reynolds, 1991) and among racial and ethnic minorities (α = .96–.98; Hovey, 2000; Walker et al., 2014). The measure also demonstrated good reliability (α = .97) in the current sample.

Acquired Capability for Suicide (ACSS). The ACSS (Bender, Gordon, Brensin, & Joiner, 2011) is a 20-item self-report inventory designed to assess levels of capability for suicide, as defined by the IPTS (Joiner, 2005; Van Orden et al., 2010). Respondents' scores are rated on a 0 (*not at all like me*) to 4 (*very much like me*) scale. The ACSS includes items that assess reduced fear (e.g., "Things that scare most people don't scare me") and pain tolerance, (e.g., "I can tolerate more pain than most people"). Items 1 through 20 contributed to a possible total score that ranged from 0 to 80. The ACSS has demonstrated satisfactory internal consistency whereby alpha values range from .67 to .88 (e.g., Davidson et al., 2010; Smith, Cukrowicz, Poindexter, Hobson & Cohen, 2010, & Mitchell et al., 2015). In the current study, α = .62.

Painful and Provocative Events Scale (PPES). The PPES (Bender et al., 2011) is a 24-item self-report measure that is designed to assess a respondents' frequency of engagement in a

variety of painful and provocative events that reflect PPE per the IPTS (Joiner, 2005). Participants were asked to respond on a five-point Likert scale with response options including: *never, once, 2-3 times, 4-20 times,* or *more than 20 times.* The PPES includes items such as "Have you ever imagined killing yourself?"; "Have you shot a gun?"; and "Have you been a victim of physical abuse?" Items 1 through 24 were summed and contributed to a total possible score that ranged from 0 to 100. Past research using the PPES have reported good internal consistency (e.g., Bender et al., 2011; Smith et al., 2010). For the current sample, the measure was found to have acceptable alpha reliability ($\alpha = .83$).

Procedure

The present study was granted institutional review board approval. Potential study volunteers were recruited from a large southwestern university as part of a larger study examining the psychological health, stress and coping styles among college students. Participants who were less than 18 years of age, or who did not identify as Black/African American or White/European American, or who reported recent loss of consciousness due to substance use were excluded from this study. Each participant was informed that she or he would be administered an online set of questionnaires that included questions about her/his behavior and experiences of stress, depression, culture, and suicide. Upon consent, participants were administered the battery of questionnaires and informed that participation in the study could cease at any time and referral for psychological services would be available if needed. Approximately 35 minutes were required to complete the packet of questionnaires. Upon completion of the study, participants were given an online debriefing form.

Data Analytic Plan

All analyses were conducted using SPSS statistical software package (Version 25). Analyses of statistical power were conducted using G* Power statistical software (Faul, Erdfelder, Lang, & Buchner, 2007). A preliminary power analysis was conducted to determine the number of participants needed for a Multivariate Analysis of Variance (MANOVA) of ethnic group differences. In the MANOVA, the primary effects will be ethnic group differences among 5 measured variables of interest (i.e., depressive symptomatology, suicide ideation, non-discriminatory painful and provocative events, perceived discrimination, and capability for suicide). As suggested by Cohen (1988, 1992), an estimated medium effect size (.0625) was used for this analysis. Based on this estimate with an alpha = .05 and power = .80, the projected sample size needed with this effect size (Faul et al., 2009) is 106 participants per group for a total of 212 participants.

A second power analysis was conducted to determine the number of participants needed for bivariate correlation analyses. An estimated medium effect size (.30) for such an analysis was used as suggested by Cohen (1988, 1992). Based on this estimate with an alpha = .05 and power = .80, the projected sample size required with this effect size (Faul et al., 2009) is 84 participants.

A third power analysis was conducted to determine the number of participants needed for the hierarchical linear regression analysis. For this study, six predictor variables (including covariates) will be entered into the multiple regression analysis. Given an estimated medium effect size (0.15), an alpha = .05, and power = .80 (Cohen, 1988, 1992), the projected sample size required for this analysis is 98 participants. However, it was concluded that approximately 212 participants (106 subjects per group) would be needed to sufficiently conduct all analyses.

Descriptive statistics including means, standard deviations, and intercorrelations of all variables were calculated. Following the preliminary data analysis, a one-way general linear model multivariate analysis of variance (GLM MANOVA) was conducted in order to determine if there are racial differences for symptoms of depression, suicide ideation, non-discriminatory painful and provocative events experienced, perceived discrimination, and capability for suicide. Scores obtained from the BDI-II, ASIQ, PPES, EDS, and ACSS were used as the dependent variables and race/ethnicity was used as the independent variable. If a significant difference in depressive symptomatology, suicide ideation, painful and provocative events experienced, perceived discrimination, or capability for suicide scores existed for African Americans or European Americans, follow-up univariate analyses of variance (ANOVA) were conducted.

Following the GLM MANOVA, a stepwise multiple regression analysis was conducted to assess associations for independent variables (non-discriminatory painful and provocative events, perceived discrimination) and capability for suicide in the present sample. As illustrated by Van Orden et al. (2010), in order to reduce the potentially confounding influence of the covariates in the model; age and gender were entered in Step 1, followed by depression symptoms (as measured by the BDI-II) and suicide ideation (as measured by the ASIQ) in Step 2. In order to allow for comparison of whether non-discriminatory painful and provocative events or perceived discrimination better accounts for variance in the model, painful and provocative events (as measured by the PPES) was entered in Step 3, followed by perceived discrimination (as measured by the EDS) in Step 4.

Results

Preliminary Analyses

Means, standard deviations, and intercorrelations for all measured variables for African Americans are presented in Table 1. Means, standard deviations, and intercorrelations for all measured variables in European Americans are presented in Table 2. As expected, bivariate correlation analyses revealed a significant positive association between perceived discrimination and capability for suicide ($r = .176$, $p < .05$) for African Americans, such that higher levels of perceived discrimination relate to higher levels of capability for suicide. Furthermore, for African Americans, analyses revealed that perceived discrimination was positively associated with symptoms of depression ($r = .354$, $p < .01$), suicidal ideation ($r = .251$, $p < .01$) and non-discriminatory painful and provocative events ($r = .182$, $p < .05$).

Additionally, as expected for European Americans, bivariate correlation analyses indicated that perceived discrimination was not significantly associated with capability for suicide. However, for European Americans, analyses showed a significant positive association between perceived discrimination and symptoms of depression ($r = .346$, $p < .01$), non-discriminatory painful and provocative events ($r = .170$, $p < .01$), and suicidal ideation ($r = .288$, $p < .01$). The ASIQ mean score for African Americans (M=16.83, SD=29.41) and for European Americans (M=16.36, SD=24.66) reveals that the current sample of adults reported a relatively higher level of suicide ideation than that of college samples (M = 10.91) in previous studies (Reynolds, 1991).

Multivariate Analysis of Variance

Results from the GLM MANOVA revealed that ethnic group membership had a statistically significant effect on the ACSS score (Wilks's λ), $F(5, 438) = 6.026$, $p < .001$), of

participants in the present study. Follow up univariate tests revealed statistically significant differences for the two ethnic groups on the painful and provocative events scale score $F(1, 442) = 5.551$, $p = .019$ and the everyday discrimination scale score $F(1, 442) = 16.868$, $p < .001$. These results demonstrate that the PPES mean score for African Americans (M=40.04, SD=11.47) was significantly lower than the PPES mean score for European Americans (M=42.44, SD=9.81), and that the EDS mean score for African Americans (M=9.50, SD=6.62) was significantly higher than the EDS mean score for European Americans (M=7.06, SD=5.77).

Hierarchical Linear Regression Model

African Americans. For African Americans, age and gender accounted for 14.4% variance in ACSS scores ($R^2 = .144$). The addition of symptoms of depression and suicide ideation to the model in Step 2 increased the variance explained in ACSS scores by 2.9% ($\Delta R^2 = .029$). The addition of non-discriminatory painful and provocative events accounted for 5.9% of the total variance in ACSS scores ($\Delta R^2 = .059$).

For African Americans perceived discrimination emerged as a significant predictor of ACSS scores ($\beta = .226$, $t = 3.154$, $p = .002$). Thus, for African Americans perceived discrimination was significantly associated with an increased capability for suicide after accounting for age, gender, level of depressive symptomatology, suicide ideation, and non-discriminatory painful and provocative events experienced. Results demonstrated that the addition of perceived discrimination increased the variance explained in ACSS scores by 4.4% ($\Delta R^2 = .044$, $F(1, 164) = 9.947$, $p = .002$). Of note, approximately 27.6% of the variance in ACSS scores was explained by the model ($R^2 = .276$, $p = .002$).

European Americans. For European Americans, age and gender accounted for 12.1% variance in the dependent variable ($R^2 = .121$). The addition of symptoms of depression and

suicide ideation to the model in Step 2 increased the variance explained in ACSS scores by 4.7% ($\Delta R^2 = .168$). The addition of non-discriminatory painful and provocative events accounted for 9% of the total variance in ACSS scores ($\Delta R^2 = .090$). Of note, approximately 26.4% of the variance in ACSS scores was explained by the model ($R^2 = .264$, $p = .185$).

For European Americans, perceived discrimination did not emerge as a significant predictor of ACSS scores ($\beta = .076$, $t = 1.330$, $p = .185$). Thus, for European Americans perceived discrimination was not significantly associated with capability for suicide after accounting for age, gender, level of depressive symptomatology, suicide ideation, and non-discriminatory painful and provocative events.

Discussion

The overall aim of the current study was to examine how discrimination, a pervasive, painful and provocative experience for marginalized populations, might influence capability for suicide. As predicted, perceived discrimination was directly associated with capability for suicide in the current sample of African American adults, such that higher levels of perceived discrimination were associated with higher levels of capability for suicide. Additionally, consistent with prediction, perceived discrimination was not significantly associated with capability for suicide in the current sample of European American adults.

Available research has demonstrated a robust association between non-discriminatory painful and provocative events–including discharging a firearm, skydiving, or being a victim of abuse—and capability for suicide (Van Orden et al., 2008; Mitchell et al., 2015; Bender et al., 2011) As a result, exposure to painful and provocative events was accounted for in the model. Consistent with available literature, increased exposure to non-discriminatory painful and provocative events was associated with increases in capability for suicide for African Americans.

These findings support available theories, which posit that perceived discrimination can lead to numerous adverse physical and psychological outcomes for African Americans including a diminished self-esteem and self-worth (Utsey, Giesbrecht, Hook, & Stanard, 2008), increased suicide ideation (Walker, Salami, Carter, & Flowers, 2014), increased depressive symptoms (Wheaton, Thomas, Roman, & Abdou, 2018), and higher rates of hypertension, cardiovascular disease, and diabetes (Utsey, Belvet, Hubbard, et al., 2013). This is the first known study to empirically examine predictors of suicide capability that are unique to marginalized populations. These findings suggest that for African Americans, perceived discrimination serves as a sufficiently painful and provocative experience that is directly associated with increased capability to overcome one's inherent fear of death and higher capacity for self-harm. In a clinical context, the findings demonstrate the importance of addressing the psychological consequences of perceived discrimination for African Americans.

Future studies might also examine potential mediator and moderator variables of this association. For example, available literature has demonstrated that religiosity (Assari, 2014; Ellison, Musick, & Henderson, 2008; Hayward & Krause, 2015), social support (Lewis-Coles & Constantine, 2006), dispositional forgiveness (Brooks, Hong, Madubata, et al., 2019), and emotion regulation strategies (Thomas, Witherspoon, & Speight, 2008) can be adaptive for African Americans in coping with discrimination. Future research should examine whether these or other factors could mitigate the demonstrated association between discrimination and suicide capability.

The present study provides promising insight to the adverse effects of perceived racial discrimination on psychological functioning and broadens the range of consideration for what is considered a painful suicidogenic event. Some limitations, however, should be noted. One

limitation of the study is the cross-sectional methodological design. As such, causal inference cannot be drawn regarding the role of perceived discrimination in activating suicide capability. Also, the study relied on a single, self-report measure of perceived discrimination. Because perceptions of discrimination experiences are subjective, some researchers have noted that objective measures might provide better insight to the effects of discrimination experiences (e.g., Karlsen & Nazroo, 2002). Future prospective studies should examine whether the observed relationship varies across different forms of racism in particular, including covert racism, institutional racism, interpersonal racism, and colorism. Additionally, results were obtained from a limited southwestern geographic area; therefore, the generalizability of these findings to other populations is limited.

The overall aim of the current study was to examine how discrimination, a pervasive painful and provocative experience for marginalized populations, might be associated with capability for suicide for African American and European American adults. In general, this study has provided preliminary evidence that perceived racism plays a role in suicide capability for African Americans (though not for European Americans). Available literature suggests that context is important but fails to bring attention to how marginalization via discrimination might lead to suicide vulnerability. The current study's contributions are important in the context of providing empirical evidence for the role of social marginalization and culturally-relevant experiences in suicidality for underserved groups.

References

Abela, J. R. Z., Webb, C. A., Wagner, C., Ho, M.-H. R., & Adams, P. (2006). The role of self-criticism, dependency, and hassles in the course of depressive illness: a multiwave longitudinal study. *Personality & Social Psychology Bulletin*, *32*(3), 328–338.

Anestis, M., Bryan, C., Cornette, M., & Joiner, T. (2009). Understanding suicidal behavior in the military: An evaluation of Joiner's Interpersonal-Psychological Theory of Suicidal Behavior in two case studies of active duty post-deployers. *Journal of Mental Health Counseling*, *31*(1), 60–75. https://doi.org/10.17744/mehc.31.1.u394h1470248844n

Assari S. (2014). Chronic medical conditions and major depressive disorder: Differential role of positive religious coping among African Americans, Caribbean Blacks and Non-Hispanic Whites. *International journal of preventive medicine*, *5*(4), 405–413.

Beck, A. T., Brown, G., & Steer, R. A. (1989). Prediction of eventual suicide in psychiatric inpatients by clinical ratings of hopelessness. *Journal of Consulting and Clinical Psychology*, *57*, 309–310.

Beck, A. T., & Steer, R. A. (1993). *BSI, Beck scale for suicide ideation: manual*. San Antonio, TX; New York: Psychological Corp. ; Harcourt Brace Jovanovich.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *BDI-II, Beck depression inventory: manual*.

Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review*, *8*(1), 77–100. https://doi.org/10.1016/0272-7358(88)90050-5

Beck, A. T., Steer, R. A., & Ranieri, W. F. (1988). Scale for suicide ideation: Psychometric properties of a self-report version. *Journal of Clinical Psychology*, *44*(4), 499–505.

Bender, T. W., Gordon, K. H., Bresin, K., & Joiner, T. E. (2011). Impulsivity and suicidality: The mediating role of painful and provocative experiences. *Journal of Affective Disorders*, *129*(1), 301–307. https://doi.org/10.1016/j.jad.2010.07.023

Brooks, J. R. Hong, J. H., Madubata, I. J., Odafe, M. O., Cheref, S., & Walker, R. L. (under review). The moderating effect of dispositional forgiveness on perceived racial discrimination and depressive symptoms for African American adults.

Brown, T. N., Williams, D. R., Jackson, J. S., Neighbors, H. W., Torres, M., Sellers, S. L., & Brown, K. T. (2000). "Being black and feeling blue": the mental health consequences of racial discrimination. *Race and Society*, *2*(2), 117–131. https://doi.org/10.1016/S1090-9524(00)00010-3

Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control. (2016). *Web-Based Injury Statistics Query and Reporting System (WISQARS)*.

Clark, R. D., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans. A biopsychosocial model. *The American Psychologist*, *54*(10), 805–816.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences*. L. Erlbaum Associates.

Cohen, J. (1992). A power primer. *Psychological Bulletin*, *112*(1), 155–159.

Ellison, C., Musick, M., & Henderson, A. (2008). Balm in gilead: Racism, religious involvement, and psychological distress among African-American Adults. *Journal for the Scientific Study of Religion, 47*(2), 291-309.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191.

Fink-Miller, E. L. (2015). Provocative work experiences predict the acquired capability for suicide in physicians. *Psychiatry Research*, *229*(1–2), 143–147. https://doi.org/10.1016/j.psychres.2015.07.055

Fu, K., & Yip, P. F. (2007). Long-term impact of celebrity suicide on suicidal ideation: Results from a population-based study. Journal of Epidemiology and Community Health, 61, 540–546.

Gee, G. C., Ryan, A., Laflamme, D. J., & Holt, J. (2006). Self-reported discrimination and mental health status among African descendants, Mexican Americans, and other Latinos in the New Hampshire REACH 2010 initiative: The added dimension of immigration. *American Journal of Public Health*, *96*(10), 1821–1828. https://doi.org/10.2105/AJPH.2005.080085

Harris, T. L., & Molock, S. D. (2010). Cultural orientation, family cohesion, and family support in suicide ideation and depression among African American college students. *Suicide and Life-Threatening Behavior*, *30*(4), 341–353. https://doi.org/10.1111/j.1943-278X.2000.tb01100.x

Hayward, R. D., & Krause, N. (2015). Religion and strategies for coping with racial discrimination among African Americans and Caribbean Blacks. *International Journal of Stress Management*, *22*(1), 70–91. https://doi.org/10.1037/a0038637

Jones, J. M., & Carter, R. T. (1996). Racism and white racial identity: Merging realities. In B. Bowser & R. Hunt (Eds.), *Impacts of racism on white America* (2nd ed., pp. 1–23). Thousand Oaks, CA: Sage.

Joiner, T. (2005). *Why people die by suicide*. Cambridge, Mass: Harvard University Press.

Joiner, T. E., Sachs-Ericsson, N. J., Wingate, L. R., Brown, J. S., Anestis, M. D., & Selby, E. A. (2007). Childhood physical and sexual abuse and lifetime number of suicide attempts: A persistent and theoretically important relationship. *Behaviour Research and Therapy*, *45*(3), 539–547. https://doi.org/10.1016/j.brat.2006.04.007

Karlsen, S., & Nazroo, J. Y. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *American Journal of Public Health*, *92*(4), 624–631. https://doi.org/10.2105/AJPH.92.4.624

Kessler, R. C., Mickelson, K. D., & Williams, D. R. (1999). The prevalence, distribution, and mental health correlates of perceived discrimination in the United States. *Journal of Health and Social Behavior*, *40*(3), 208–230.

Lewis, T. T., Aiello, A. E., Leurgans, S., Kelly, J., & Barnes, L. L. (2010). Self-reported experiences of everyday discrimination are associated with elevated C-reactive protein levels in older African-American adults. *Brain, Behavior, and Immunity*, *24*(3), 438–443. https://doi.org/10.1016/j.bbi.2009.11.011

Lewis-Coles, M. E. L., & Constantine, M. G. (2006). Racism-related stress, Africultural coping, and religious problem-solving among African Americans. *Cultural Diversity and Ethnic Minority Psychology*, *12*(3), 433–443. https://doi.org/10.1037/1099-9809.12.3.433

Linehan, M. (1993). *Cognitive behavioral treatment of borderline personality disorder*. New York, NY: Guilford Press.

Martin, J. K., Tuch, S. A., & Roman, P. M. (2003). Problem drinking patterns among African Americans: The impacts of reports of discrimination, perceptions of prejudice, and "risky" coping strategies. *Journal of Health and Social Behavior, 44,* 408–425.

Mays, V. M., Cochran, S. D., & Barnes, N. W. (2007). Race, race-based discrimination, and

health outcomes among African Americans. *Annual Review of Psychology*, *58*(1), 201–225. https://doi.org/10.1146/annurev.psych.57.102904.190212

Mitchell, S. M., Cukrowicz, K. C., Van Allen, J., & Seegan, P. L. (2015). Moderating role of trait hope in the relation between painful and provocative events and acquired capability for suicide. *Crisis: The Journal of Crisis Intervention and Suicide Prevention*, *36*(4), 249–256. https://doi.org/10.1027/0227-5910/a000319

Ong, A. D., Fuller-Rowell, T., & Burrow, A. L. (2009). Racial discrimination and the stress process. *Journal of Personality and Social Psychology*, *96*(6), 1259–1271. https://doi.org/10.1037/a0015335

Orbach I. (1994). Dissociation, physical pain, and suicide: A hypothesis. *Suicide and life-threatening Behavior*, *24*(1), 68-79.

Outlaw, F. H. (1993). Stress and coping: The influence of racism on the cognitive appraisal processing of African Americans. *Issues in Mental Health Nursing*, *14*(4), 399–409.

Pascoe, E. A., & Richman, L. (2009). Perceived discrimination and health: A meta-analytic review. *Psychological Bulletin*, *135*(4), 531–554. https://doi.org/10.1037/a0016059

Pieterse, A. L., Todd, N. R., Neville, H. A., & Carter, R. T. (2012). Perceived racism and mental health among Black American adults: A meta-analytic review. *Journal of Counseling Psychology*, *59*(1), 1–9. https://doi.org/10.1037/a0026208

Reynolds, W. M., Kobak, K., & Griest, J. H. (1990). Suicidal ideation in outpatients with major depression, anxiety disorders, and nonpsychotic controls. Paper presented at the annual meeting of the American Psychological Association, Boston.

Reynolds, W. M. (1991). Psychometric characteristics of the Adult Suicidal Ideation Questionnaire in college students. *Journal of Personality Assessment, 56*(2), 289-307.

Ribeiro, J. D., Witte, T. K., Van Orden, K. A., Selby, E. A., Gordon, K. H., Bender, T. W., & Joiner, T. E. (2014). Fearlessness about death: The psychometric properties and construct validity of the revision to the Acquired Capability for Suicide Scale. *Psychological Assessment*, *26*(1), 115–126. https://doi.org/10.1037/a0034858

Ribeiro, J. D., Yen, S., Joiner, T., & Siegler, I. C. (2015). Capability for suicide interacts with states of heightened arousal to predict death by suicide beyond the effects of depression and hopelessness. *Journal of Affective Disorders*, *188*, 53–59. https://doi.org/10.1016/j.jad.2015.07.037

Rudd M. D. (2000). The suicidal mode: A cognitive-behavioral model of suicidality. *Suicide and Life-Threatening Behavior, 30*(1):18-33.

Sanders Thompson, V. L. (2006). Coping responses and the experience of discrimination. *Journal of Applied Social Psychology, 36,* 1198–1214.

Segal, D. L., Coolidge, F. L., Cahill, B. S., & O'Riley, A. A. (2008). Psychometric properties of the Beck Depression Inventory II (BDI-II) among community-dwelling older adults. *Behavior Modification*, *32*(1), 3–20. https://doi.org/10.1177/0145445507303833

Smith, P. N., & Cukrowicz, K. C. (2010). Capable of suicide: A functional model of the acquired capability component of the Interpersonal-Psychological Theory of Suicide. *Suicide and Life-Threatening Behavior*, *40*(3), 266–275. https://doi.org/10.1521/suli.2010.40.3.266

Smith, P. N., Cukrowicz, K. C., Poindexter, E. K., Hobson, V., & Cohen, L. M. (2010). The acquired capability for suicide: A comparison of suicide attempters, suicide ideators, and non-suicidal controls. *Depression and Anxiety*, *27*(9), 871–877. https://doi.org/10.1002/da.20701

Smith, P. N., Stanley, I. H., Joiner, T. E., Sachs-Ericsson, N. J., & Van Orden, K. A. (2016). An aspect of the capability for suicide—fearlessness of the pain involved in dying—amplifies the association between suicide ideation and attempts. *Archives of Suicide Research*, *20*(4), 650–662. https://doi.org/10.1080/13811118.2016.1162245

Thomas, A. J., Witherspoon, K. M., & Speight, S. L. (2008). Gendered racism, psychological distress, and coping styles of African American women. Cultural Diversity and Ethnic Minority Psychology, 14(4), 307–314. https://doi.org/10.1037/1099-9809.14.4.307

Utsey, S. O., Belvet, B., Hubbard, R. R., Fischer, N. L., Opare-Henaku, A., & Gladney, L. L. (2013). Development and validation of the prolonged activation and anticipatory race-related stress scale. *Journal of Black Psychology*, *39*(6), 532–559. https://doi.org/10.1177/0095798412461808

Utsey, S. O., Giesbrecht, N., Hook, J., & Stanard, P. M. (2008). Cultural, sociofamilial, and psychological resources that inhibit psychological distress in African Americans exposed to stressful life events and race-related stress. *Journal of Counseling Psychology*, *55*(1), 49–62. https://doi.org/10.1037/0022-0167.55.1.49

Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S. R., Selby, E. A., & Joiner, T. E. J. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*(2), 575–600. https://doi.org/10.1037/a0018697

Van Orden, K. A., Witte, T. K., Gordon, K. H., Bender, T. W., & Joiner, T. E. J. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. *Journal of Consulting and Clinical Psychology, 76*(1), 72–83. https://doi.org/10.1037/0022-006X.76.1.72

Vanderhorst, R. K., & McLaren, S. (2005). Social relationships as predictors of depression and suicidal ideation in older adults. *Aging & Mental Health*, *9*(6), 517–525. https://doi.org/10.1080/13607860500193062

Walker, R. L., Salami, T. K., Carter, S. E., & Flowers, K. (2014). Perceived Racism and Suicide Ideation: Mediating Role of Depression but Moderating Role of Religiosity among African American Adults. *Suicide and Life-Threatening Behavior*, *44*(5), 548–559. https://doi.org/10.1111/sltb.12089

Wheaton, F. V., Thomas, C. S., Roman, C., & Abdou, C. M. (2018). Discrimination and depressive symptoms among African American men across the adult lifecourse. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *73*(2), 208–218. https://doi.org/10.1093/geronb/gbx077

Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, N. B. (1997). Racial differences in physical and mental health socio-economic status, stress and discrimination. *Journal of Health Psychology*, *2*(3), 335–351.

Willoughby, T., Heffer, T., & Hamza, C. A. (2015). The link between nonsuicidal self-injury and acquired capability for suicide: A longitudinal study. *Journal of Abnormal Psychology*, *124*(4), 1110–1115. https://doi.org/10.1037/abn0000104

World Health Organization [WHO]. Preventing suicide: a global imperative. Luxembourg: WHO Press; 2014.

Table 1

Means, Standard Deviations, and Intercorrelations Among Measured Variables for African Americans (N = 173)

Variable	1	2	3	4	5	6	*M*	*SD*
1. EDS							9.53	6.61
2. BDI-II	.354**						10.21	9.75
3. ASIQ	.251**	.556**					16.83	29.41
4. PPES	.182*	.253**	.387**				40.04	11.47
5. ACSS	.176*	-.172*	-.063	.293**			38.14	12.39
6. Age	-.039	-.192*	-.172*	.037	.081		23.18	5.74
7. Gender[a]	-.082	.041	.082	-.316**	-.364**	.057	.68[b]	

Note: EDS = Everyday Discrimination Scale; BDI-II = Beck Depression Inventory II; ASIQ = Adult Suicidal Ideation Scale; PPES = Painful and Provocative Events Scale; ACSS = Acquired Capability for Suicide.
[a]0 = men (reference), 1 = women. [b] Percentage females.
*p < .05 ** p < .01

Table 2

Means, Standard Deviations, and Intercorrelations Among Measured Variables for European Americans (N = 272)

Variable	1	2	3	4	5	6	*M*	*SD*
1. EDS							7.06	5.77
2. BDI-II	.346**						10.70	10.54
3. ASIQ	.288**	.611**					16.36	24.66
4. PPES	.170**	.125*	.177**				42.44	9.81
5. ACSS	.099	-.036	.178**	.377**			39.32	13.29
6. Age	.042	-.021	.002	.292**	.027		22.80	5.90
7. Gender[a]	.064	.071	-.036	-.182**	-.342**	.101	.61[b]	

Note: EDS = Everyday Discrimination Scale; BDI-II = Beck Depression Inventory II; ASIQ = Adult Suicidal Ideation Scale; PPES = Painful and Provocative Events Scale; ACSS = Acquired Capability for Suicide.
[a]0 = men (reference), 1 = women. [b] Percentage females.
*p < .05 ** p < .01

Table 3

Hierarchical Multiple Regression Analysis of Perceived Discrimination Predicting Capability for Suicide in African Americans

Model	Step/Variable	β	R^2	ΔR^2	*t*	*p*
All	**Step 1:**		.144			
	Age	.102			1.432	.154
	Gender [a]	-.371			-5.185	.000***
	Step 2:		.173	.029		
	BDI-II	-.186			-2.132	.034*
	ASIQ	.023			.267	.790
	Step 3:		.232	.059***		
	PPES	.280			3.575	.000***
	Step 4:		.276	.044**		
	EDS	.226			3.154	.002**

Note: EDS = Everyday Discrimination Scale; BDI-II = Beck Depression Inventory II; ASIQ = Adult Suicidal Ideation Scale; PPES = Painful and Provocative Events Scale; ACSS = Acquired Capability for Suicide. Age, gender, BDI-II, and ASIQ are modeled as covariates.
[a]0 = men (reference), 1 = women.
*p < .05 ** p < .01 *** p < .001

Table 4

Hierarchical Multiple Regression Analysis of Perceived Discrimination Predicting Capability for Suicide in European Americans

Model	Step/Variable	β	R^2	ΔR^2	*t*	*p*
All	**Step 1:**		.121			
	Age	.062			1.079	.282
	Gender [a]	-.349			-6.069	.000***
	Step 2:		.168	.047**		
	BDI-II	-.180			-2.536	.012*
	ASIQ	.276			3.893	.000***
	Step 3:		.259	.090***		
	PPES	.328			5.695	.000***
	Step 4:		.264	.005		
	EDS	.076			1.330	.185

Note: EDS = Everyday Discrimination Scale; BDI-II = Beck Depression Inventory II; ASIQ = Adult Suicidal Ideation Scale; PPES = Painful and Provocative Events Scale; ACSS = Acquired Capability for Suicide. Age, gender, BDI-II, and ASIQ are modeled as covariates.
[a]0 = men (reference), 1 = women.
*p < .05 ** p < .01 *** p < .001