Discrimination, Coping, and Depression among Black Men Who Have Sex with Men

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## Abstract

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## Keywords

Depression; Discrimination; Coping; Black MSM

## Cover Page Footnote

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## ABSTRACT

Black men who have sex with men (BMSM) have elevated risk for depression compared to the general population. BMSM's capacity to cope with these experiences is not well understood. Increased understanding of how multiple forms of discrimination contribute to depression and how BMSM cope with discrimination can better inform interventions. Data come from 3,510 BMSM who attended Black Pride events in six U.S. cities from 2015-2017. Participants completed a health survey that ascertained their psychosocial health and resiliency profiles. Using multivariable logistic regression models, we tested the associations between type-specific discrimination (race, sexuality, HIV status) and depression. We then conducted sub-analyses to determine if coping attenuated the association between type-specific discrimination and depression. Our findings indicated that increased odds of depression among BMSM were associated with discrimination based on race (*aOR*=1.38, 95% *CI* = 1.08-1.76), sexual orientation (*aOR*=1.32, 95% *CI* = 1.01-1.72), and HIV status (*aOR*=1.53, 95% *CI* = 1.08-2.17). Sub-analyses indicated coping had inconsistent moderation effects between type-specific discrimination and depression. Our findings demonstrate that impact of various forms of discrimination on BMSM's mental health and the mitigating role of coping. Interventions should seek to address depression by reducing experiences of discrimination and building coping resiliency.

**Keywords:** Depression; Discrimination; Coping; Black MSM

## INTRODUCTION

Depression is a common health problem and one of the leading causes of disability among working-age individuals (Gelenberg, 2010). It is estimated that nearly 7% of all U.S.

adults experienced at least one major depression episode in the past year (National Institute of Mental Health, 2017). While few studies have examined depression among Black men who have sex with men (BMSM), previous data suggest that depression may affect this group more than the general
U.S. adult population in part because of disproportionate experiences with racism, homophobia, and other forms of discrimination (Alvy et al., 2011; Cochran & Mays, 1994; De Santis & Vasquez, 2011; Friedman et al., 2018; Graham, Aronson, Nichols, Stephens, & Rhodes, 2011; Maulsby et al., 2014; Reisner et al., 2009). Some studies estimate the proportion of BMSM with depression to be as high as 33%; this is a rate nearly five times greater than the national estimate for all adults (Graham et al., 2011; National Institute of Mental Health, 2017; Reisner et al., 2009; Watkins et al., 2016).

Mental health disorders like depression also have an especially debilitating impact on BMSM's health and well-being (Graham et al., 2011). Previous studies have shown that BMSM living with depression have increased HIV risk behaviors (e.g., condomless anal intercourse) and sexually transmitted infections, a higher likelihood of violence exposure and victimization, and elevated smoking, alcohol, and substance use rates (Corliss et al., 2012; Jerome & Halkitis, 2009; Kuhns et al., 2016; McKirnan, Tolou-Shams, Turner, Dyslin, & Hope, 2006; Voisin, Hotton, Schneider, & Team, 2017) when compared to Black and other MSM living without depression. These findings collectively suggest that when compared to the general population, BMSM may have greater rates of, and exposure to risk factors for depression.

BMSM's disproportionate risk for and rates of depression highlight the need to identify the aggravating and mitigating factors influencing this health problem in this vulnerable group. To help meet that need, this study will examine the relationship between various types of discrimination experienced by BMSM and depression outcomes in this group. The study will also examine how self-reported discrimination coping abilities affect the relationship between discrimination and depression for BMSM. Explicating the impact of discrimination and coping on depression can aid in scaling up or developing innovative intervention strategies for BMSM that prevent potential drivers of depression or reduce the negative health and social impact of these drivers on their psychological well-being.

Role of Discrimination in Depression

Two complementary theoretical frameworks, Intersectionality Theory (Crenshaw, 1989) and Minority Stress Theory (Meyer, 1995), help to understand BMSM's experiences of discrimination and the relationship between discrimination and depression for this group. Intersectionality Theory asserts that marginalized identities, such as Black race and sexual minority orientation, are not mutually exclusive. These identities often intersect and work in concert to create multifaceted social experiences for marginalized groups that may compound incidents of discrimination and other negative social occurrences (Bowleg, 2013; Crenshaw, 1989). As members of both racial and sexual minority groups, BMSM sit at the intersection of two marginalized identities (Dyer et al., 2012; Ports et al., 2017). BMSM's positioning at this intersection exposes them to multiple forms of discrimination, including racism and homophobia (Bogart et al., 2011; Bowleg, 2013; Crawford, Allison, Zamboni, & Soto, 2002; Jeffries, Marks, Lauby, Murrill, & Millett, 2013; Loiacano, 1989; Stokes & Peterson, 1998).

Minority Stress Theory asserts that existing in a heteronormative and heterosexist society exposes racial and sexual minorities, like BMSM, to chronic stress (Meyer, 1995). BMSM's

stigmatized social identities as racial and sexual minorities subject them to stressors such as racism, homophobia, and other forms of social discrimination that contribute to chronic stress in this population. This chronic stress facilitates several health disparities in this group, such as disproportionate rates of depression and other mental illnesses (Frye et al., 2015; Holman, 2018; Meyer, 2013).

Racism and homophobia contribute to a host of poor health outcomes among BMSM (Dyer et al., 2012; Fields, Morgan, & Sanders, 2016; Paul, Boylan, Gregorich, Ayala, & Choi, 2014; Ports et al., 2017; Wilson et al., 2016). These include depression and other mental health disorders (Bogart et al., 2011; Brown, 2012; Choi, Paul, Ayala, Boylan, & Gregorich, 2013; Dyer et al., 2012; Haines et al., 2016; Myers et al., 2015; Ompad, Palamar, Krause, Kapadia, & Halkitis, 2016; Wohl et al., 2013; Yi, Turney, & Wildeman, 2017). In one prior study among Black sexual minority men, discrimination and harassment based on race and sexual orientation, along with internalized homophobia explained a majority of the variance in depression experienced by BMSM (Graham et al., 2011).

While some studies have examined the impact of racism and homophobia on the health of BMSM, few studies have explored whether BMSM attribute their experiences of discrimination to other social identities, such as their class/income and HIV status, which may also place themat increased risk for depression (Miners et al., 2014; Patel et al., 2018). A better understanding of BMSM's discrimination attributions may inform which specific types of social adversity hold significance in the production of psychological distress for this population. Furthermore, ascertaining these attributions may be insightful for the development of narrowly tailored interventions that seek to address discrimination and reduce depression among BMSM.

Discrimination Coping

The ability to cope with social stressors like racism, homophobia, and other forms of discrimination may mitigate the negative effects of discrimination on health outcomes like depression (Lewis, Cogburn, & Williams, 2015; Mossakowski, 2003). Coping is thought to occur as a result of an individual "constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Lazarus & Folkman, 1986, p. 141). Thus, BMSM might employ a variety of adaptive strategies, like meditation, and talking out their problems with another individual (Barnes & Hollingsworth, 2018; Carrico et al., 2017; Dangerfield, Williams, Bass, Wynter, & Bluthenthal, 2019), or maladaptive strategies, like drug use, as coping mechanisms for their experiences of discrimination attributed to race, sexual orientation, income, or other social identities and characteristics (Frye et al., 2015; Nelson, Walker, DuBois, & Giwa, 2014). Previous studies (Graham et al., 2011; Lewis et al., 2015; Mossakowski, 2003) demonstrate that coping changes the relationship between stressors, like discrimination, and depression and must be accounted for in analyses of health outcome data.

BMSM's experiences with multiple social stressors and depression underscore the pressing need to examine more thoroughly BMSM's trajectories with this mental illness and the factors that drive the health problem. It also highlights the pressing need to develop effective strategies for intervening on and improving BMSM's mental health outcomes. Additionally, increased morbidity and mortality risk for BMSM attributed, in part, to their experiences with depression highlight the need to better understand and subsequently address the factors that are driving their poor mental health outcomes. This present study sought to contribute a greater

understanding of depression among BMSM and the factors driving it. The present study accomplished this goal by
examining the effects of various types of discrimination on depression and investigating how coping affected the relationship between discrimination and depression among BMSM.

## METHODS

### Participants

To examine the relationships between discrimination, coping, and depression among BMSM, this present study used secondary data from the Promoting Our Worth, Equality, and Resilience (POWER) study. POWER is one of the largest collections of Black sexual and gender minority health and psychosocial data in existence. POWER research staff recruited participants from 2015-2017 at Black Pride events in six cities: Atlanta, GA; Detroit, MI; Houston, TX; Memphis, TN; Philadelphia, PA; and Washington, D.C. Individuals were eligible to participate in POWER if they: (1) were assigned male sex at birth; (2) currently identified as male, female, or transgender; (3) reported having at least one male sexual partner in their lifetime; (4) were 18 years or older; (5) were able to give informed consent in English; and (6) identified as "Black" or "African American". For the analyses in this present study, we used the same eligibility criteria, but excluded those who identified as female or transgender. The analytic sample for this present study was 3,510 individuals.

### Data Collection Procedures

The POWER study utilized time location sampling to recruit eligible participants. In each city, participant recruitment occurred at official Black Pride events during randomly selected two- hour time blocks. Black Pride events occurred over multiple days and time periods in each city. POWER research staff created the sampling frames for data collection by partitioning these days and time periods into two-hour blocks. The blocks were then randomly selected to determine when and where study recruitment would occur.

At each data collection site, the staff created intercept zones where eventgoers were counted, approached, and invited to participate in the study. POWER research staff approached and invited eventgoers to participate in the study. The staff used electronic tablets to screen potential participants for eligibility. Eligible participants completed an anonymous, self-administered behavioral health questionnaire (~20 minutes) on the same electronic tablet. In order to prevent duplication, each participant received a unique identifier code (Hammer et al., 2003). Participants received $10 for taking part in the study. The Institutional Review Board at the University of Pittsburgh approved all study procedures.

### Measures

Table 1 contains an overview of the measures used in the analyses for this present study. A brief description of the measures is included below.

*Dependent Variable*

**A. Depression.** The Center for Epidemiologic Studies Depression 10 (CES-D 10) measured past week depressive symptomatology (Zhang et al., 2012). We summed

**Table 1. Measures for Data Analyses**

| Measure | Details |
|---|---|
| **Predictors (*No, Yes, Don't Know, Refuse*)** | |
| Race discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because of your race? |
| Sexual orientation discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because you are gay or have sex with men? |
| HIV status discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior while because of your HIV status? |
| Gender ID discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior while because of your gender-identity/expression? |
| Income discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because of your income or social class? |
| Other discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because of some other reason? |
| **Moderators (*Strongly agree, Agree, Neither agree or disagree, Disagree, Strongly disagree, Don't Know, Refuse to Answer*)** | |
| Race coping | When I experience discrimination because of my race/ethnicity, I am able to cope with it. |
| Sexual orientation coping | When I experience discrimination because I have sex with men, I am able to cope with it |
| HIV status coping | When I experience discrimination because of my HIV status, I am able to cope with it. |
| Gender ID coping | When I experience discrimination because of my gender identity/expression, I am able to cope with it. |
| Income coping | When I experience discrimination because of my income or social class, I am able to cope with it. |
| Other coping | When I experience discrimination because of other reasons, I am able to cope with it. |
| **Outcomes (Rarely or none of the time: less than 1 day; Some of the time: 1-2 days; Occasionally or a moderate amount of time: 3-4 days; All of the time: 5-7 days; Don't Know; Refuse to Answer)** | |
| Depressed | I felt depressed. |
| Covariates | |
| Age | In what year were you born? |
| Healthcare Coverage | Do you currently have health insurance or health care coverage? |

| | |
|---|---|
| Gay tolerance | Most people where I live are tolerant of gays and bisexuals. |
| Partner abuse | In the past year, have you been in a relationship with a partner who has ever hit, kicked, slapped, beaten or in any other way physically assaulted you? |
| Family support | To what degree do you feel you receive support from your family? |

| | |
|---|---|
| Friends support | To what degree do you feel you receive support from your friends? |
| Church support | To what degree do you feel you receive support from your church? |
| Work support | To what degree do you feel you receive support from your work environment? |
| Gay support | To what degree do you feel you receive support from the gay community? |
| Black support | To what degree do you feel you receive support from the Black community? |
| Internalized homophobia (Scale) | I tried to stop being attracted to men in general. |
| | If someone had offered me the chance to be completely heterosexual, I would have accepted the chance. |
| | I wished I weren't attracted to men. |
| | I felt that being gay/bisexual was a personal shortcoming for me. |
| | I was happy to be attracted to men. |
| | I wanted to get professional help in order to change my sexual orientation to heterosexual. |
| | I tried to become more sexually attracted to women. |
| | I often felt it best to avoid personal or social involvement with other gay/bisexual men. |
| | I felt alienated from myself because of being gay/bisexual. |
| | I wished that I could have developed more erotic feelings about women. |
| Religiosity | How religious are you? |
| Education | What is the highest level of education you completed? |
| Employment status | What best describes your employment status? |
| Income | What would you say is your annual personal income before taxes? |
| Relationship status | What is your current relationship status? |
| Other types of discrimination | In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because of your…? |

the items to create a composite score for depression (alpha = 0.76). Scores ranged from 0 to 30 with higher scores indicating increased depressive symptomology. We categorized respondents with CES-D-10 scores ≥10 as "depressed" and "not depressed" if their score was <10 (Myers et al., 2015; Zhang et al., 2012)

*Independent Variables*

**A. Discrimination.** The original study staff created this measure using adapted measures from the 1995 Detroit Area Study and the MIDUS study for the YES Health Study (Williams et al., 2012). We evaluated six types of past-year discrimination experiences: (1) *racial*; (2) *sexual orientation*; (3) *HIV status*; (4) *gender identity*; (5) *income*; (6) *other*. Each type of discrimination was assessed with the following yes/no item: "In the past year, have you experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior because of your: (1) race; (2) sexual orientation; (3) HIV status; (4) gender identity; (5) income; or (6) some other reason?" **Moderators**

**A. Discrimination coping.** For participants who endorsed any type of discrimination, a participant's ability to cope with that type of discrimination was assessed with the following question: "When I experience discrimination because of my: (1) race; (2) sexual orientation; (3) HIV status; (4) gender identify; (5) income; or (6) other, I am able to cope with it." Each item was assessed using a Likert-type scale with response options of: 1 (*Strongly Agree*); 2 (*Agree*); 3 (*Neither Agree or Disagree*); 4 (*Disagree*); and 5 (*Strongly Disagree*).

*Covariates*

For covariates, we used several variables identified by previous studies as drivers of depression among samples primarily consisting of Black and other MSM. The variables include demographics (Jones-Webb & Snowden, 1993), internalized homophobia (Amola & Grimmett, 2015), intimate partner violence (Buller, Devries, Howard, & Bacchus, 2014), health care access (Reisner et al., 2009), social support (Ward & Mengesha, 2013), religiosity (Watkins et al., 2016), and gay tolerance (Owen-Smith et al., 2017). We used these variables as covariates to reduce the risk of a confounding effect on the relationship between discrimination and depression. We provide descriptions of the covariates below.

**A. Demographics.** Participants self-reported their age, level of education, income, employment status, and relationship status. Age was measured continuously in years. Education was assessed with four levels: less than high school, high school diploma, some college, and college diploma or more. Income was assessed using six levels: $0 - 9,999; $10,000 - 29,999; $30,000 - 49,999; $50,000 - 69,999; $70,000 - 89,999; and $90,000 and up. Six categories were used to assess employment status: full-time, part-time, full-time student, retired, unemployed, and other. Relationship status was assessed with six categories: married (legally recognized), married (not legally recognized), partnered, single, other. We created dummy variables for all categorical demographic variables prior to model inclusion.

**B. Recruitment Characteristics.** City of participation is defined as the city where participants attended a Black Pride event and completed their behavioral questionnaire (Atlanta, GA, Detroit, MI, Houston, TX, Memphis, TN, Philadelphia, PA, and Washington, DC). As a multi-year study, the original research staff coded participants using the city and year in which they completed the questionnaire (Year 1 – 2015, Year 2 – 2016, Year 3 – 2017).

**C. Internalized homophobia.** Internalized homophobia was measured using Herek's internalized homophobia (IHP) scale (Herek, Cogan, Gillis, & Glunt, 1998). Consistent

with existing literature (Herrick et al., 2013; Stall et al., 2003), individuals' were assigned continuous IHP scores using the sum of their responses to ten scale items (Table 1) (alpha = 0.91). Each item was assessed using a Likert-type scale with response options of: 1 (*Strongly Agree*); 2 (*Agree*); 3 (*Neither Agree or Disagree*); 4 (*Disagree*); and 5 (*Strongly Disagree*).

a. **Intimate Partner Violence.** Intimate Partner Violence was measured using the following item (0 = No; 1 = Yes): "In the past year, have you been in a relationship with a partner who has ever hit, kicked, slapped, beaten or in any other way physically assaulted you?"

b. **Health Care Access.** The original study assessed the presence of *Health Insurance Coverage* with the following item (0 = No; 1 = Yes): "Do you currently have health insurance or health care coverage?"

c. **Social Support**. The original study adapted the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988) to derive the amount of social support from six separate sources. The survey asked participants: "To what degree to you feel you receive support from your/the (1) family; (2) friends; (3) church; (4) work environment; (5) gay community; (6) Black community?" Each item was assessed using a Likert-type scale with response options of: 1 (*None*); 2 (*A Little*); 3 (*Somewhat*); and 4 (*A Lot*). For the present study, we created a social support index by adapting methods previously described in social science research (Ackerman & Cianciolo, 2000; Subramanyam et al., 2013). To create the index, we converted the raw scores for each source of social support into z-scores. We summed the z-scores to create a composite score that reflected the participants' level of social support (alpha = .88).

d. **Religiosity.** The following question assessed religiosity: "How religious are you?" Response options included: 1 (*Very*); 2 (*Somewhat*); 3 (*A Little*); 3 (*Not At All*) (Halkitis et al., 2009; Schlehofer, Omoto, & Adelman, 2008). We reverse coded the items in the analyses so that the higher response values represented higher religiosity in respondents.

e. **Gay Tolerance.** One question measured gay tolerance: "Most people where I live are tolerant of gays and bisexuals" (Francis & Mialon, 2010). Response options were as follows: 1 (*Strongly Agree*); 2 (*Agree*); 3 (*Neither Agree or Disagree*); 4 (*Disagree*); and 5 (*Strongly Disagree*).

Data Analysis

We conducted all analyses using SAS version 9.4. (SAS Institute Inc., Cary, NC). After an analysis of missing data indicated that the data were missing arbitrarily, we used listwise deletion to exclude from analyses those participants with incomplete responses to the measures of interest for this present study. We developed multivariable logistic regression models, adjusting for covariates, to test the main effect of each type of discrimination on BMSM's odds of being depressed.

We conducted moderation sub-analyses for each discrimination type that exhibited a statistically significant main effect in multivariable models. Multivariable models were developed to test if discrimination coping moderated the association between type-specific discrimination (race, sexuality, HIV status, income, gender, and other) and depression. Each sub-analysis model only included participants who reported experiencing the respective type of discrimination. For example, the race-specific model that assessed whether race discrimination coping attenuated the association between race-based discrimination and depression only included participants who reported experiencing racial discrimination.

## RESULTS

Participants

A total of 3510 from the available 3612 participant records comprised the analytic sample for this study. Participants in the study sample (Table 2) had an average age of 31.4 years (*SD* = 10.8). The majority reported at least a high school education (94.9%), an income less than $50,000 annually (72.7%), current full-time employment (69.1%), current healthcare insurance coverage (85.6%), and single as their marital status (78%). The proportion of the sample that experienced discrimination ranged from 7.4% for HIV-status-related discrimination to 21.6% for race-based discrimination. Some of the sample reported experiencing dual discrimination. This proportion ranged from 3.6% for experiences of HIV-status-related and other discrimination to 13.1% for experiences of race- and sexuality-based discrimination. Twenty-three percent of the sample (*n*=797) had CES-D scores at or above 10, indicating that they exhibited significant depressive symptoms.

Multivariable Models

Multivariable models (Table 3) demonstrated increased odds of being depressed among BMSM who experienced discrimination based on their race (*a**OR***=1.38, 95% *CI* = 1.08-1.76), sexual orientation (*a**OR***=1.32, 95% *CI* = 1.01-1.72), and HIV status (*a**OR***=1.53, 95% *CI* = 1.08-2.17). Gender-identity-based, income-based, and “Other” forms of discrimination exhibited no statistically significant association with depression among BMSM in the sample.

Multivariable models for the sub-analyses revealed that coping exerted inconsistent moderation effects on the relationship between racism, homophobia, and HIV-based discrimination and the odds of being depressed. For racism coping (Table 4), those who strongly agreed that they could cope with the race-based discrimination they experienced had significantly lower odds of depression when compared to those who agreed (*a**OR***= 0.66, 95% *CI* 0.44-0.99) and to those who neither agreed nor disagreed (*a**OR***=0.40, 95% *CI* = 0.23-0.67) that they possessed the ability to cope. However, we found no other significant moderating effect indicating that a greater self-reported ability to cope with racism attenuated the positive relationship between race discrimination and depression. These findings are similar to those from the models examining the moderating effect of coping on the relationships between sexuality- and HIV-based discrimination and depression.

For sexuality-based discrimination (Table 5), those who reported having this experience and strongly agreed that they could cope with it had significantly lower odds of depression than those who reported that they neither agreed nor disagreed (*a**OR***=0.30, 95% *CI* = 0.17-0.53) or disagreed (*a**OR***=0.28, 95% *CI* = 0.14-0.56) that they possessed homophobia coping abilities. Those who agreed that they possessed homophobia coping abilities also had significantly lower odds of depression than those who reported that they neither agreed nor disagreed (*a**OR***=0.46, 95% *CI* = 0.27-0.79) or disagreed (*a**OR***=0.42, 95% *CI* = 0.21-0.85) that they possessed these abilities. We found no other significant moderating effects on the relationship between sexuality- based discrimination and depression.

**Table 2. Demographics of Sample**

| Measure | Total (%) (*n*=3510) |
|---|---|
| **Age (mean)** | 31.4 years |
| **Education** | |
| Less than high school | 178 (5.1%) |
| High school graduate/GED | 749 (21.3%) |
| Some college | 1295 (36.9%) |
| College degree or more | 1288 (36.7%) |
| **Income** | |
| $0 - 9,999 | 653 (18.6%) |
| $10,000 - 29,999 | 925 (26.4%) |
| $30,000 - 49,999 | 971 (27.7%) |
| $50,000 - 69,999 | 532 (15.2%) |
| $70,000 - 89,999 | 275 (7.8%) |
| $90,000 and up | 154 (4.4%) |
| **Employment Status** | |
| Full-time | 2426 (69.1%) |
| Part-time | 363 (10.3%) |
| Full-time student | 125 (3.6%) |
| Retired | 100 (2.9%) |
| Unemployed | 388 (11.1%) |
| Other | 108 (3.1%) |
| **Current Healthcare Coverage** | |
| Yes | 3005 (85.6%) |
| No | 505 (14.4%) |
| **Marital/Cohabitating Status** | |
| Married, legally recognized | 109 (3.1%) |
| Married, not legally recognized | 55 (1.6%) |
| Partnered | 552 (15.7%) |
| Single | 2738 (78.0%) |
| Other | 56 (1.6%) |
| **CES-D (Depression) Scores** | |
| < 10 (Not Depressed) | 2713 (77.3%) |
| ≥ 10 (Depressed) | 797 (22.7%) |
| **Experienced Discrimination because of:** | |
| Race | 759 (21.6%) |
| Sexuality | 662 (18.9%) |
| HIV Status | 260 (7.4%) |
| Income | 373 (10.6%) |
| Gender Identity | 323 (9.2%) |
| Other | 284 (8.1%) |
| **Experienced Dual Discrimination because of:** | |
| Race and Sexuality | 459 (13.1%) |
| Race and HIV Status | 177 (5.0%) |
| Race and Income | 247 (7.0%) |

| | |
|---|---|
| Race and Gender Identity | 204 (5.8%) |
| Race and Other | 206 (5.9%) |
| | |
| Sexuality and HIV Status | 196 (5.6%) |
| Sexuality and Income | 237 (6.8%) |
| Sexuality and Gender Identity | 226 (6.4%) |
| Sexuality and Other | 205 (5.8%) |
| | |
| HIV Status and Income | 143 (4.1%) |
| HIV Status and Gender Identity | 144 (4.1%) |
| HIV Status and Other | 125 (3.6%) |
| | |
| Income and Gender Identity | 164 (4.7%) |
| Income and Other | 180 (5.1%) |
| | |
| Income and Other | 149 (4.3%) |

**Table 3. Odds Ratio for Depression by Type of Discrimination Experienced (n=3510)**

| Measure | Unadjusted Crude Odds Ratio (95% Confidence Interval) | Adjusted Odds Ratio (95% Confidence Interval) |
|---|---|---|
| Race Discrimination | **2.53 (2.12-3.01)** | **1.38 (1.08-1.76)** |
| Sexual Orientation Discrimination | **2.96 (2.47-3.55)** | **1.32 (1.01-1.72)** |
| HIV Status Discrimination | **4.30 (3.32-5.56)** | **1.53 (1.08-2.17)** |
| Gender Identity Discrimination | **3.51 (2.77-4.43)** | 1.19 (0.87-1.65) |
| Income Discrimination | **3.67 (2.94-4.58)** | 1.36 (0.99-1.81) |
| Other Discrimination | **4.05 (3.16-5.20)** | 1.20 (0.84-1.72) |

**Table 4. Impact of Coping on the Relationship between Racism and Depression (n=781)**

| Coping Ability | Strongly Agree | Agree | Neither Agree or Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **Strongly Agree** | | 0.66 (0.44-0.99)* | 0.40 (0.23-0.67)* | 0.58 (0.28-1.21) | 0.52 (0.19-1.45) |
| **Agree** | | | 0.60 (0.36-1.00) | 0.89 (0.43-1.84) | 0.79 (0.28-2.23) |
| **Neither Agree or Disagree** | | | | 1.47 (0.67-3.24) | 1.31 (0.44-3.87) |
| **Disagree** | | | | | 0.89 (0.27-2.96) |

Note. * denotes significant differences between specified category and those who Strongly Agreed.

Similar to race- and sexuality-based discrimination, those who reported experiencing discrimination because of their HIV status (Table 6) and indicated that they strongly agreed that they possessed the ability to cope with this type of discrimination had significantly lower odds of depression compared to those who reported that they neither agreed nor disagreed (***aOR***=0.28, 95% *CI* = 0.10-0.79) or disagreed (***aOR***=0.15, 95% *CI* = 0.05-0.46) that they possessed HIV discrimination coping abilities. Those who agreed that they possessed HIV discrimination coping abilities also had lower odds of depression when compared to those who disagreed that they had these abilities (***aOR***=0.33, 95% *CI* = 0.11-0.99). However, as with race and sexuality discrimination, we found no other moderating effect indicating that a greater self-reported ability to cope with HIV discrimination attenuated the positive relationship between this type of discrimination and depression.

**Table 5. Impact of Coping on the Relationship between Homophobia and Depression (n=681)**

| Coping Ability | Strongly Agree | Agree | Neither Agree or Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **Strongly Agree** | | 0.66 (0.41-1.05) | 0.30 (0.17-0.53)* | 0.28 (0.14-0.56)* | 0.36 (0.11-1.18) |
| **Agree** | | | 0.46 (0.27-0.79)^ | 0.42 (0.21-0.85)^ | 0.55 (0.17-1.79) |
| **Neither Agree or Disagree** | | | | 0.91 (0.43-1.95) | 1.19 (0.35-4.02) |
| **Disagree** | | | | | 1.30 (0.37-4.62) |

Note. * denotes significant differences between specified category and those who Strongly Agreed. ^ denotes significant differences between specified category and those who Agreed.

**Table 6. Impact of Coping on the Relationship between HIV Discrimination and Depression (n=272)**

| Coping Ability | Strongly Agree | Agree | Neither Agree or Disagree | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **Strongly Agree** | | 0.44 (0.19-1.01) | 0.28 (0.10-0.79)* | 0.15 (0.05-0.46)* | 0.49 (0.11-2.24) |
| **Agree** | | | 0.63 (0.23-1.72) | 0.33 (0.11-0.99)^ | 1.18 (0.25-5.01) |
| **Neither Agree or Disagree** | | | | 0.52 (0.15-1.87) | 1.76 (0.36-8.73) |
| **Disagree** | | | | | 3.38 (0.62-18.50) |

Note. * denotes significant differences between specified category and those who Strongly Agreed. ^ denotes significant differences between specified category and those who Agreed.

## DISCUSSION

The primary purpose of this study was to contribute to a greater understanding of depression among BMSM and of how various types of discrimination contribute to this health problem. Twenty-three percent of the sample in this study exhibited significant depressive symptoms, which is significantly greater than findings from studies involving the general population of the United States (National Institute of Mental Health, 2017). These data provide additional support for the assertions of major depression disparities existing among BMSM when compared to other social groups in the United States.

Consistent with prior studies (Hudson, Neighbors, Geronimus, & Jackson, 2016; Krieger, 2014; Pascoe & Smart Richman, 2009; Rueda et al., 2016; Slater, Godette, Huang, Ruan, & Kerridge, 2017), the results of our analyses demonstrate that subjection to discrimination based on race, sexual orientation, and HIV status all make a significant, independent contribution to BMSM's risk for depression. BMSM's situation at the intersection of two marginalized identities-- Black and MSM—often means that they are exposed to multiple forms of discrimination. While these various types of discrimination may be linked, we aimed to identify the types of discrimination that are most salient to BMSM as they relate to experiences of depression. Follow-up analyses may be integral to informing how types of marginalization co-occur to impact depression.

Despite the need to further clarify how various types of discrimination interact with one another, the deleterious effects of various types of discrimination on the mental health of BMSM, found in this and other studies (Bogart et al., 2011; Brown, 2012; Choi et al., 2013; Dyer et al., 2012; Haines et al., 2016; Myers et al., 2015; Ompad et al., 2016; Wohl et al., 2013; Yi et al., 2017) suggest that implementing primary prevention strategies to reduce BMSM's experiences of discrimination may reduce their risk for depression. These prevention strategies could include activities such as community-level anti-racism, -homophobia, and -HIV-stigma campaigns that

promote empathy and acceptance of marginalized groups (i.e., BMSM) by the larger society (Cahill, Valadéz, & Ibarrola, 2013; Frye et al., 2017; Vaughan, Rosenberg, & Sullivan, 2014). Many anti-discrimination strategies target bullying in school settings. Very few of these strategies address stigma and discrimination at the community level (Frye et al., 2017). Such community-level efforts could have far-reaching effects in communities to reduce the amount of discrimination that BMSM might encounter. One promising example of this community-level strategy is the "I Love My Boo" social marketing campaign implemented in New York City by GMHC. The goal of this campaign was to promote visibility, understanding, and acceptance of Black and Latino men who have sex with men (Cahill et al., 2013). Another example is Project CHHANGE (Challenge HIV Stigma and Homophobia and Gain Empowerment). This community-level anti-HIV-stigma and -homophobia intervention was intended to increase access to HIV prevention and treatment services (Frye et al., 2017). Reducing or eliminating the amount of discrimination encountered by BMSM in their communities can help to reduce depression disparities and have positive and long-lasting effects on the mental well-being of this vulnerable population.

The secondary purpose of this study was to examine how the self-reported ability to cope with experienced discrimination influences the relationship between the respective manifestation of discrimination (e.g., homophobia, racism, HIV-related) and the odds of depression for BMSM. The present study's findings revealed inconsistent moderation effects. Some, but not all, of the higher levels of coping significantly attenuated the positive association between racism, homophobia, and HIV-based discrimination and depression. Several scenarios could explain why coping inconsistently moderated these relationships. First, how the individuals in each coping level group defined coping may help to explain this inconsistent effect. For example, some respondents who report the ability to cope may utilize problem-focused coping. This style of coping usually entails an individual holding the belief that they can successfully cope with a stressor like race- or sexuality-based discrimination by changing the social and/or physical environmental conditions that expose them to these and other forms of discrimination (Colella & King, 2018; Lazarus, 1993). Essentially, those who utilize this style of coping believe that they can reduce or eliminate the discrimination that they face.

Conversely, some respondents may adopt emotion-focused coping. Those who use this style of coping are less inclined to believe that they have the power to reduce or eliminate discrimination. Instead, they cope by trying to control their emotional reaction, how much attention they pay, or the meaning they ascribe to the discrimination they face (Colella & King, 2018; Lazarus, 1993). Emotion-focused coping, when compared to problem-focused coping, tends to be less effective and more correlated with negative health outcomes like depression (Noh & Kaspar, 2003; Petersen, 1992; Sadaghiani, 2013; Völlink, Bolman, Eppingbroek, & Dehue, 2013). Determining the type of coping used by the respondents may help to explain some of the variations and inconsistencies in the effects of coping on the relationship between discrimination and depression. A measure of coping type was not included in the data set used for this secondary data analysis. Future research should account for such a measure in analyses focused on coping, discrimination, and depression among BMSM.

Similarly, future research on coping, discrimination, and depression among BMSM should account for the style of coping, adaptive vs. maladaptive, used by respondents. This may help to resolve some of the inconsistent moderation effects observed in our analyses. How BMSM perceive, interpret, and evaluate the discrimination they face can determine whether they

utilize adaptive or maladaptive coping strategies (Bowman, 1989). Adaptive coping styles, like those sometimes used in problem-focused coping (e.g., working to eliminate discrimination), may help to attenuate the positive relationship between discrimination and depression. Conversely, maladaptive coping styles, like those sometimes used in emotion-focused coping (e.g., dissociation) may not have attenuating effects, or may in fact have exacerbating effects on the relationship between discrimination and depression for BMSM. We were unable to ascertain the distribution of coping styles from the data used for this secondary data analysis. Future research examining the direct and interactive effects of coping may yield a clearer and more nuanced understanding of how coping style affects the relationship between discrimination and depression for BMSM.

In addition to differences in coping style and type, the inherent nature of coping may also explain the inconsistent moderation results found in this study. While coping has been found to have positive health effects, these effects are not always consistent nor predictable and vary by the contexts in which they occur (Colella & King, 2018; DeLongis & Holtzman, 2005). For example, a strong belief in one's own ability to cope with discrimination in the context of living in a rural, socially conservative area may have less of a positive effect on depression outcomes when compared to having that same belief in an urban, more socially progressive area where there are likely more individuals and resources to combat discrimination. Variation in coping effects by context suggest that further research is needed to account for it in examinations of the relationship between discrimination and depression. Further research in this area should continue to examine the patterns of health effects associated with coping among BMSM and the factors that cause the variations in these patterns.

Variations in coping effects observed in our analyses partially support the assertion that coping has an attenuating effect on the positive relationship between discrimination and depression. The odds of depression were lower for some higher discrimination coping ability groups when compared to lower discrimination coping ability groups. Given the attenuating, albeit inconsistent, effect of coping on the relationship between discrimination and depression, health promotion strategies to address depression among BMSM could also focus on building their ability to cope with the various forms of discrimination they encounter. Intervention strategies might include resilience-building approaches such as aiding BMSM in accessing community resources that assist them in identifying and utilizing healthy coping strategies when faced with various forms of discrimination. In turn, these strategies may minimize the associated negative health consequences of race-, sexuality-, and HIV-based discrimination and decrease the odds of BMSM exhibiting depressive symptoms. Examples of these types of health promotion strategies can be found in Bogart and colleagues' description of a pilot intervention for discrimination-related coping among HIV positive BMSM (Bogart et al., 2018) and in Della, et al.'s description of strategies for managing heterosexism used among BMSM (Della, Wilson, & Miller, 2002).

Limitations and Strengths

Readers should consider the results and recommendations of this present study in light of the following limitations. First, this study used cross-sectional data, which prevented us from establishing temporality or causality. Secondly, this study relied on self-reported data. Therefore, it may have underestimated experiences of discrimination and depression or overestimated respondents' ability to cope due to social desirability bias. However, the original study personnel were trained to practice non-judgement with participants. The study personnel strived to provide

a safe and private environment for respondents to complete the depression and coping survey questions.

A third limitation of this study is the makeup of the analytic sample. It consisted of BMSM attending Black Pride events in six large U.S. cities. Therefore, the results from this study are not generalizable to all BMSM. Additionally, the use of listwise deletion may have led to a loss of information about some participants and this study population. However, to respond to these limitations, the study obtained a large sample of BMSM to increase the statistical power for conducting data analyses.

The use of secondary data in our analyses is another limitation of this study. We were limited to using the measures contained in the original study. This limitation prevented us from asking more direct and probing questions to BMSM about their experiences of discrimination, coping, and depression using valid and/or well-established measures for these items.

The use of some non-validated measures in this study (e.g., Intimate Partner Violence, Social Support, Gay Tolerance) is another limitation of this study. These measures were included in the original study due to their demonstrated effect on the mental and physical health of BMSM and other sexual and racial minorities (Buller et al., 2014; Dyer et al., 2012; Owen-Smith et al., 2017; Ward & Mengesha, 2013). While the measures used in our study have not previously been validated, they are informed by other validated measures of these constructs (Basile, Hertz, & Black, 2007; Francis & Mialon, 2010; Zimet et al., 1988). Validation of the measures used in this study should take place in future studies using those variables.

The use of single-item measures for discrimination and coping is another potential limitation of this study. More research is needed to determine the reliability of using such measures in studies with BMSM. Dichotomizing the depression variable may have led to a reduction in power and loss of information about the nature of depression in this population. However, obtaining a large sample size mitigated the risk of having underpowered analyses. Additionally, dichotomizing the depression variable allowed for a more meaningful interpretation of the results related to the odds that BMSM are experiencing significant depression symptoms.

Lastly, the understanding of respondents' experiences of discrimination and coping may be limited due to the makeup of the analytic sample and the nature of how study staff asked the questions on discrimination and coping questions. The survey completed by respondents only inquired about certain forms of discrimination (e.g., based on race, sexual orientation) but not about others (e.g., body type or other physical characteristics) that may affect one's odds of experiencing depression. However, to address this limitation the survey asked respondents about their experiences with a relatively broad set (six dimensions) of discrimination.

Despite the limitations, time location sampling, the sampling approach used in the original study, allowed the study staff to interact with and ascertain health information from many participants who may not have previously interacted with a research study, especially outside of a clinical setting. The study utilized data from one of the largest collections of Black sexual and gender minority health information in the U.S and helps to move the field of public health forward in its understanding of depression among BMSM—a highly marginalized group with disproportionate rates of and risk for depression when compared to the general adult population.

## CONCLUSION

BMSM are at elevated risk for exposure to multiple forms of discrimination based on race,

sexuality, HIV status and other social characteristics. Experiences of multiple marginalization is a strong correlate of psychological distress and is likely a major contributor to the depression disparities experienced by BMSM in the United States. Depression among BMSM continues to be an understudied area of research. However, the findings from this study and others on the magnitude of depression clearly demonstrate that depression is a major health problem among BMSM. BMSM's higher rates of depression and depression-related problems (e.g., HIV, violence, substance use) when compared to the general population underscore that this health problem warrants additional research and intervention. Our findings move forward the public health field with a greater understanding of the impact of depression among BMSM and of how coping can affect the relationship between discrimination and depression. These findings can inform research and practice efforts aimed at addressing discrimination and depression among this population. Such efforts can reduce discrimination and depression among BMSM, eliminate mental health disparities, and facilitate optimal mental health for this highly vulnerable group.

**REFERENCES**

Ackerman, P. L., & Cianciolo, A. T. (2000). Cognitive, perceptual-speed, and psychomotor determinants of individual differences during skill acquisition. *J Exp Psychol Appl, 6*(4), 259-290.

Alvy, L. M., McKirnan, D. J., Mansergh, G., Koblin, B., Colfax, G. N., Flores, S. A., & Hudson, S. (2011). Depression is associated with sexual risk among men who have sex with men, but is mediated by cognitive escape and self-efficacy. *AIDS Behav, 15*(6), 1171-1179. doi:10.1007/s10461-010-9678-z

Amola, O., & Grimmett, M. A. (2015). Sexual identity, mental health, HIV risk behaviors, and internalized homophobia among black men who have sex with men. *Journal of Counseling & Development, 93*(2), 236-246.

Barnes, S. L., & Hollingsworth, C. (2018). Spirituality and Social Media: The Search for Support Among Black Men Who Have Sex With Men in Tennessee. *J Homosex*, 1-25.

Basile, K. C., Hertz, M. F., & Black, S. E. (2007). Intimate partner violence and sexual violence victimization assessment instruments for use in healthcare settings. Version 1.

Bogart, L., Dale, S., Daffin, G., Patel, K., Klein, D., Mayer, K., & Pantalone, D. (2018). Pilot intervention for discrimination-related coping among HIV-positive Black sexual minority men. *Cultur Divers Ethnic Minor Psychol*.

Bogart, L., Wagner, G. J., Galvan, F. H., Landrine, H., Klein, D. J., & Sticklor, L. A. (2011). Perceived discrimination and mental health symptoms among Black men with HIV. *Cultur Divers Ethnic Minor Psychol, 17*(3), 295-302. doi:10.1037/a0024056

Bowleg, L. (2013). "Once you've blended the cake, you can't take the parts back to the main ingredients": Black gay and bisexual men's descriptions and experiences of intersectionality. *Sex Roles, 68*(11-12), 754-767.

Bowman, P. J. (1989). Research perspectives on Black men: Role strain and adaptation across the adult life cycle. *Black adult development and aging*, 117-150.

Brown, A. (2012). With poverty comes depression, more than other illnesses. *Gallup Wellbeing. Retrieved March, 7*, 2012.

Buller, A. M., Devries, K. M., Howard, L. M., & Bacchus, L. J. (2014). Associations between intimate partner violence and health among men who have sex with men: a systematic

review and meta-analysis. *PLoS medicine, 11*(3), e1001609.

Cahill, S., Valadéz, R., & Ibarrola, S. (2013). Community-based HIV prevention interventions that combat anti-gay stigma for men who have sex with men and for transgender women. *Journal of public health policy, 34*(1), 69-81.

Carrico, A. W., Storholm, E. D., Flentje, A., Arnold, E. A., Pollack, L. M., Neilands, T. B., . . . Johnson, W. (2017). Spirituality/religiosity, substance use, and HIV testing among young black men who have sex with men. *Drug and alcohol dependence, 174*, 106-112.

Choi, K. H., Paul, J., Ayala, G., Boylan, R., & Gregorich, S. E. (2013). Experiences of discrimination and their impact on the mental health among African American, Asian and Pacific Islander, and Latino men who have sex with men. *Am J Public Health, 103*(5), 868-874. doi:10.2105/ajph.2012.301052

Cochran, S. D., & Mays, V. M. (1994). Depressive distress among homosexually active African American men and women. *Am J Psychiatry, 151*(4), 524-529. doi:10.1176/ajp.151.4.524

Colella, A., & King, E. (2018). *The Oxford handbook of workplace discrimination*: Oxford University Press.

Corliss, H. L., Wadler, B. M., Jun, H.-J., Rosario, M., Wypij, D., Frazier, A. L., & Austin, S. B. (2012). Sexual-orientation disparities in cigarette smoking in a longitudinal cohort study of adolescents. *Nicotine & Tobacco Research, 15*(1), 213-222.

Crawford, I., Allison, K. W., Zamboni, B. D., & Soto, T. (2002). The influence of dual-identity development on the psychosocial functioning of African-American gay and bisexual men. *J Sex Res, 39*(3), 179-189. doi:10.1080/00224490209552140

Crenshaw, K. (1989). Demarginalizing the intersection of race and sex: A black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *U. Chi. Legal F.*, 139.

Dangerfield, D. T., Williams, J. E., Bass, A. S., Wynter, T., & Bluthenthal, R. N. (2019). Exploring Religiosity and Spirituality in the Sexual Decision-Making of Black Gay and Bisexual Men. *Journal of religion and health*, 1-11.

De Santis, J. P., & Vasquez, E. P. (2011). A pilot study to evaluate ethnic/racial differences in depressive symptoms, self-esteem, and sexual behaviors among men who have sex with men. *Journal of Gay & Lesbian Social Services, 23*(2), 147-164.

Della, B., Wilson, M., & Miller, R. L. (2002). Strategies for managing heterosexism used among African American gay and bisexual men. *Journal of Black psychology, 28*(4), 371-391.

DeLongis, A., & Holtzman, S. (2005). Coping in context: The role of stress, social support, and personality in coping. *Journal of personality, 73*(6), 1633-1656.

Dyer, T. P., Shoptaw, S., Guadamuz, T. E., Plankey, M., Kao, U., Ostrow, D., . . . Stall, R. (2012). Application of syndemic theory to black men who have sex with men in the Multicenter AIDS Cohort Study. *J Urban Health, 89*(4), 697-708. doi:10.1007/s11524-012-9674-x

Fields, E., Morgan, A., & Sanders, R. A. (2016). The Intersection of Sociocultural Factors and Health-Related Behavior in Lesbian, Gay, Bisexual, and Transgender Youth: Experiences Among Young Black Gay Males as an Example. *Pediatr Clin North Am, 63*(6), 1091-1106. doi:10.1016/j.pcl.2016.07.009

Francis, A. M., & Mialon, H. M. (2010). Tolerance and HIV. *Journal of Health Economics, 29*(2), 250-267.

Friedman, M. R., Bukowski, L., Eaton, L. A., Matthews, D. D., Dyer, T. V., Siconolfi, D., & Stall, R. (2018). Psychosocial Health Disparities Among Black Bisexual Men in the US.

Frye, V., Nandi, V., Egan, J., Cerda, M., Greene, E., Van Tieu, H., . . . Baez, E. (2015). Sexual orientation-and race-based discrimination and sexual HIV risk behavior among urban MSM. *AIDS Behav, 19*(2), 257-269.

Frye, V., Paige, M. Q., Gordon, S., Matthews, D., Musgrave, G., Kornegay, M., . . . Taylor-Akutagawa, V. (2017). Developing a community-level anti-HIV/AIDS stigma and homophobia intervention in new York city: The project CHHANGE model. *Evaluation and program planning, 63*, 45-53.

Gelenberg, A. J. (2010). The prevalence and impact of depression. *J Clin Psychiatry, 71*(3), e06. doi:10.4088/JCP.8001tx17c

Graham, L. F., Aronson, R. E., Nichols, T., Stephens, C. F., & Rhodes, S. D. (2011). Factors Influencing Depression and Anxiety among Black Sexual Minority Men. *Depress Res Treat, 2011*, 587984. doi:10.1155/2011/587984

Haines, C. F., Fleishman, J. A., Yehia, B. R., Lau, B., Berry, S. A., Agwu, A. L., . . . Gebo, K. A. (2016). Closing the Gap in Antiretroviral Initiation and Viral Suppression: Time Trends and Racial Disparities. *J Acquir Immune Defic Syndr, 73*(3), 340-347. doi:10.1097/qai.0000000000001114

Halkitis, P. N., Mattis, J. S., Sahadath, J. K., Massie, D., Ladyzhenskaya, L., Pitrelli, K., . . . Cowie, S.-A. E. (2009). The meanings and manifestations of religion and spirituality among lesbian, gay, bisexual, and transgender adults. *Journal of Adult Development, 16*(4), 250-262.

Hammer, G. P., Kellogg, T. A., McFarland, W. C., Wong, E., Louie, B., Williams, I., . . . Klausner, J. D. (2003). Low incidence and prevalence of hepatitis C virus infection among sexually active non-intravenous drug-using adults, San Francisco, 1997-2000. *Sex Transm Dis, 30*(12), 919-924. doi:10.1097/01.OLQ.0000091152.31366.E6

Herek, G. M., Cogan, J. C., Gillis, J. R., & Glunt, E. K. (1998). Correlates of Internalized Homophobia in a Community Sample of Lesbians and Gay Men. *Journal of the Gay and Lesbian Medical Association, 2*, 10.

Herrick, A. L., Stall, R., Chmiel, J. S., Guadamuz, T. E., Penniman, T., Shoptaw, S., . . . Plankey, M. W. (2013). It gets better: resolution of internalized homophobia over time and associations with positive health outcomes among MSM. *AIDS Behav, 17*(4), 1423-1430. doi:10.1007/s10461-012-0392-x

Holman, E. G. (2018). Theoretical Extensions of Minority Stress Theory for Sexual Minority Individuals in the Workplace: A Cross-Contextual Understanding of Minority Stress Processes. *Journal of Family Theory & Review, 10*(1), 165-180.

Hudson, D. L., Neighbors, H. W., Geronimus, A. T., & Jackson, J. S. (2016). Racial discrimination, John Henryism, and depression among African Americans. *Journal of Black psychology, 42*(3), 221-243.

Jeffries, W. L. t., Marks, G., Lauby, J., Murrill, C. S., & Millett, G. A. (2013). Homophobia is associated with sexual behavior that increases risk of acquiring and transmitting HIV infection among black men who have sex with men. *AIDS Behav, 17*(4), 1442-1453. doi:10.1007/s10461-012-0189-y

Jerome, R. C., & Halkitis, P. N. (2009). Stigmatization, stress, and the search for belonging in Black men who have sex with men who use methamphetamine. *Journal of Black psychology, 35*(3), 343-365.

Jones-Webb, R. J., & Snowden, L. R. (1993). Symptoms of depression among blacks and whites. *Am J Public Health, 83*(2), 240-244.

Krieger, N. (2014). Discrimination and health inequities. *International Journal of Health Services, 44*(4), 643-710.

Kuhns, L. M., Hotton, A. L., Garofalo, R., Muldoon, A. L., Jaffe, K., Bouris, A., . . . Schneider, J. (2016). An index of multiple psychosocial, syndemic conditions is associated with antiretroviral medication adherence among HIV-positive youth. *AIDS Patient Care STDS, 30*(4), 185-192.

Lazarus, R. S. (1993). Coping theory and research: Past, present, and future. *Fifty years of the research and theory of RS Lazarus: An analysis of historical and perennial issues*, 366-388.

Lazarus, R. S., & Folkman, S. (1986). Stress, Appraisal, and Coping. *New York: pringer*.

Lewis, T. T., Cogburn, C. D., & Williams, D. R. (2015). Self-reported experiences of discrimination and health: scientific advances, ongoing controversies, and emerging issues. *Annual review of clinical psychology, 11*, 407-440.

Loiacano, D. K. (1989). Gay identity issues among Black Americans: Racism, homophobia, and the need for validation. *Journal of Counseling & Development, 68*(1), 21-25.

Maulsby, C., Millett, G., Lindsey, K., Kelley, R., Johnson, K., Montoya, D., & Holtgrave, D. (2014). HIV among Black men who have sex with men (MSM) in the United States: a review of the literature. *AIDS Behav, 18*(1), 10-25. doi:10.1007/s10461-013-0476-2

McKirnan, D. J., Tolou-Shams, M., Turner, L., Dyslin, K., & Hope, B. (2006). Elevated risk for tobacco use among men who have sex with men is mediated by demographic and psychosocial variables. *Substance use & misuse, 41*(8), 1197-1208.

Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of health and social behavior*, 38-56.

Meyer, I. H. (2013). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence.

Miners, A., Phillips, A., Kreif, N., Rodger, A., Speakman, A., Fisher, M., . . . Sherr, L. (2014). Health-related quality-of-life of people with HIV in the era of combination antiretroviral treatment: a cross-sectional comparison with the general population. *The lancet HIV, 1*(1), e32-e40.

Mossakowski, K. N. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *Journal of health and social behavior*, 318-331.

Myers, H. F., Wyatt, G. E., Ullman, J. B., Loeb, T. B., Chin, D., Prause, N., . . . Liu, H. (2015). Cumulative burden of lifetime adversities: Trauma and mental health in low-SES African Americans and Latino/as. *Psychol Trauma, 7*(3), 243-251. doi:10.1037/a0039077

National Institute of Mental Health. (2017). Major Depression. Retrieved from https://www.nimh.nih.gov/health/statistics/major-depression.shtml.

Nelson, L. E., Walker, J. N. J., DuBois, S. N., & Giwa, S. (2014). Your blues ain't like mine: considering integrative antiracism in HIV prevention research with black men who have sex with men in C anada and the U nited S tates. *Nursing inquiry, 21*(4), 270-282.

Noh, S., & Kaspar, V. (2003). Perceived discrimination and depression: Moderating effects of coping, acculturation, and ethnic support. *Am J Public Health, 93*(2), 232-238.

Ompad, D. C., Palamar, J. J., Krause, K. D., Kapadia, F., & Halkitis, P. N. (2016). Reliability and

Validity of a Material Resources Scale and Its Association With Depression Among Young Men Who Have Sex With Men: The P18 Cohort Study. *Am J Mens Health*. doi:10.1177/1557988316651206

Owen-Smith, A. A., Sineath, C., Sanchez, T., Dea, R., Giammattei, S., Gillespie, T., . . . Roblin, D. (2017). Perception of community tolerance and prevalence of depression among transgender persons. *Journal of gay & lesbian mental health, 21*(1), 64-76.

Pascoe, E. A., & Smart Richman, L. (2009). Perceived discrimination and health: a meta-analytic review. *Psychological bulletin, 135*(4), 531.

Patel, V., Burns, J. K., Dhingra, M., Tarver, L., Kohrt, B. A., & Lund, C. (2018). Income inequality and depression: a systematic review and meta-analysis of the association and a scoping review of mechanisms. *World Psychiatry, 17*(1), 76-89.

Paul, J. P., Boylan, R., Gregorich, S., Ayala, G., & Choi, K. H. (2014). Substance use and experienced stigmatization among ethnic minority men who have sex with men in the United States. *J Ethn Subst Abuse, 13*(4), 430-447. doi:10.1080/15332640.2014.958640

Petersen, A. C. (1992). Depression in Adolescence: Current Knowledge, Research Directions, and Implications for Programs and Policy.

Ports, K. A., Lee, R. D., Raiford, J., Spikes, P., Manago, C., & Wheeler, D. P. (2017). Adverse Childhood Experiences and Health and Wellness Outcomes among Black Men Who Have Sex with Men. *J Urban Health, 94*(3), 375-383. doi:10.1007/s11524-017-0146-1

Reisner, S. L., Mimiaga, M. J., Skeer, M., Bright, D., Cranston, K., Isenberg, D., . . . Mayer, K. H. (2009). Clinically significant depressive symptoms as a risk factor for HIV infection among black MSM in Massachusetts. *AIDS Behav, 13*(4), 798-810. doi:10.1007/s10461-009-9571-9

Rueda, S., Mitra, S., Chen, S., Gogolishvili, D., Globerman, J., Chambers, L., . . . Morassaei, S. (2016). Examining the associations between HIV-related stigma and health outcomes in people living with HIV/AIDS: a series of meta-analyses. *BMJ open, 6*(7), e011453.

Sadaghiani, N. S. K. (2013). The comparison of coping styles in depressed, anxious, under stress individuals and the normal ones. *Procedia-Social and Behavioral Sciences, 84*, 615-620.

Schlehofer, M. M., Omoto, A. M., & Adelman, J. R. (2008). How do “religion” and “spirituality” differ? Lay definitions among older adults. *Journal for the Scientific Study of Religion, 47*(3), 411-425.

Slater, M. E., Godette, D., Huang, B., Ruan, W. J., & Kerridge, B. T. (2017). Sexual orientation-based discrimination, excessive alcohol use, and substance use disorders among sexual minority adults. *LGBT health, 4*(5), 337-344.

Stall, R., Mills, T., Williamson, J., Hart, T., Greenwood, G., Paul, J., . . . Catania, J. (2003). Association of Co-Occurring Psychosocial Health Problems and Increased Vulnerability to HIV/AIDS Among Urban Men Who Have Sex With Men *Am J Public Health, 93*(6), 4.

Stokes, J. P., & Peterson, J. L. (1998). Homophobia, self-esteem, and risk for HIV among African American men who have sex with men. *AIDS Educ Prev, 10*(3), 278-292.

Subramanyam, M. A., James, S. A., Diez-Roux, A. V., Hickson, D. A., Sarpong, D., Sims, M., . . . Wyatt, S. B. (2013). Socioeconomic status, John Henryism and blood pressure among African-Americans in the Jackson Heart Study. *Soc Sci Med, 93*, 139-146. doi:10.1016/j.socscimed.2013.06.016

Vaughan, A. S., Rosenberg, E. S., & Sullivan, P. S. (2014). Spatial relationships between gay

stigma, poverty, and HIV infection among black and white men who have sex with men in Atlanta. *AIDS research and human retroviruses, 30*(8), 740-741.

Voisin, D. R., Hotton, A. L., Schneider, J. A., & Team, U. S. (2017). The relationship between life stressors and drug and sexual behaviors among a population-based sample of young Black men who have sex with men in Chicago. *AIDS Care, 29*(5), 545-551.

Völlink, T., Bolman, C., Eppingbroek, A., & Dehue, F. (2013). Emotion-focused coping worsens depressive feelings and health complaints in cyberbullied children. *Journal of Criminology, 2013*.

Ward, E., & Mengesha, M. (2013). Depression in African American men: A review of what we know and where we need to go from here. *American Journal of Orthopsychiatry, 83*(2pt3), 386-397.

Watkins, T. L., Simpson, C., Cofield, S. S., Davies, S., Kohler, C., & Usdan, S. (2016). The relationship of religiosity, spirituality, substance abuse, and depression among black men who have sex with men (MSM). *Journal of religion and health, 55*(1), 255-268.

Williams, D. R., John, D. A., Oyserman, D., Sonnega, J., Mohammed, S. A., & Jackson, J. S. (2012). Research on discrimination and health: an exploratory study of unresolved conceptual and measurement issues. *Am J Public Health, 102*(5), 975-978.

Wilson, P. A., Valera, P., Martos, A. J., Wittlin, N. M., Muñoz-Laboy, M. A., & Parker, R. G. (2016). Contributions of qualitative research in informing HIV/AIDS interventions targeting Black MSM in the United States. *The Journal of Sex Research, 53*(6), 642-654.

Wohl, A. R., Galvan, F. H., Carlos, J. A., Myers, H. F., Garland, W., Witt, M. D., . . . George, S. (2013). A comparison of MSM stigma, HIV stigma and depression in HIV-positive Latino and African American men who have sex with men (MSM). *AIDS Behav, 17*(4), 1454-1464. doi:10.1007/s10461-012-0385-9

Yi, Y., Turney, K., & Wildeman, C. (2017). Mental Health Among Jail and Prison Inmates. *Am J Mens Health, 11*(4), 900-909. doi:10.1177/1557988316681339

Zhang, W., O'Brien, N., Forrest, J. I., Salters, K. A., Patterson, T. L., Montaner, J. S., . . . Lima, V. D. (2012). Validating a shortened depression scale (10 item CES-D) among HIV-positive people in British Columbia, Canada. *PLoS One, 7*(7), e40793. doi:10.1371/journal.pone.0040793

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of personality assessment, 52*(1), 30-41.