5-10-2018

The Association Between Internalized Homophobia, Stigma, Racism, Religion and Sexual Risk Behaviors in Young African American Men who have sex with Men in Jackson, MS

Dorian Freeman

ABSTRACT

THE ASSOCIATION BETWEEN INTERNALIZED HOMOPHOBIA, RACISM, RELIGION, STIGMA AND SEXUAL RISK BEHAVIORS AMONG YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN IN JACKSON, MISSISSIPPI

BY

DORIAN PATRICE FREEMAN

APRIL 18, 2018

INTRODUCTION: The HIV/AIDS epidemic has had a troubling affect across all racial/ethnic groups but has disproportionately exacted its greatest toll on African Americans, specifically, African American men who have sex with men (AAMSM), inclusive of any man who has had sexual contact with another man. In 2015, among all gay and bisexual men who received an HIV diagnosis in the U.S., African Americans accounted for the highest number (10,315; 39%), followed by whites (7,570; 29%) and Hispanics/Latinos (7,013; 27%)(CDC, 2017). Despite an overall decline in HIV diagnoses in African Americans between 2005-2014, conversely a 22% increase in HIV diagnosis was observed in African American gay and bisexual men during that same period, with HIV diagnoses among African American gay and bisexual men aged 13 to 24 increasing 87% (CDC, 2017). If current diagnosis rates continue, 1 in 6 gay and bisexual men will be diagnosed with HIV in their lifetime, including 1 in 2 black/African American gay and bisexual men, 1 in 4 Hispanic/Latino gay and bisexual men, and 1 in 11 white gay and bisexual men (CDC, 2017). Therefore, Black MSM (BMSM) in the United States are now experiencing rates of HIV infection that rival those among the general population in the developing world (Peterson & Jones, 2009). Studies to date have demonstrated that racial HIV disparities are not explained by individual behavioral factors alone, nor higher rates of substance use, or a higher number of sexual partners in BMSM, therefore these findings have prompted exploration into a broader array of social, structural, and contextual factors experienced by minority MSM that may explain HIV disparities (Quinn et al., 2015).

AIM: To examine the association between Internalized homophobia, stigma, racism, and religion and sexual risk behaviors, sexual identity and HIV testing frequency among young AAMSM in Jackson, MS.

METHODS: A total of 600 young MSM were eligible to participant in the study. Study participants were recruited from two federally funded clinics specializing in the diagnosis and treatment of STIs, including HIV. Participants were also recruited through social media, attending bars and nightclubs. Inclusion criteria included: (1) assigned male at birth; (2) self-identification as Black/African American; (3) 15-29 years of age; (4) attending the clinic to be tested for HIV or other STIs; (5) having engaged in anal sex with a male partner at least once in the past 6 months; and (6) the ability to speak and comprehend English. Study participants provided written informed consent and parental consent was obtained for participants under the age of 18. Participants completed an online questionnaire that collected sociodemographic characteristics, sexual risk behaviors, sexual experiences and experiences of homophobia, stigma and discrimination.

RESULTS: An increase in IH was associated with a .164(SD, .081) increase in the number of times having anal sex with a male partner as a top (*p*-value .02). An increase in stigma was associated with a .185(SD, .057) increase in the number of different male anal sex partners as a bottom (*p*-value .003). No statistically significant associations were found between daily racism. An increase in racism and life experiences was associated with a .051(SD, .021) increase in the number of different male anal sex partners as a bottom (*p*-value .027). No statistically significant association was found between religious support and the seven sexual risk behaviors. An increase in religious attendance was found to be associated with a .360 decrease in the number of different male anal sex partners as a bottom (*p*-value .03). And as religious attendance increased, the odds of engaging in condomless anal sex with a male as a bottom decreased (aOR 0.77, CI 0.64-0.92) at a *p*-value of .005.

A statistically significant mean difference was found for IH across the sexual identity categories based on how an individual identified to male friends [F(6 ,581)=7.0, *p*=<.0001], how individuals identified to female friends [F(6, 582)=8.8, *p*=<.0001], and how individuals identified to healthcare providers [F(7, 581)=7.0, *p*=<.001]. No statistically significant mean IH level scores was found between the HIV testing frequency groups. No statistical significance for the mean level for stigma across sexual identity categories based on how individuals sexually identified to male friends was found [F(6,582)=1.7, *p*=0.12]. The mean level for stigma across the sexual identity categories and how individuals identified themselves to female friends [F(6, 582)=4.0, *p*=0.0005] and healthcare providers[F(97, 581)=2.9, *p*=0.006] was found to be statistically significant. The mean level for stigma based on the HIV testing frequency groups found non-significant results [F(2, 524)=0.3, *p*=0.7]. The mean level for religious attendance across sexual identity groups and how individuals identified to male friends found statistically significant results [F(6, 593)=2.7, *p*=0.01]. The mean level for religious attendance across sexual identity groups based on how individuals identified to female friends [F(6, 593)=2.0, *p*=0.06] and healthcare providers [F(7,592)=1.9, *p*=0.07] found statistically non-significant results. There were no mean level differences found for religious attendance and the HIV testing frequency groups [F(2, 524)=2.4, *p*=0.09]. The mean level for religious support across sexual identity categories based on how individuals sexually identified to female friends found statistically significant results [F(6, 490)=3.4, *p*=0.003]. Statistically insignificant results were found between religious support across sexual identity groups and how individuals identified to male friends [F(6, 490)=1.5, *p*=0.2], and healthcare providers [F(7, 489)=1.0, *p*=0.5]. Non-significant results were also found when assessing the mean level for religious support and HIV testing frequency between groups [F(2, 439)=2.2, *p*=0.1].

CONCLUSION: These study findings suggest that higher levels of IH, stigma, racism and life experiences are associated with an increase in sexual risk behaviors that can predispose young AAMSM in Jackson, MS. to HIV infection. Conversely, an increase in religious attendance was associated with a decrease in sexual risk behaviors. Additionally, the impact on mean levels of IH, stigma, religious attendance and support can differ across groups based on how individuals sexually identify to male friends, female friends and healthcare providers. These finding signify the importance of a need for HIV risk reduction interventions, at the individual, community, and structural level, that address socio-contextual factors that negatively impact sexual behaviors and increasing HIV risk, and these findings also signify the vital need for further research assessing socio-contextual factors and their role in driving the HIV/AIDS epidemic in AAMSM.

THE ASSOCIATION BETWEEN INTERNALIZED HOMOPHOBIA, RACISM, RELIGION, STIGMA AND SEXUAL RISK BEHAVIORS AMONG YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN IN JACKSON, MISSISSIPPI

By

DORIAN PATRICEFREEMAN

A.S.N., Clayton State University
M.S.N., Georgia State University

A Thesis Submitted to the Graduate Faculty
of Georgia State University in Partial Fulfillment
of the
Requirements for the Degree

MASTER OF PUBLIC HEALTH

ATLANTA, GEORGIA
30303

APPROVAL PAGE

THE ASSOCIATION BETWEEN INTERNALIZED HOMOPHOBIA, RACISM, RELIGION, STIGMA AND SEXUAL RISK BEHAVIORS AMONG YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN IN JACKSON, MISSISSIPPI

By

DORIAN PATRICE FREEMAN

Approved:

Dr. Laura Salazar_____
Committee Chair

Dr. Monica Swahn_____
Committee Member

Thesis Defense: April 18, 2018

Acknowledgments

I would first and foremost like to give Glory to my Lord and Savior, Jesus Christ, for the strength to endure and persevere this arduous journey. Many times, I questioned my path and ability to press forward, but only by Faith and through Grace was I able to complete this major milestone in my life. I would also like to give thanks to my biggest fans, the loves of my life, my Husband and Son, for without their support and understanding my journey would have been much to heavy, but because they believed in me and my success, more than I sometimes believed in myself, I was able to persevere. I would also like to give a special thanks to my "Study Group", you know who you are, as you guys helped more than you know and for that I am eternally grateful. Finally, I want to express my sincere thanks to Dr. Salazar for her guidance, support and calming demeanor during my times of uncertainty and confusion. Thank you for having faith in my vision, even when my vision was cloudy. I appreciated your availability, whether by email, phone or in person, your sacrifice never went unnoticed. I would also like to thank Dr. Swahn for her time, guidance and support. Your effort and expertise were greatly appreciated.

Author's Statement Page

In presenting this thesis as a partial fulfillment of the requirements for an advanced degree from Georgia State University, I agree that the Library of the University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote from, to copy from, or to publish this thesis may be granted by the author or, in his/her absence, by the professor under whose direction it was written, or in his/her absence, by the Associate Dean, School of Public Health. Such quoting, copying, or publishing must be solely for scholarly purposes and will not involve potential financial gain. It is understood that any copying from or publication of this dissertation which involves potential financial gain will not be allowed without written permission of the author.

___   Dorian Patrice Freeman_____
Signature of Author

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

For more than two decades, the Human Immunodeficiency Virus (HIV)/Acquired

Immuno-Deficiency Syndrome (AIDS) epidemic has placed a tremendous burden on the United

States (U.S.). Currently there are an estimated 1.1 million people living with HIV in the United

States, but unfortunately approximately 15% (1 in 7) are unaware that they are infected ("HIV

Basics | HIV/AIDS | CDC," 2017). Despite tremendous strides that have been made in

HIV/AIDS prevention and treatment, there is still a significant amount of progress needed to

combat this epidemic. Even with the advancements that have been made, such as the advent

of antiretroviral therapy (ART) in the 1990's, which has greatly reduced HIV transmission and

HIV mortality, thereby increasing the prevalence of individuals living chronically with HIV, and

HIV preventative medications like pre-exposure prophylaxis (PREP), which reduces HIV

acquisition risk in high risk individuals, disparities in HIV infection and treatment still persist.

Despite highly effective treatments many individuals are continuing to be adversely affected by

the HIV/AIDS epidemic. The HIV/AIDS epidemic has had a troubling effect across all

racial/ethnic groups, but it has disproportionately exacted a toll on African Americans,

specifically, African American men who have sex with men (AAMSM), inclusive of any man who

has had sexual contact with another man.

Although African Americans represent 13% of the U.S. population, they constitute 45%

of those living with HIV/AIDS (Reed et al., 2013). In 2015, 39,513 people were diagnosed with

HIV, and African Americans accounted for 17,670 of those newly diagnosed infections, with

more than 58% of those infections occurring in AAMSM. Furthermore, in 2015, gay and

bisexual men constituted 2% of the U.S. population, but accounted for 82% (26,375) of

individuals diagnosed with HIV (CDC, 2017). Despite AAMSM accounting for 9% of all MSM in

the United States, they account for the majority of new HIV cases in the U.S. per year (Stacy W.

Smallwood, S. Melinda Spencer, Lucy Annang Ingram, Jim F. Thrasher, & Melva V. Thompson-

Robinson, 2017). Specifically, in 2015 among all gay and bisexual men who received an HIV

diagnosis in the U.S., African Americans accounted for the highest number (10,315; 39%),

followed by whites (7,570; 29%) and Hispanics/Latinos (7,013; 27%)(CDC, 2017).

Despite an overall decline in HIV diagnoses in African Americans between 2005-2014,

conversely a 22% increase in HIV diagnosis was observed in African American gay and bisexual

men during that same period (CDC, 2017). If current diagnosis rates continue, 1 in 6 gay and

bisexual men will be diagnosed with HIV in their lifetime, including 1 in 2 Black/African

American gay and bisexual men, 1 in 4 Hispanic/Latino gay and bisexual men, and 1 in 11 white

gay and bisexual men (CDC, 2017). To further put into perspective the disproportionate impact

of the HIV epidemic, Black MSM (BMSM) in the United States are now experiencing rates of HIV

infection that rival those among the general population in the developing world (Peterson &

Jones, 2009).   AAMSM are not only disproportionately affected by the highest number of newly

diagnosed HIV cases, but they also account for the highest number of diagnosed AIDS cases and

HIV/AIDS related mortality. Among all gay and bisexual men with HIV infection classified as

AIDS in the United States in 2015, African Americans accounted for 3,928(39%), followed by

whites 3,096(31%) and Hispanics/Latinos 2,430(24%) (CDC, 2017). Likewise, in 2014, 3,591

African Americans died of HIV or AIDS, accounting for 53% of total deaths attributed to the

disease that year (CDC, 2017). BMSM also have unequally high rates of other sexually

transmitted diseases (STD), including chlamydia, gonorrhea and syphilis infections, which are

known to increase an individual's risk of acquiring and transmitting HIV infections.

HIV related disparities are also being observed in AAMSM across various age groups,

with HIV prevalence and incidence rates being disproportionately higher among young MSM

(YMSM) between the ages of 13-24, specifically young Black MSM (YBMSM). YBMSM not only

experience the greatest HIV burden, but they are also more likely to be living with HIV and

unaware of their seropositive status. According to the CDC, despite the stabilization in the

overall rate of HIV diagnosis among AAMSM in the U.S., YBMSM have experienced increases in

HIV incidence. From 2005 to 2014, HIV diagnoses among African American gay and bisexual

men aged 13 to 24 increased 87% (CDC, 2107), and previous research has indicated that

YBMSM, BMSM 29 years of age and younger are most at risk for HIV infection (Maksut, Eaton,

Siembida, Driffin, & Baldwin, 2016). Progress has been made in this population with the trend

leveling off in recent years, declining 2% since 2010. But in 2015, among all AAMSM diagnosed

with HIV, 38% were YMSM between the age of 13-24 (CDC, 2017). Given the one in four chance

of being diagnosed with HIV by the age of 25 in this population, YBMSM are the highest priority

population for intervention efforts (Crosby, Mena, & Ricks, 2017). Aside from the unequal

distribution of HIV/AIDS infection by racial/ethnic groups and by age groups, the geographical

rates of new HIV infection cannot be ignored. The South has the highest rates followed by the

Northeast, the West, and then the Midwest with African Americans, specifically, AAMSM

mostly contributing.

Regarding HIV transmission, anal sex is considered the highest risk sexual behavior, and

because of this, the MSM population are left particularly vulnerable. Gay and bisexual men who engage in receptive "bottoming" anal intercourse (RAI) (receiving a penis in the rectum from another man) have a greater risk of HIV transmission than gay and bisexual men who engage in insertive "topping" anal sex (inserting a penis into the rectum of another man). Condomless anal intercourse is one of the most commonly cited factors associated with HIV infection among MSM (Stacy W. Smallwood et al., 2017) therefore, because MSM have a significant risk of being exposed to HIV, and due to the staggering rates of HIV infection being observed in this population, particularly in AAMSM, there is a tremendous need to escalate HIV-prevention efforts. Even with the progress that's been made to reduce HIV transmission, there are still many obstacles that contribute to HIV risk and incidence, such as poverty, homelessness, unemployment, discrimination, stigma and incarceration. Therefore, understanding these societal and cultural factors and how they contribute to sexual risk behaviors resulting in HIV acquisition and transmission is imperative.

Studies to date have demonstrated that racial HIV disparities are not explained by individual behavioral factors alone, nor higher rates of substance use, or a higher number of sexual partners in BMSM, therefore these findings have prompted exploration into a broader array of social, structural, and contextual factors experienced by minority MSM that may explain HIV disparities (Quinn et al., 2015). Unfortunately, despite this awareness, there is still a lack of community-level HIV prevention intervention research in AAMSM. To combat the scarcity of prevention research in AAMSM prevention strategies have entailed tailoring current effective prevention models to the AAMSM population. Identifying personal, social and environmental factors associated with the sexual behaviors that increases HIV acquisition and

transmission risk among MSM is critical to informing prevention policy and practice(Frye et al., 2015). Consequently, although scarce, studies in AAMSM examining the relationship between structural factors, such as internalized homophobia, racism, religion and stigma, and sexual risk behaviors are increasing and necessary as these factors could potentially be driving the HIV/AIDS epidemic and explain the racial/ethnic disparity that is being observed. Additionally, even though still limited, research is not only focusing on individual structural factors, but also on the influences of syndemics in the HIV/AIDS epidemic in BMSM, syndemics being two or more co-occurring, mutually enhancing risk factors (e.g. poverty, racism, homonegativity) or health conditions (substance use, depression, sexual compulsivity) that intersect to increase the likelihood of disease development (Lassiter & Parsons, 2016). Hence, research that examines the influence of individual structural factors and co-occurring factors is also necessary to expand the literature and better understand factors contributing to the HIV/AIDS disparity being seen in AAMSM.

PURPOSE

Structural-level factors, which include the socio-economic and cultural contexts of communities have contributed to the high burden of HIV among BMSM (Levy et al., 2014). Therefore, this study seeks to explore structural factors, including internalized homophobia, stigma, religion and racism and their association with sexual risk behaviors, while also examining their association to sexual identity and HIV testing frequency, in a sample of young, Black MSM (YBMSM) in Jackson, Mississippi. There is a dearth of research assessing the impact of social and contextual factors and their association with HIV risk behaviors in AAMSM.

Therefore, research examining these factors is necessary to fill the research gap. Apart from risk factors that affect all gay and bisexual men, AAMSM face additional risk factors that can impact HIV risks, including socioeconomic factors, smaller more exclusive sexual networks, lack of knowledge about HIV status, homophobia, racism, stigma and discrimination. Additional factors that can contribute to HIV transmission and explain the higher HIV rates in black MSM, include higher rates of sexually transmitted diseases (STD), ART noncompliance and failure to achieve undetectable viral loads. These risk factors signify why there is a compelling public health need for STD and HIV prevention programs targeting AAMSM. In addition, reducing STD incidence among this population will require programs and policies that improve care access and linkage of patients to STD screening and treatment and overall improvement along the HIV care continuum, which consist of identifying undiagnosed HIV cases, linking them to HIV care and retaining HIV-positive AAMSM not in care into high-quality HIV care and treatment. Consequently, programs must additionally address the external root causes of delayed HIV care and dropping out of care, such as homelessness, joblessness, substance abuse, mental health, stigma, and discrimination based on race, gender, and/or sexual orientation (Maulsby et al., 2014). A targeted focus on all these factors is vital if the disproportionately high rates of HIV in AAMSM are to be impacted.

RESEARCH QUESTIONS

1. Are IH, stigma, racism and religion associated with an increase in sexual risk behaviors?

2. Are there differences in the levels of IH, stigma, racism and religion among different sexual identity groups based on how they identify to male friends, female friends and healthcare providers?

3. Are there differences in the level of IH, stigma, racism and religion among difference HIV testing frequency groups?

4. Are IH, racism, stigma or religion associated with increased odds of engaging in condomless male anal sex as a top or bottom?

HYPOTHESIS

1. IH, stigma, racism and religion are associated with an increase in sexual risk behaviors

2. Levels of IH, stigma, racism and religion differ between different sexual identity groups based on how they identify to male friends, female friends and healthcare providers

3. Levels of IH, stigma, racism and religion differ between the HIV testing frequency groups

4.   IH, stigma, racism and religion are associated with increased odds of

engaging in condomless anal sex with a male as a top and as a bottom

CHAPTER 2

LITERATURE REVIEW

HIV AND AFRICAN AMERICAN MSM

MSM who identify as Black or African American (BMSM) historically have been and continue to

be the group most heavily impacted by the HIV epidemic (Maksut et al., 2016). AAMSM

experience the greatest burden of HIV incidence and prevalence in the U.S. and experience the

highest rates of HIV/AIDS related mortality. Research has consistently shown that sexual risk

behaviors alone do not explain the disproportionate rates of HIV in this population, and despite

advancements that had been made in addressing the HIV epidemic, AAMSM continue to

experience burdensome HIV rates that are comparable to rates observed in Sub-Saharan Africa.

In 2015, Gay and bisexual men represented 2% of the U.S. population, but accounted for 82%

(26,375) of HIV diagnoses among males and 67% of all diagnoses (CDC, 2017). In 2015, 39,513

people were diagnosed with HIV, but African Americans accounted for 17,670 of those newly

diagnosed infection, with more than 58% of those diagnosed infections occurring in AAMSM

(CDC, 2017). There is also well-documented evidence of both race and age-based disparities in

the prevalence and disease progression of HIV infection among MSM in the United States. In

2016, BMSM accounted for 45% of new HIV diagnosis, with the greatest burden being observed in YMSM (13-29 years of age), HIV prevalence among BMSM was 28%, significantly higher than among Latino (18%) or White MSM (16%), with minority MSM more likely to be unaware of their HIV infection (Quinn et al., 2015).

The geographic HIV disparities being observed in the South compared to other U.S. regions is also a major concern. In 2016, southern states accounted for more than half of new HIV diagnoses, while making up 38% of the national population (CDC, 2017). One southern state for which the HIV epidemic has caused great concern is the State of Mississippi, with the epidemic being disproportionately high in the MSM population. The highest burden of newly diagnosed cases is occurring in AAMSM between the ages of 20-24. In the fall of 2007, clinicians at a sexually transmitted disease (STD) clinic in Jackson, Mississippi, noted that diagnoses of HIV infection were increasing among young African American MSM, and a subsequent review of surveillance data revealed a 38% rise in newly diagnosed HIV infections among African American MSM aged 16 to 25 years in the Jackson area during 2006-2007 relative to 2004-2005 (Oster et al., 2011). In 2015, 56.2% of individuals living with HIV in Mississippi contracted the infection through male to male contact, and from 2011-2015, the combined estimate of new diagnosed HIV infection related to male to male contact was 65.8% (aidsvu,2017). In 2015, men between the age of 20-29 experienced the highest number of the new diagnosed HIV cases, representing 45% of new cases, but the greatest burden was observed in YBMSM between the ages of 20-24 (Health, 2018).

As previously stated, individual sexual risk behavior alone does not explain the HIV burden seen in AAMSM in relation to other racial/ethnic groups. Studies to date have

demonstrated that racial HIV disparities are not due to higher rates of high-risk sexual

behaviors, nor can they be explained by higher rates of substance use, or a higher number of

sexual partners. Known factors contributing to the increased HIV rates are the increased

number of AAMSM who are <u>unaware of their positive HIV status, high rates of sexually</u>

<u>transmitted diseases, high HIV rates within the sexual network of AAMSM, and of those who</u>

<u>are HIV positive, inadequate ART compliance and undetectable viral loads</u>. In addition, research

has shown that AAMSM are less likely to be regularly tested for STDs, including HIV, and are

less likely to access HIV prevention programs. Research has also found that AAMSM are less

likely than MSM of other racial/ethnic groups to disclose their same sex-behaviors to others, or

to identify as gay or bisexual. Furthermore, minority MSM are also less likely to disclose their

same sex behaviors to their healthcare providers. Same sex disclosure is important because

MSM who disclose same-sex behaviors to a health care provider may be more likely to be

tested for HIV and counseled about STD prevention and HIV preventative treatments. However,

research does not suggest that a lower level of disclosure to health care providers among

BMSM compared to MSM of other races has translated into differences in frequency of HIV

testing (Maulsby et al., 2014).

An understanding of factors contributing to the disproportionate rates of HIV in AAMSM

is important and necessary to provide focused HIV prevention programs targeting this

population. Even though scarce, research has now focused its attention to structural-

contextual factors and their relationship with sexual risk behaviors in AAMSM. Structural

factors can be defined as forces that work outside the individual and beyond the individual's

control to foster or impede health or health behaviors and they often distally impact health

outcomes (Levy et al., 2014). According to the literature, until more research is done focusing on structural factors and their role in driving the HIV epidemic, the number of new HIV cases among black MSM will continue to escalate. Again, there are multiple factors that contribute to an individual's HIV risk, but multiple studies have shown that structural factors may play a major role in shaping the epidemic. Hence, this has prompted an exploration into a broader array of social, structural, and contextual factors experienced by minority MSM that may explain HIV disparities (Quinn et al., 2015).

MINORITY STRESS THEORY

The minority stress theory (MST) is one long-standing area of empirical and theoretical inquiry that provides a foundation for understanding gay men's health behaviors (Hamilton & Mahalik, 2009). The theory proposes that physical and mental health disparities among sexual minority populations may be explained by the stress produced by living in heterosexist social environments characterized by stigma and discrimination directed toward sexual minority persons (Bruce, Stall, Fata, & Campbell, 2014). These factors often result in experiences of external prejudice, expectations of rejection, and internalized homophobia and may in turn impact behavior and access to care (Dentato, Halkitis, & Orwat, 2013). The MST also suggests that Black LGBT individuals are exposed to greater stress, and subsequently worse health and mental health outcomes than White LGBT persons because of the stress related to both homonegativity and racism, as well as more limited support and community resources compared to White LGBT individuals (Quinn et al., 2015). Minority stress is understood as the

excess stress to which individuals from stigmatized categories are exposed as a result of their

social, often a minority position, and for MSM of color minority stress can take a number of

forms, including homophobia in communities of color and racism from the gay community,

which may cause them to experience multiple unique stressors forcing them to cope with their

doubly marginalized status (Han et al., 2015). Stressors, such as, sexual stigma and

homophobia experienced by minorities require individual adaptation, but even so these

stressors can cause significant tension, thereby negatively affecting physical and mental health

outcomes. Individual response to Minority stress can vary, for instance in MSM where some

individuals may react to excessive minority stress with vigilance and resilience, thereby allowing

the person to effectively cope with the stressor. Conversely, other MSM, for fear of rejection or

harm, may hide their sexual identity or internalize society's heterosexist attitudes and beliefs,

which can result in the individual feeling devalued and inadequate. Consequently, an

understanding of the theoretical origins for risk behavior is essential for developing effective

prevention programs and improving minority health outcomes. As stated by Dentato et al.,

theoretical origins of risk behavior provide concrete evidence of the deleterious implications

related to perceived and experienced stressors such as non-disclosure of HIV status, "bareback"

or unprotected sex, drug use and experimentation, and sex with multiple partners.

There have been numerous studies evaluating the MST in immigrants and different

racial/ethnic groups, but there have been a limited number of studies applying this theoretical

framework to sexual minority populations. One of the first studies assessing the relationship

between MST factors and sexual risk behavior in MSM, found no association between minority

stress factors and engaging in unprotected insertive anal intercourse (UIAI) or unprotected

receptive anal intercourse (URAI), regardless of the partner being a primary or non-primary partner. Another study by Hamilton et al., found that MST moderated the relationship between social norms and gay men's health behaviors. Despite mixed results found in these studies examining the relationship between the minority stress factors and sexual risk behaviors, the MST is important to understanding how stress experienced by MSM, whether prejudice, discrimination or harassment, can impact sexual behaviors and may be important in explaining the disproportionate HIV/AIDS rates that are being observed in BMSM. Understanding the stressors experienced by minority groups is instrumental if we are to understand their influence on individual behaviors and health outcomes. If HIV prevention programs are to be implemented effectively, research assessing the relationship between minority stress and sexual risk-taking behaviors in AAMSM is vital.

INTERNALIZED HOMOPHOBIA IN AFRICAN AMERICAN MSM

Internalized homophobia (IH), also referred to as internalized homonegativity, internalized heterosexism, or sexual prejudice, is the acceptance of societal anti-gay attitudes toward oneself, leading to internalized conflict, a devaluation of oneself, and poor self-regard. (Quinn et al., 2015). Likewise, Maulsby et al., defined internalized homophobia as the internalization of society's homophobic attitudes. Negative societal attitudes about homosexuality and the internalization of those attitudes by AAMSM may play an important role in explaining the underlying causes of these racial and ethnic disparities in HIV incidence and prevalence (Quinn et al., 2015). The internalization of experienced societal stigma can lead to

negative thoughts and feeling about one's own sexual identity and lead to negative social experiences and mental health outcomes. Additionally, society's negative perspective about homosexuality and an individual internalization of that negative perspective could also negatively impact an individual's sexual behaviors, such as increasing the chance of a person engaging in high risk sexual behaviors. These high risk sexual behaviors could play a role in explaining the racial/ethnic HIV incidence and prevalence disparities that are being observed in AAMSM. Unfortunately, one factor in which there is a scarcity of research is the association between internalized homophobia (IH) and HIV risk. Therefore, examining the association between IH and HIV risk behaviors, specifically, sexual risk behavior in AAMSM is important to understand factors driving the HIV/AIDS epidemic.

Internalized homophobia predisposes AAMSM to depression, psychological distress, and low self-esteem, factors which can indirectly increase the likelihood of an individual engaging in risky sexual behaviors (Puckett, Newcomb, Ryan, et al., 2017). Study findings have also revealed several significant contextual and psychosocial factors related to internalized homophobia including religiosity, resilience, and gay community acculturation, factors which all have important implications for HIV risk, HIV testing, and social, psychological wellbeing for BMSM. Despite well documented research concerning the negative consequences of IH in AAMSM, there is still a scarcity of research examining the association between IH and sexual risk behavior in this population, with most current research evaluating IH occurring in non-minority populations (Quinn et al., 2015). Appropriately, due to this gap in research, assessing the impact of IH and risky sexual behavior in AAMSM is critical.

A review of the literature has found mixed results regarding the association between IH and risky sexual behaviors in the general MSM population. In a review of the literature by Maulsby et al. (2014), inconclusive evidence was found regarding the effects of IH on HIV risk behavior in MSM. Some studies supported a relationship between IH and HIV risk behaviors and conversely, others failed to find a relationship between IH and HIV risk behaviors or found a positive relationship. A study implemented in an ethnically/racially diverse sample of HIV-positive MSM found internalized homonegativity to be strongly associated with lower condom self-efficacy and not being open about one's sexual orientation (Quinn et al., 2015).   Another study by Quinn et al., found that higher levels of religiosity, greater perceived self-masculinity, and greater AIDS conspiracy beliefs were associated with increased internalized homophobia, with a trend also being seen between increased IH and never being tested or not testing for HIV in the past year, and marijuana/drug use in the last 30 days. Even though a direct link was not observed between IH and sexual risk behaviors, indirectly these found associations could contribute to an individual's engagement in risky sexual behaviors and inhibit safe sex negotiation.

A study by Puckett et al. assessing the relationship between IH and positive and negative urgency in MSM found that both positive and negative urgency moderated the association between IH and condomless anal sex acts and binge drinking, such that, for individuals with higher levels of both negative and positive urgency, a positive association was found between higher levels of IH and condomless anal sex acts, and binge drinking. Negative urgency being the tendency to act impulsively in response to negative emotional experiences and positive urgency being the tendency to act impulsively in response to positive emotional

experiences (Puckett, Newcomb, Garofalo, & Mustanski, 2017). No direct association between

IH and binge drinking, marijuana, other drug use, or risky sexual behaviors was found.

Conversely, another study found a significant association between any condomless anal sex and

greater levels of IH, and men with greater IH were more likely to have had sex with women,

were less likely to discuss AIDS prevention with sex partners, disclose their same sex sexual

behaviors to health care providers, and test RPR-positive. Additionally, the study found that

men classified as having greater levels of IH were marginally more likely to use condoms with

their most recent, new sex partner, but they were marginally less likely to be tested for HIV in

the past 12 months and to engage in condomless oral sex (Crosby, Salazar, Mena, & Geter,

2016).

To evaluate the HIV incidence disparity seen in YBMSM and Older, Black MSM

(OBMSM), another study examined the association between IH and sexual risk behavior. This

study failed to find a statistically significant association between IH and CAI, but IH was

significantly, negatively associated with CAI for OBMSM. Previous research found the opposite

to be true, with greater internalized homophobia being associated with higher rates of sexual

risk taking (Maksut et al., 2016). A study by Fry at el., done in a racial/ethnically diverse MSM

sample found no association between IH and HIV acquisition risk behavior, which consisted of a

HIV negative participant who had unprotected receptive anal sex with a HIV positive or

unknown status partner, controlling for psychological distress and alcohol and/or drug use

before/after sex. Moreover, a study by Smallwood et al., found that IH was positively

associated with an increase in the frequency of condom use, with receptive anal intercourse

(RAI) and insertive anal intercourse (IAI). The review of literature, further confirmed the mixed

finding regarding the relationship between IH and sexual risk behavior in MSM. Therefore, as a

result of these mixed results, there is dire need for research to understand the effect of IH on

HIV risk behavior in AAMSM (Maulsby et al., 2014), and considering the dearth of research

examining IH and risky sexual behaviors in this minority population, understanding the

potential impact of IH in explaining the HIV/AIDS epidemic is paramount.

RACISM IN AFRICAN AMERICAN MSM

Racism has long been a major cause of stress for African Americans and unlike other

stressors that may occur intermittently, experiencing long term and persistent stressor like

racism can having a major psychological effect. The deleterious effects of racism on a wide

range of health outcomes, including HIV risk, are well documented among racial/ethnic

minority groups in the United States (Han et al., 2015). In addition, the high prevalence of

racial discrimination reported by African American men in the USA has been well-documented,

and growing research has showcased significant relations between experiences of racial

discrimination and negative physical and mental health outcomes (Reed et al., 2013). Aside

from racial discrimination, AAMSM are also affected by sexual orientation related

discrimination, and these combined discriminatory experiences can have an even greater

negative impact on AAMSM than each individual factor alone. AAMSM not only commonly

experience racism in the general population, but also within the gay community. As a result of

racism experienced in the gay community, research has shown that these experience plays a

contributory role in AAMSM's decision to choose same-race sexual partners, thereby increasing

HIV acquisition and transmission risks due to the high prevalence of STD, including HIV, in this

population. Therefore, assessing the role racism plays in driving the HIV/AIDS epidemic and its

disproportionate effect on AAMSM is necessary, unfortunately there has been a limited amount

of research examining the association between experienced racism and HIV risk behaviors in

African American men, and an even more scarce body of research assessing this relationship in

AAMSM.

A study by Fry at el., in a diverse racial/ethnic sample examining the relationship

between experiencing only racial based discrimination and acquisition risk behavior (a HIV

negative participant who had unprotected receptive anal sex with a HIV positive or a partner

with of unknown HIV status) found no significant association. There was also no association

found between experiencing only racial based discrimination and transmission risk behavior (a

HIV positive or unknown HIV status participant who had unprotected insertive sex with a HIV

negative or unknown status partner). Psychological distress and alcohol and/or drug use

before/during last sex, factors potentially linked to discrimination and sexual risk behavior were

associated with transmission risk behavior.   A study by Reed at el., assessing the relationship

between racial discrimination and sexual risk behaviors for HIV in an urban, clinic-based sample

of black and African American men, found that men reporting higher levels of racial

discrimination were more likely to have had recent unprotected vaginal sex with women, had

more than four sexual partners in a year and had been involved in sex trade involvement

(buying and/or selling). The study did not find an association between higher levels of reported

racial discrimination and sex with male partners, although only a small number of men in the

sample reported sex with men. A study by Ayala et al., found that AAMSM with higher mean

levels of experienced racism engaged in serodiscordant or unknown status unprotected anal

sex compared to AAMSM with lower mean levels of experienced racism, therefore

discrimination was associated with participation in risky sexual situations (Ayala, Bingham, Kim,

Wheeler, & Millett, 2012). Another study examining the relationship between stress, coping

strategies and perceived racism in the gay community, implemented in African Americans,

Pacific Islanders and Latinos, found that majority of the study participants reported experiences

of racism in the gay, white communities and the racism they experienced was a significant

source of stress. In addition, participants who reported that they were stressed when they

experienced racism were more likely to engage in UAI than those who were not stressed due to

racism. The association between stress because of perceived racism and risky sexual behaviors

did not differ across racial groups, and no protective effect was found between different coping

strategies, perceived racism and UAI.

RELIGION AND AFRICAN AMERICAN MSM

One of the oldest and most influential institutions in African American communities is

the African American Christian faith community, commonly referred to as the "Black church"

(Stacy W. Smallwood et al., 2017). Religion has long been recognized as a foundational

cornerstone for African American people, symbolizing freedom and strength during times of

oppression, such as during slavery and segregation. As a result of the integral role religion has

played in the Black community, beginning early in childhood and extending well into adulthood,

for many Blacks, their identity is molded by the church and the religious community at large.

Religion typically refers to the formal set of beliefs and practices affiliated with an

acknowledged religious authority and includes such overt visible acts as praying before meals, attending worship services, and reading sacred texts (Watkins et al., 2016a). Religion is an important factor in the lives of African American, including gay and bisexual men, and multiple and studies have found that it plays a significant role in influencing behaviors, both positively and negatively. For instance, positive health consequences related to religion are adherence to HIV medication, social support, less psychological distress, improved quality of life and the ability to effectively cope with stressors, conversely, negative health consequences of religion having an opposite effect.

There is a strong body of literature that signifies the importance of religion to African Americans. For example, studies have shown that Blacks in the U.S., including Black men who have sex with men (MSM), tend to have stronger religious and spiritual affiliations compared with other racial/ethnic populations and a recent national survey of religious behaviors and beliefs found that relative to their racial and ethnic groups, Blacks are more likely to report a formal religious affiliation (Watkins et al., 2016b). Specifically, the survey found that a high majority (85 %) of Blacks reported that religion is very important to them, and 60 % of Black individuals surveyed reported weekly or ''regular'' church. Comparatively, 56% of the general population reported that religion was very important to them and 39% reported regular or weekly church attendance (Watkins et al., 2016a). In addition to differences seen in religious affiliation across racial/ethnic groups, there are also differences seen regarding the acceptance of homosexuality and same-sex relationships, with Blacks being less accepting of homosexuality compared to whites. Hence, the Black church can be a source of strength and support for the Black community but can also play a significant role in defining the community's attitudes about

same-sex behavior and relationships, and according to Quinn et al., the church can be a source of homonegativity, and is therefore criticized for perpetuating negative attitudes toward homosexuality.

Given the fact that Blacks, including AAMSM, normally have strong affiliations with Black religious institutions and these institutions play a major role in shaping sexual norms, emphasizing the sinful nature of homosexuality, AAMSM can be left feeling shame, guilt, and rejection due to their sexual orientation. Even in the face of anti-gay teaching in the church, many AAMSM continue to remain actively involved in the church, because of the social support and sense of pride they receive from the non-affirming religious institution. Because of the Black churches homonegativity, research as shown that Black MSM are less likely to disclose their sexual orientation in religious institutions than white MSM, despite the church symbolizing a source of support and strength for them. Homonegative attitudes experienced by individuals have been linked to increased internalized homophobia and cognitive dissonance, causing the individual to feel disconnected and isolated. The relationship between religious engagement and internalized homonegativity is thought to begin in early life and is reinforced through continued participation in non-affirming religious settings (Barnes, 2012). It is not surprising then that higher religiosity or church involvement significantly predicted internalized homonegativity (Quinn et al., 2015)

Attitudes in the Black community about religion and homosexuality, along with experiencing high levels of homophobia can contribute to increased HIV/AIDS risk behaviors in AAMSM. Negative attitudes about homosexuality can leads to feeling of internalized homonegativity, which can inhibit BMSM from engaging in same-sex monogamous

relationships and accessing HIV prevention services. Additionally, the presence of homophobia

in African American churches has hampered AAMSM ability to engage in AIDS prevention

(Fullilove & Fullilove, 1999). Conversely, Religious faith has been found to significantly

contribute to resiliency (participants' ability to handle changes or misfortunes in their lives)

among Black LGBT emerging adults even when they had high levels of internalized

homonegativity, therefore these findings highlight the multifaceted influences religion could

have on the health of MSM (Lassiter & Parsons, 2016). Unfortunately, as was seen with IH and

racism, there is a limited body of research examining the cultural role religion plays in the HIV

epidemic, specifically the association between religion and sexual risk behaviors. Current

research on religion and HIV emphasizes the role of religion as a resource for people living with

HIV, and suggests that religion is useful in helping individuals cope and find meaning, but less

research is available on pathways through which religion may influence HIV risk behavior (Shaw

& El-bassel, 2014). Religion may be particularly salient for MSM people of color and thus may

influence their health in significantly different ways than their white counterparts (Lassiter &

Parsons, 2016).

A review of the literature was consistent with a prevalence of studies assessing the

effects of religion on health outcomes in seropositive participants, with many of the study

designs being qualitative in nature. Therefore, to fill the gap in research, more quantitative

studies are necessary that evaluate the role religion plays in seronegative individuals. In a

systematic review of the quantitative HIV research that assessed the relationships between

religion, spirituality, HIV syndemics, and individual HIV syndemic-related health conditions (e.g.

depression, substance abuse, HIV risk) among men who have sex with men (MSM) in the U.S,

Lassiter al el. found no published peer-review articles that quantitatively examined the relationships between religion, spirituality, and HIV syndemics; further, only nine studies were found that assessed the association between religion and individual HIV syndemic related health conditions. One study found a positive association between self -reported religious/spiritual identity and alcohol and drug use, and a negative association was observed between religious identity and club drug use. Engaging in religious activities was found to be negatively associated with condomless anal sex and an individual's churches positive attitudes towards homosexuality was negatively associated with the likelihood of engaging in sex without condoms. Lassiter al el. also found that studies which included more racially/ethnically diverse samples found more positive effects of religion and spirituality on the health of MSM than in studies with majority white samples.

A qualitative study by Milller et al. examining the religious experiences of a small sample of AAMSM living with AIDS found that many of the participants shared many of the same experiences in the church, feelings of homophobia, heterosexist and AIDS phobic views, experiences causing most participants to leave the church permanently because of feeling oppressed and devalued due to their sexual orientation and HIV positive status. Another study by Watkins et al., examining the relationship between religiosity, spirituality, high-risk behaviors and high risk sexual behaviors in AAMSM, resulted in a significant association being found between religiosity and HIV infection, use of cocaine, crack and poppers, and a marginal association was found between religiosity and ecstasy use. A negative association was found between HIV status, ecstasy and poppers use and religiosity, and a nonsignificant negative association was found between religiosity and both unprotected receptive and insertive anal

intercourse (UAI). In the same study, the association between spirituality and high-risk

behaviors and sexual risk behaviors found a positive association between spirituality and STD

infection status, HIV infection status, alcohol and crack use, but there was a negative

association found between receptive anal intercourse and unprotected anal intercourse.

Watkins et al. examination of the relationship between religiosity, spirituality, depression and

substance use found that AAMSM with higher levels of religiosity had more substance use

(crack, cocaine, poppers) and reported being depressed in the last week. Conversely, AAMSM

with higher levels of spirituality reported less alcohol, crack and cocaine use, and no association

was found between ever being depressed or being depressed in the last week. AAMSM who

reported being depressed and using cocaine had higher levels of religiosity, and AAMSM who

were depressed and using substances, also had higher levels of religiosity. Therefore, this study

was consistent with religiosity being a risk factor and spirituality being protective when

correlated with risky behavior. These associations between religiosity, spirituality, depression

and substance use have important implications considering the strong body of research

supporting the correlation between depression, substance use and increased HIV risk

behaviors.

A cross -sectional study by Smallwood et al. examining the relationship between

Religiosity, Spirituality, Internalized homonegativity and condom use in AAMSM living in the

deep south found that higher levels of religiosity were associated with higher levels of

personal/moral homonegativity but associated to lower levels of gay affirmation. Conversely,

higher levels of Spirituality were related to higher levels of Gay affirmation, but lower levels of

personal/moral homonegativity. No significant direct effect was observed between either

religiosity or spirituality and the frequency of condom use during IAI or RAI in the past 3

months. Higher levels of both gay affirmation and personal/moral homonegativity were

associated with increased frequency of condom use with IAI/RAI in the past 3 months. An

evaluation of personal/moral homonegativity and gay affirmation as mediators between

religiosity, spirituality and frequency of condoms use during IAI/RAI found that personal/moral

homonegativity acted as a mediator between religiosity and the frequency of condom use. No

significant mediating effect was found between spirituality and any dimension of internalized

homonegativity. According to Smallwood et al., study findings showing that internalized

homonegativity was associated with an increase in the frequency of condom use challenges the

notion that negative feelings about one's own homosexuality are associated with higher

engagement in risky sexual behaviors.

STIGMA AND AFRICAN AMERICAN MSM

As attention into socio-cultural and contextual factors and their role in explaining HIV

disparities have drawn increased attention, stigma is one factor being examined. Stigma is a

complex concept that refers to prejudice and discrimination based on a devalued characteristic

of an individual, and stigma reduces an individual's social status based on attitudes about the

stigma held by significant others (e.g., families, friends, community members) who define

standards of behaviors (Preston., et al). Considering the HIV/AIDS epidemic has exhibited the

greatest impact in MSM, this population tends to experience a great deal of stigma due to their

homosexuality and HIV status. Sexual stigma has been defined as "the negative regard, inferior

status, and relative powerlessness that society collectively accords to any non-heterosexual

behavior, identity, relationship, or community" (Christensen et al., 2013). In addition,

according to Puckett et al., sexual orientation-based stigma refers to the knowledge that

individuals hold negative societal attitudes about sexual minorities or individuals who engage in

same-sex sexual behaviors, including an awareness of the marginalized status of anyone with a

non-heterosexual identity or who has same-sex relationships (Puckett, Newcomb, Ryan, et al.,

2017).

Stigma experienced by MSM can be internalized and result in an individual engaging in

negative behaviors that can impact health outcomes. Stigma and IH are closely related terms,

especially as it relates to external experiences of marginalized individuals, but stigma differs

from IH. For instance, despite an individual's awareness of the stigma they may not necessarily

internalize societies heterosexist beliefs or feel as though their own homophobic feeling are

wrong, as is the case with IH. Stigma has been well documented as an obstacle to HIV care and

treatment, and studies have shown that stigma results in an individual never receiving HIV

testing and not participating in HIV prevention efforts, and as a result, individuals who are

unaware of their HIV seropositive status risk unknowingly transmitting HIV infection to their

sexual partners. Additionally, higher levels of stigma have been found to be associated to

psychological disorders, such as anxiety and depression, both factors which can increase an

individual's risk of engaging in sexual risk behaviors.

A review of the literature was consistent with a scarcity of studies assessing the

relationship between stigma and sexual risks behaviors in seronegative AAMSM, with most

studies having been implemented in a seropositive population. A longitudinal research study

with a sample of predominantly White MSM living with HIV demonstrated that perceptions of

HIV-related stigma were positively associated with sexual behaviors that increase risk for HIV

transmission and may place MSM at greater risk for other sexually transmitted infections

(Quinn et al., 2017).   Stigma toward homosexuality in the U.S has pervasive effects on Black

MSM (Peterson & Jones, 2009), for whom their race and sexual identity or behaviors present

co-occurring stigmatizing identities, for example, YBMSM have reported experiencing racism

from the White, gay community and struggling with the intersection of stigma and

discrimination due to the intersection of their sexual orientation and race (Quinn et al., 2017).

Research has consistently found an association between stigma and negative mental health

outcomes, such as depression and low self-esteem, in AAMSM, factors that can increase HIV

risk behaviors. As a result of stigma some AAMSM may be less likely to identify their sexual

orientation as gay or bisexual and to be long-term monogamously partnered, less likely to

arrive at high-risk locations with prevention supplies, and/or less likely to engage in safer sex

practices, such as condom use (Watkins et al., 2016a), and these behaviors can contribute to

HIV acquisition and transmission. Research assessing the relationship between perceived

stigma, and substance use or sexual risk taking has been limited and a review of the literature

was consistent with a prevalence of studies examining stigma in mostly HIV positive samples

only. In studies assessing the relationship between perceived stigma and substance use or

sexual risk-taking behaviors, researchers found that higher levels of perceived stigma were

associated with increased number of days of drug use and high-risk sex acts under the influence

of substances in MSM. Multiple studies also found a positive relationship between sexual

orientation related stigma and HIV related stigma in MSM, with HIV related stigma resulting in

reduced medical compliance and unwillingness to take antiretroviral therapy (ART). Some

studies have also found that stigma experienced by AAMSM was associated with lack of HIV

testing and lack of accessing preventative services.

Stigma is a major factor that can impact sexual risk behavior, especially in MSM,

therefore research assessing its impact on risky sexual behaviors is crucial. In a review of the

literature, a study examining the association between stigma and sexual risk behavior in rural

MSM found stigma to be predictive of modified high sexual risk in comparison to low or no risk

sexual categories. A study by Quinn et al (2017) in a population of seropositive YBMSM

assessed the association between varying forms of HIV related stigma and health related

correlates, such as medication compliance and viral load, and results showed that individuals

with higher levels of total stigma and personalized stigma were less likely to be virally

suppressed and higher levels of personalized stigma was a significant predicter of CAI and

having a partner that uses marijuana as a sex drug. Concerns about public attitudes toward HIV

was the only level of stigma that was positively associated with medication compliance and a

predictor of psychological distress. Another study done in a diverse group on YMSM found that

a reduction in shame related to sexual stigma was correlated to a reduction in UAI.

SEXUAL RISK BEHAVIOR IN AFRICAN AMERICAN MSM

Sexual risk behaviors include any sexual behaviors that increases an individual's risk of

contracting or transmitting a sexually transmitted disease (STD), including HIV. Oral, vaginal

and anal intercourse are all well-known sexual risk behaviors that can increase an individual's

risk of acquiring and transmitting a STD, but risk varies based on the type sexual intercourse.

According to the CDC (2017), anal intercourse is considered the riskiest sexual behavior for transmitting HIV infection, with receptive anal intercourse (RAI) carrying the greatest risk. The bottom partner is 13 times more likely to get infected than the top, however, it's possible for either partner to get HIV through anal sex (CDC, 2017). Most men diagnosed with HIV infection acquired infection through anal intercourse, with MSM accounting for the highest number of new and existing HIV infection. Sexual behaviors that increase an individual's risk for disease transmission include any unprotected sexual intercourse, although rare with oral sex, having multiple sexual partners, changing sexual partners frequently, and having unprotected sexual intercourse with seropositive partners or partners with unknown HIV status. In Addition, for AAMSM, having anal intercourse with other AAMSM is considered risky sexual behavior. Research has shown that AAMSM are more likely than White MSM to engage in sexual intercourse with MSM within their own race, this thereby increasing their risk of HIV transmission due to the high rates of HIV infection in the population.

Despite limited evidence of the role individual-level risk behavior alone, such as, the number of sexual partners and drug use, have in explaining racial disparities in HIV incidence and prevalence, the role of sexual behavior in HIV transmission is crucial to epidemic propagation among MSM (Frye et al., 2015). Research has shown that AAMSM are less likely to disclose their sexual identity as gay or homosexual, less likely to disclose their sexual orientation to their health care provider, less likely to be aware of their HIV status due to lack of HIV testing, in comparison to white MSM. AAMSM who are HIV seropositive are also less likely to be ART compliant and have undetectable viral loads than white MSM. All these factors reduce an individual's likelihood of receiving targeted HIV prevention education and HIV

testing, increasing the individual risk of HIV transmission and acquisition. While interventions focusing on reducing individual risk behaviors are important, as previously stated, these factors alone do not explain the HIV racial disparities being observed, therefore examining previously discussed structural factors and their association to risky sexual behaviors is crucial.

In a review of the literature, a study by Tieu et al., found that AAMSM were more likely to test HIV positive and less likely to be aware of their HIV positive status than other racial/ethnic groups. In comparison to white MSM (WMSM), AAMSM reported fewer male sexual partners in the last year, and when compared to three other racial groups, AAMSM were more likely to have black male partners in the last 12 months (57.1% for Black MSM vs. 5.7% for White, 21.0% for Hispanic, and 17.7% for Other,) (Tieu, Murrill, Xu, & Koblin, 2010). AAMSM were not found to have more UAI with their same race male partner. Despite observing higher undiagnosed HIV infection in AAMSM in Tieu's et al. study, consistent with previous research findings, AAMSM reported less risky sexual behaviors than WMSM. Another study by Oster et al., assessing factors associated with HIV infection in young MSM (YMSM), found an association between HIV infection and engaging in UAI with a casual male partner and being more likely to give in to a partner who wanted to have UAI (Oster et al., 2011). Study findings further signify the need for continued research to identify factors other than individual risk behaviors only in explaining the disproportionate rates of HIV in AAMSM.

CHAPTER 3

Methods

Study Sample

The study is an National Institute of Health (NIH) funded randomized control trial (RCT) of a safer sex intervention program targeting YBMSM. Study participants were recruited from two federally funded clinics specializing in the diagnosis and treatment of STIs, including HIV. The clinic was located in a southern city where HIV incidence rates are among the highest in the U.S. Participants were also recruited through social media, attending bars and nightclubs. Inclusion criteria included: (1) assigned male at birth; (2) self-identification as Black/African American; (3) 15-29 years of age; (4) attending the clinic to be tested for HIV or other STIs; (5) having engaged in anal sex with a male partner at least once in the past 6 months; and (6) the ability to speak and comprehend English.

All Black men between the ages of 15-29 were approaches by clinic research staff and asked about their interest in volunteering in an HIV prevention study. Those expressing interest in the study were then screened for eligibility. A total of 789 men were screened for eligibility, with 623 considered eligible. After being offered the opportunity to enroll in the study, 14 declined, yielding an overall participation rate of 96.6%. Nine of the enrolled participants were pilot subjects, leaving a study sample of 600 YMSM. The current study only used baseline data (data collected before sample randomization and intervention). All study procedures were

approved by the Institutional Review Boards of the University of Mississippi Medical Center,

The Mississippi State Department of Health and the University of Kentucky.

Procedure

Study participants provided written informed consent and parental consent was

obtained for participants under the age of 18. Participants then completed an online

questionnaire using Qualtrics© (Provo, UT) in a private office unaffiliated with the clinic. The

questionnaire collected sociodemographic characteristics, sexual risk behaviors, sexual

experiences, religious experiences, and experiences with homophobia, stigma and

discrimination. Subsequently, participants were tested for gonorrhea and chlamydia in 3

anatomic sites using nucleic acid amplification testing(NAT). Additionally, blood samples were

obtained, testing participants for syphilis, using RPR testing, and HIV testing was performed in

participants not already HIV positive by use of OraSure.

PREDICTOR MEASURES

INTERNALIZED HOMOPHOBIA. IH was assessed by the following 7-item scale with response

options ranging from Strongly disagree (1) to Strongly agree (5): *1) "I have tried to stop being*

attracted to men in general") 2) If someone offered me the chance to be completely

heterosexual, I accept the chance" 3)" I wish I weren't attracted to men) 4) I feel that having sex

with men is a personal shortcoming for me) 5) "I am glad I have sex with men 6) "I often feel it

best to avoid personal or social involvement with other men who have sex with men" 7) "I wish I

could develop more erotic feeling about women." Scale scores were calculated based on the sum where a higher score indicated higher levels of IH

RACISM. Racism was assessed by the following 13 items, but by two separate scales, with Daily Racism being measured by item one and two, with response options ranging from Never(0 times) (1)to A lot(7+ times) (4). Racism and life experiences was measured by item three through thirteen, with response items ranging from Never(1) to Very often(4): (1) *"Racism at work or school"; (2) "Racism in public places"; (3) In the past 12 months, how often have your civil rights been violated (i.e., job or housing discrimination due to racism, racial, discrimination, or racial prejudice)?"; (4) "In the past 12 months, how often have others said or acted as if you over-sensitive or paranoid about racism?"; (5) "In the past 12 months, how often have you witnessed prejudice or discrimination directed at someone else because of their race/ethnic group?"; (6) "In the past 12 months, how often have you heard about someone else's experiences of racially-motivated discrimination or prejudice; (7) "In the past 12 months, how often have others reacted to you as if they were afraid or intimidated of you because of your race/ethnic group?"; (8) "In the past 12 months, how often have you been observed or followed while in public places because of your race/ethnic group; (9) "In the past 12 months, how often have you been treated as if you were "stupid" or "talked down to" because of your race/ethnic group?"; (10) "In the past 12 months, how often have your ideas or opinions been minimized, ignored, or devalued because of your race/ethnic group?" ; (11) "In the past 12 months, how often have you heard (or been told) a racially offensive or insensitive comment or joke?" ; (12) "In the past 12 months, how often have you been mistaken for someone who serves others (i.e. janitors, bellboy, maid) because of your race/ethnic group?"; (13) "In the past 12 months, how*

often have you been mistaken for someone else of your same race (who may not look like you at all)?". Scale scores were calculated based on the sum where a higher score indicated higher levels of Racism.

RELIGION. Religion was assessed by the following 3 items, but by 2 separate scales. Religious attendance was measured by item one, with response options ranging from Never(1) to More than once a week(5). Religious support and acceptance were measured by item two through three, with response options ranging from Strongly disagree(1) to Strongly agree(5): *(1) "How often do you attend religious services?"; (2) "How much do you agree with the following statement: I would be accepted by members of my church or religious community if they knew that I sleep with men."; (3) "How much do you agree with the following statement: If I was going through a hard time, I have someone who would be right there with me".* Scale scores were calculated based on the sum where a higher score indicated higher levels of Religion.

STIGMA. Stigma was assessed by the following 4 item scale, with response options ranging from Never(1) to More than a few times(4): *(1)"Dealing with prejudice or discrimination from others due to being gay or having sex with men"; (2) "Introducing your lover as a "friend" or roommate" ; (3) "Verbal harassment by straight people about being gay or having sex with men"; (4) "Being physically affectionate with another man in public".* Scale scores were calculated based on the sum where a higher score indicated higher levels of Stigma.

OUTCOME MEASURE

SEXUAL RISK BEHAVIORS. Sexual risk behavior was assessed by the following items: (1) *"In the past 90 days, have you had anal sex with a male partner (penis in the rectum of a male)?"* (yes, no); (2) *"In the past 90 days, how many different male anal sex partners have you have had when you were the top?"*; (3) *"In the past 90 days, how many different male anal sex partners have you had when you were the bottom?"*; ; (5) *"In the past 90 days, how many times have you had anal sex with a new partner, as a TOP?"* (6) *"In the past 90 days, how many times have you had anal sex with a new partner, as a BOTTOM?"*; ; *(8)"In the past 90 days, how many times have you had condomless anal sex with a male when you were the TOP?"*; *(9) "In the past 90 days, how many times have you had condomless anal sex with a male when you were the BOTTOM?"*;

COVARIATES

AGE. Age was assessed by the following item: *"How old are you? (Please enter in number of years)"*

INCOME. Income was assessed by the following item: *"About how much is your total income in a typical month, either in the form of income or social assistance? (less than $500, between $500 and $1000, between $1000 and 1500, between $1500 and $2000, more than $2000)*

HIV SEROSTATUS. HIV serostatus was assessed by the following item: *"What is the most recent HIV test result you have received? (positive, negative, didn't get my results)*

EDUCATION. *Education was assessed by the following item: "What is the highest level of education you have completed?" (less than high school, high school graduation or GED, some*

college, trade school, or vocational school, college graduation, graduate school, more than

graduate school)

EMPLOYMENT STATUS. *Employment status was assessed by the following item: "Are you*

currently employed?" (yes, no)

RELATIONSHIP STATUS. *Relationship status was assessed by the following item: "From the*

following list, which word best describes your present relationship status?" (married, divorced,

widowed, separated, single never been married, long-term relationship with a partner)

RACE OF SEXUAL PARTNERS. *Race of sexual partners was assessed by the following item:*

"During the past year, what was/is the race/ethnicity of your sex partner(s)? (please check all

that apply)" (Black or African American, White or Caucasian, Hispanic or Latino, American

Indian or Alaska Native, Asian American or Pacific Islander)

FREQUENCY OF HIV TESTING. Frequency of HIV testing was assessed by the following item:

"How often do you get tested for HIV" (once a year, twice a year, more than twice a year)

SEXUAL POSITION. Sexual position was assessed by the following item: *"In the past 90 days,*

what role have you played during anal sex with another guy?" (Top (put your penis in his

anus/rectum), Bottom (he put his penis in your anus/rectum))

SEXUAL IDENTITY TO MALE FRIENDS. Sexual identity to male friends was assessed by the

following item: *"In the past 90 days, how did you usually identify yourself to male friends?" (as*

gay, as bisexual, as a straight guy who sleeps with women only, as a straight guy who sleeps

with women and other guys, as a straight guy who sleeps with other guys, I do not label myself,

but sleep with other guys, I do not discuss this with them)

SEXUAL IDENTITY TO FEMALE FRIENDS. Sexual identity to female friends was assessed by the

following item: *"In the past 90 days, how did you usually identify yourself to female friends?" (as*

gay, as bisexual, as a straight guy who sleeps with women only, as a straight guy who sleeps

with women and other guys, as a straight guy who sleeps with other guys, I do not label myself,

but sleep with other guys, I do not discuss this with them)

SEXUAL IDENTITY TO HEALTHCARE PROVIDERS. Sexual identity to healthcare providers was

assessed by the following item: "*In the past year, how did you usually identify yourself to your*

healthcare providers?" (as gay, as bisexual, as a straight guy who sleeps with women only, as a

straight guy who sleeps with women and other guys, as a straight guy who sleeps with other

guys only, I do not label myself, but sleep with other guys, I do not discuss this with them, I have

not seen a healthcare provider in the past year)

DATA ANALYSIS

Secondary data analysis was utilized for this thesis. Univariate data analysis was used to

provide a description of the study sample. Multiple linear regression analyses were conducted

to determine the relationship between the predictor variables IH, stigma, racism, religion, and

seven outcome variables measuring sexual risks behavior, controlling for age, income,

education. Coefficient estimates with standard errors, 95% confidence intervals and p-values

were calculated. Logistic regression was conducted to analyze the association between the IH,

stigma, racism, religion, and the binary outcome variables condomless anal sex with a male as a

top and condomless anal sex with a male as a bottom. Adjusted odds ratios, confidence

intervals and p- values were calculated. Additionally, one-way between subject analysis of

variances (ANOVA) was conducted to compare the means of the above predictor variables

across sexual identity categories, based on how participants identified to male friends, female

friends, healthcare providers and HIV testing frequency groups. Where statistically significant

differences were observed, Tukey testing was performed to make post hoc pairwise

comparisons and determine the source of the significant findings at a p-value of 0.05. The F-

value, *p*-value and mean difference with confidence intervals for statistically significant Tukey

test results were calculated. All analyses were conducted using SAS version 9.4.

CHAPTER 4

RESULTS

SAMPLE CHARACTERISTICS

Table 1 summarizes the demographic characteristics of the men in the sample. The

study sample consisted of 600 young MSM. All participants identified as Black or African

American. The mean age was 22.6 years (SD, 3.2). 25.7% of the sample had a monthly

household income between $500-$1000 and 19.8% had a monthly income <$500. 34.3% of the

sample graduated from high school or received a GED and 43.3% had some college, trade or

vocational education. 58.5% of the participants were employed, 69.5% of the sample was

single, never having been married. A majority of the sample (98.83%) reported the race of their

sexual partners as Black or African American, 13% reported having a white sexual partner, 7.5%

reported having a Hispanic partner and less than 3.0% reported having an American Indian or

Asian American sexual partner in the last year. 20.50% of the sample was HIV seropositive.

Greater than 60% of the study sample identified as gay or bisexual to male and female friends

and more than 70% identified as gay or bisexual to healthcare providers. The mean number of

different male anal sex partners as a top was 2.5 (SD, 7.3) and as a bottom 2.1 (SD, 4.2). The

mean number of times having had anal sex with a new partner as a top was 2.5 (SD, 7.2), and as

a bottom 3.4 (SD, 11.3). 69.2% of the participants reported having had anal sex as a top and

67.3% had anal sex as a bottom. 35.1% of the participants reported having at least one episode

of condomless male anal sex as a top and as a bottom. 36% of the sample reported having HIV

testing twice a year. The mean for IH, having a scale range of 7-35, was 18.6 (SD, 5.8), and the

mean for Stigma having a scale range of 4-16, was 8.7 (SD, 3.1).   Religion was measured by two

scales: the mean for Religious attendance was 2.7 (SD, 1.1), with a scale range of 1-5 and

Religious support and acceptance had a mean of 6.8 (SD, 6.8), with a scale range of 2-10.

Additionally, Racism was measured by two scales, with daily racism having a mean of 3.0, with a

scale range of 2-8, and racism and life experiences having a mean of 19.2, with a scale range of

11-55.

TABLE 1. SOCIODEMOGRAPHIC BACKGROUND, SEXUAL IDENTITY, SEXUAL BEHAVIORS, HIV TESTING, HIV STATUS, STRUCTURAL FACTORS AMONG YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN (AAMSM) AGE 15-29 YEARS (N=600)

Age in years: Mean (SD)	22.6 (3.2)
Monthly household Income: n (%)	

<$500	119	(19.8)
$500-$1000	154	(25.7)
$1000-$1500	110	(18.3)
$1500-$2000	96	(16.0)
>$2000	111	(18.5)
Education Level: n (%)		
< high school	34	(5.7)
high school or GED	206	(34.3)
some college, trade school or vocational school	260	(43.3)
college	79	(13.2)
graduate school	16	(2.7)
> graduate school	5	(0.8)
Employment Status: n (%)		
Yes	351	(58.5)
No	249	(41.5)
Current Relationship Status: n (%)		
married	20	(3.3)
divorced	16	(2.7)
widowed	4	(0.7)
separated	14	(2.3)
single, never been married	417	(69.5)
long-term relationship with a partner	129	(21.5)
Sexual identity to male friends: n (%)		
gay	307	(51.2)
bisexual	91	(15.1)
straight and sleeps w/women only	16	(2.7)
straight and sleeps w/women and guys	13	(2.2)
straight and sleeps with guys only	5	(0.8)
no label, but sleep with guys	74	(12.3)
do not discuss	94	(15.7)
Sexual identity to female friends: n (%)		
gay	313	(52.2)
bisexual	86	(14.3)
straight and sleeps w/women only	38	(6.6)
straight and sleeps w/women and guys	6	(1)
straight and sleeps with guys only	7	(1.2)
no label, but sleep with guys	40	(6.8)
do not discuss	110	(18.3)
Sexual Identity to healthcare providers: n (%)		
gay	328	(54.7)
bisexual	109	(18.2)
straight and sleeps w/women only	17	(2.8)
straight and sleeps w/women and guys	12	(2.0)
straight and sleeps with guys only	2	(0.33)

no label, but sleep with guys	37	(6.2)
do not discuss	64	(10.7)
have not seen a healthcare provider in the past year	31	(5.2)
Race of sex partner: n (%)		
Black/African American	593	(98.8)
White/Caucasian	78	(13.0)
Hispanic/Latino	45	(7.5)
American Indian/Alaska Native	9	(1.5)
Asian American/Pacific Islander	7.0	(1.2)
Role played during sex with another guy: n (%)		
top	415	(69.2)
bottom	404	(67.3)
Had 1 or more episodes of condomless anal sex w/ male partner: n (%)		
As a top	142	(35.1)
As a Bottom	150	(35.1)
Sexual Behaviors: In the past 90 days		
Had anal sex w/ a male partner: n (%)	508	(84.7)
Number of different male anal sex partners as a top: mean(SD)	2.5	(7.3)
Number of different male anal sex partners as a bottom: mean(SD)	2.2	(4.2)
Number of times had unprotected anal sex as a top: mean(SD)	5.0	(13.0)
Number of times had unprotected anal sex as a bottom: mean(SD)	4.7	(10.6)
Number of times had anal sex with a new partner as a top: mean(SD)	3.0	(7.7)
Number of times had anal sex with a new partner as a bottom: mean(SD)	3.5	(11.4)
HIV testing frequency: n (%)		
Once a year	158	(26.3)
Twice a year	153	(25.5)
More than twice a year	216	(36.0)
HIV status: n (%)		
negative	375	(62.5)
positive	123	(20.5)
Internalized Homophobia: (scale range 7-35): Mean(SD)	18.6	(5.8)
Stigma (scale range 4-16): Mean(SD)	8.7	(3.1)
Religion		
Religious Attendance (scale range 1-5): Mean(SD)	2.7	(1.1)
Religious Support/Acceptance (scale range 2-10): Mean(SD)	6.8	(1.9)
Racism		
Daily Racism (scale range 2-8): Mean(SD)	3.0	(1.4)
Racism and Life Experiences (scale range 11-55): Mean(SD)	19.2	(8.2)

*All percentages include missing data

MULTIPLE LINEAR REGRESSION ANALYSIS

Tables 2 displays the results of the association between IH, stigma, racism, religion and seven sexual risk behavior outcomes, controlling for age, income and education. Results were found statistically significant at a *p*-value <.05. One of the seven associations assessing the relationship between IH and sexual risk behavior were found to be statistically significant. An increase of one unit in IH was associated with a .164(SD, .081) unit increase in the number of times having anal sex with a male partner as a top, at a significance level of .02. One of seven associations between stigma and sexual risk behavior were found to be statistically significant. An increase of one unit in stigma was associated with a .185(SD, .057) unit increase in the number of different male anal sex partners as a bottom, at a significance level of .003. No statistically significant associations were found between daily racism and any of the seven sexual risk behavior outcomes and only one statistically significant association was found between racism and life experiences and sexual risk behavior. An increase of one unit in racism and life experiences was associated with a .051(SD, .021) unit increase in the number of different male anal sex partners as a bottom, at a significance level of .027. No statistically significant association was found between religious support and the seven sexual risk behaviors. The association between religious attendance and the sexual risk behavior outcomes resulted in one statistically significant association. A one unit increase in religious attendance was found to be associated with a .360 unit decrease in the number of different male anal sex partners as a bottom, at a significance level of .03.

TABLE 2. MULTIPLE LINEAR REGRESSION ANALYSES PREDICTING SEXUAL RISK BEHAVIORS AMONG YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN (AAMSM)

INTERNALIZED HOMOPHOBIA			
	"b"		
In the past 90 days:	**COEFFICIENT(SE)**	**95% CI**	*p-value*

	"b" COEFFICIENT(SE)	95% CI	p-value
Had anal sex with a male partner	-0.001(0.002)	-0.006-0.004	0.06
Number of different male anal sex partners as a top	-0.012(0.053)	-0.116-0.092	0.42
Number of different male anal sex partners as a bottom	-0.033(0.030)	-0.093-0.027	0.17
Number of times had condomless anal sex with a male, as a top	**0.164(0.081)**	**0.005-0.323**	**0.02**
Number of times had condomless anal sex with a male, as a bottom	-0.545(0.418)	-1.366-0.277	0.66
Number of times had anal sex with a new partner as a top	0.077(0.055)	-0.031-0.186	0.72
Number of times had anal sex with a new partner as a bottom	-0.047(0.078)	-0.200-0.106	0.90

STIGMA

In the past 90 days:	"b" COEFFICIENT(SE)	95% CI	*p-value*
Had anal sex with a male partner	0.004(0.005)	-0.005-0.013	0.05
Number of different male anal sex partners as a top	0.114(0.100)	-0.082-0.310	0.27
Number of different male anal sex partners as a bottom	**0.185(0.057)**	**0.073-0.297**	**<0.01**
Number of times had condomless anal sex with a male, as a top	0.117(0.151)	-0.180-0.413	0.09
Number of times had condomless anal sex with a male, as a bottom	0.265(0.792)	-1.292-1.822	0.93
Number of times had anal sex with a new partner as a top	0.122(0.104)	-0.082-0.327	0.83
Number of times had anal sex with a new partner as a bottom	0.165(0.147)	-0.123-0.453	0.74

PERCEIVED DAILY EXPERIENCES OF RACISM

In the past 90 days:	"b" COEFFICIENT(SE)	95% CI	p-value
Had anal sex with a male partner	<0.001(0.010)	-0.019-0.020	0.07
Number of different male anal sex partners as a top	0.135(0.215)	-0.288-0.558	0.38
Number of different male anal sex partners as a bottom	0.109(0.123)	-0.133-0.351	0.20
Number of times had condomless anal sex with a male, as a top	0.335(0.324)	-0.300-0.971	0.07
Number of times had condomless anal sex with a male, as a bottom	-1.420(1.630)	-4.624-1.787	0.83
Number of times had anal sex with a new partner as a top	0.074(0.224)	-0.365-0.514	1.00
Number of times had anal sex with a new partner as a bottom	0.055(0.316)	-0.565-0.675	0.95

RACISM AND LIFE EXPERIENCES

In the past 90 days:			
Had anal sex with a male partner	-0.001(0.001)	-0.005-0.002	0.05
Number of different male anal sex partners as a top	0.006(0.038)	-0.068-0.079	0.43
Number of different male anal sex partners as a bottom	**0.051(0.021)**	**0.009-0.093**	**0.03**
Number of times had condomless anal sex with a male, as a top	0.013(0.058)	-0.101-0.127	0.11
Number of times had condomless anal sex with a male, as a bottom	0.374(0.286	-0.187-0.936	0.65
Number of times had anal sex with a new partner as a top	0.029(0.039	-0.048-0.106	0.96
Number of times had anal sex with a new partner as a bottom	0.051(0.055)	-0.057-0.160	0.81

RELIGIOUS ATTENDANCE

In the past 90 days:	"b" COEFFICIENT(SE)	95% CI	*p*-value

Had anal sex with a male partner	-0.019(0.013)	-0.044-0.006	0.05
Number of different male anal sex partners as a top	-0.447(0.270)	-0.978-0.083	0.15
Number of different male anal sex partners as a bottom	-0.360(0.156)	-0.666-0.054	**0.03**
Number of times had condomless anal sex with a male, as a top	0.323(0.411)	-0.484-1.130	0.08
Number of times had condomless anal sex with a male, as a bottom	-3.99(2.137)	-8.193-0.207	0.38
Number of times had anal sex with a new partner as a top	0.134(0.278)	-0.412-0.681	0.99
Number of times had anal sex with a new partner as a bottom	-0.144(0.392	-0.914-0.627	0.93

RELIGIOUS SUPPORT AND ACCEPTANCE

In the past 90 days:

Had anal sex with a male partner	-0.008(0.008)	-0.024-0.007	0.09
Number of different male anal sex partners as a top	-0.328(0.184	-0.689-0.033	0.10
Number of different male anal sex partners as a bottom	-0.041(0.087)	-0.212-0.131	0.19
Number of times had condomless anal sex with a male, as a top	-0.061(0.262)	-0.576-0.455	0.19
Number of times had condomless anal sex with a male, as a bottom	-0.064(0.150)	-0.358-0.230	0.34
Number of times had anal sex with a new partner as a top	-0.161(0.186)	-0.527-0.204	0.91
Number of times had anal sex with a new partner as a bottom	0.046(0.266)	-0.476-0.568	0.95

The above models controlled for Age, Income and Education
Statistically significant at a p-value <.05

LOGISTIC REGRESSION

Table 3 displays the results of logistic regression analyses conducted to examine the association between each predictor variable, IH, stigma, racism and religion and the outcome variables, condomless anal sex with a male partner as a top and condomless anal sex with a male partner as a bottom. Only the predictor religious attendance was found to be statistically significant, at a significance level of .005. As religious attendance increased, the odds of engaging in condomless anal sex with a male as a bottom decreased (AOR 0.77, CI 0.64-0.92). This statistical significance was not captured with Linear regression.

TABLE 3. LOGISTIC REGRESSION ANALYSES PREDICTING CONDOMLESS ANAL SEX IN YOUNG AFRICAN AMERICAN MEN WHO HAVE SEX WITH MEN (AAMSM)

INTERNALIZED HOMOPHOBIA	aOR	95% CI	*p*-value
Condomless anal sex with a male as a top	1.02	0.98-1.06	0.31
Condomless anal sex with a male as a bottom	1.02	0.98-1.05	0.34
STIGMA			

Condomless anal sex with a male as a top	1.04	0.98-1.12	0.16
Condomless anal sex with a male as a bottom	1.03	0.97-1.10	0.35
DAILY RACISM			
Condomless anal sex with a male as a top	0.93	0.80-1.07	0.31
Condomless anal sex with a male as a bottom	1.02	0.89-1.17	0.78
RACISM/LIFE EXPERIENCES			
Condomless anal sex with a male as a top	1.00	1.00-1.03	0.94
Condomless anal sex with a male as a bottom	1.01	0.99-1.04	0.29
RELIGIOUS ATTENDANCE			
Condomless anal sex with a male as a top	0.84	0.70-1.01	0.06
Condomless anal sex with a male as a bottom	**0.77**	**0.64-0.92**	**<0.01**
RELIGIOUS SUPPORT/ACCEPTANCE			
Condomless anal sex with a male as a top	1.02	0.91-1.16	0.07
Condomless anal sex with a male as a bottom	0.93	0.82-1.05	0.22

The above models controlled for Age, Income and Education
Statistically significant at a p-value <.05

ONE-WAY ANALYSIS OF VARIANCE (ANOVA)

One-way ANOVA testing was conducted to compare the association of six sexual identity conditions and three HIV testing frequency conditions on the dependent variables IH, stigma, racism and religion (No table provided for ANOVA results). Results were statistically significant at a p-value <.05. There was a significant difference in mean levels for IH across the six sexual identity categories, based on how individuals identified to male friends [F(6 ,581)=7.0, p=<.0001]. Post hoc comparisons using the tukey test indicated that the mean IH score for three group comparisons was statistically significant: the group who identified as gay (M=17.5) and the group who did not label themselves, but slept with other guys (M=20) was statistically significant (MD=3.5, CI 0.7-6.3), the group who identified as gay (M=17.5) and the group who did not discuss sexual identity(M=20.6); (MD=3.1, CI 0.7-5.1), and the group who identified as gay (M=17.5) and the group who identified as bisexual (M=20.4); (MD=2.9, CI 0.8-4.9). The difference in mean levels for IH across the six sexual identity categories, based on how

individuals identified to female partners was also found to be statistically significant [F(6, 582)=8.8, *p*=<.0001]. Tukey post hoc comparisons found statistically significant mean IH score differences between four groups, the group who identified as gay (M=17) and the group who identified as a straight guy who sleeps with women (M=21.9); (MD=4.9, CI 2.0-7.8), the group who identified as gay (M=17) and the group who did not label themselves, but slept with other guys (M=20.5); (MD=3.5, CI 0.7-6.3), the group who identified as gay (M=17) and the group who did not discuss their identity with them (M=20.1); (MD=3.1, CI1.2-4.9), and the group who identified as gay (M=17) and the group who identified as bisexual (M=19.5); (MD=2.5, CI 0.4-4.6). The difference in mean levels for IH across the six sexual identity categories based on how individuals identified to healthcare providers was also found to be statistically significant [F(7, 581)=7.0, *p*=<.001]. Tukey post hoc testing found statistically significant IH mean scores between two groups, the group who identified as gay (M=18) and the group who identified as a straight guy who slept with women only (M=23.7); (MD=5.7, CI 1.4-9.9), the group that identified as gay (M=18) and those who identified as bisexual (M=21.4); (MD=3.4, CI 1.5-5.3). No statistically significant mean IH scores were found between the HIV testing frequency groups.

Likewise, the mean levels for Stigma across the six sexual identity categories based on how individuals sexually identified to male friends was assessed, although no statistically significant association was found [F(6,582)=1.7, *p=0.*12]. The difference in the level for stigma and how individuals identified themselves to female friends [F(6, 582)=4.0, *p*=0.0005] and healthcare providers[F(97, 581)=2.9, *p*=0.006] was found to be statistically significant. Tukey post hoc testing assessing the mean stigma scores across group comparisons, based on how

individuals sexually identified to female friends found statistically significance results between

four groups, the group who responded I do not label myself, but slept with other guys (M=9.8)

and the group who identified as a straight guy who sleeps with women only (M=6.6) ;(MD 3.2,

CI 1.1-5.2), the group who identified as gay (M=8.8) and the group who identified as a straight

guy who slept with women only (M=6.6); (MD 2.2, CI 0.5-3.7), the group who identified as

bisexual (M=8.4) and the group who identified as a straight guy who sleeps with women only

(M=6.6);(MD 1.8, CI 0.04-3.6), and the group that responded I do not discuss it with them

(M=8.3) and the group who identified as a straight guy who sleeps with women only (M=6.6)

(MD 1.7, CI 0.04-3.5). Additionally, a statistically significant mean stigma levels across sexual

identity categories were found according to how individuals identified to healthcare providers

[F(7, 581)=2.9, *p*=0.006], although the Tukey post hoc test failed to find statistically significant

mean stigma scores between group comparisons.   One-way ANOVA assessing the mean levels

for stigma based on HIV testing frequency found non-significant results between the groups

[F(2, 524)=0.3, *p*=0.7].

One-way ANOVA conducted examining the mean levels for perceived daily racism across

sexual identity categories, based to how individuals sexually identify to male friends[F(6,

582)=1.0, *p*=0.44], female friends[F(6, 582)=0.6, *p*=0.7] and healthcare providers[F(7, 581)=0.5,

p=0.8], were all found to be statistically non-significant. In addition, non-significant results

were found with one way ANOVA testing conducted to assess the mean levels for stigma

between the HIV testing frequency groups [F(2, 524)=0.1, *p*=0.9]. One-way ANOVA assessing

the mean levels of racism and life experiences across the sexual identity categories, based on

how individuals identified to male friends [F(6, 582)=0.7, *p*=0.12], female friends [F(6, 582)=0.9,

p=0.5], and healthcare providers [F(7, 581)=1.6, *p*=0.1] also resulted in non-significant results. One-way ANOVA results testing the mean level for racism and life experiences across the HIV testing frequency categories also found non-significant results [F(2, 524)=0.6, *p*=0.5].

One-way ANOVA conducted assessing the mean levels for religious attendance across the sexual identity categories and how individuals identified to male friends found statistically significant results [F(6, 593)=2.7, *p*=0.01], conversely, Tukey post hoc testing found non-significant mean score differences between group comparisons. One-Way ANOVA assessing the mean level for religious attendance across the sexual identity categories based on how individuals identified to female friends [F(6, 593)=2.0, *p*=0.06] and healthcare providers [F(7,592)=1.9, *p*=0.07] found statistically non-significant results. There were no statistically significant mean levels for religious attendance across the HIV testing frequency groups [F(2, 524)=2.4, *p*=0.09]. The mean level for religious support across sexual identity categories based on how individuals sexually identified to female friends, found statistically significant results [F(6, 490)=3.4, *p*=0.003]. Tukey post hoc testing found statistically significant mean level religious support scores between two sexual identity groups, individuals who identified as a straight guy who slept with women only (M=5.8) and the group who responded I do not label myself, but sleep with other guys (M=7.2) ;(MD=1.4, CI 0.02-2.8) and the group that identified as a straight guy who sleeps with women only (M=5.8) and the group who identified as a straight guy who slept with other guys only (M=8.9); (MD=3.1, CI 0.3-5.8) . Statistically non-significant results were found between mean levels for religious support across sexual identity categories and how individuals identified to male friends [F(6, 490)=1.5, *p*=0.2] and healthcare

providers [$F_{(7, 489)}=1.0$, p=0.5], and HIV testing frequency between groups [$F_{(2, 439)}=2.2$, p=0.1].

CHAPTER 5

DISCUSSION

An understanding of factors contributing to the disproportionately high rates HIV in AAMSM is critical. For this epidemic to be impacted effective interventions addressing the external root causes are necessary. Many studies have found that sexual risk behaviors alone do not explain the HIV disparity being observed in AAMSM, therefore an exploration of other factors driving the HIV epidemic is necessary. Consequently, this thesis sought to examine multiple social-structural factors to determine their role in increasing sexual risk behaviors for HIV transmission. Analysis found that 98.8% of the sample participants reported having Black or African American sexual partners. This finding is consistent with previous research showing a high level of assertive mixing by race among AAMSM. These findings are important in understanding HIV acquisition and transmission risk in AAMSM. Despite this population being a small sub-population, its high HIV prevalence increases AAMSM exposure. Study results also found that 84.75% of the participants reported recent anal sex with a male partner, with more than 60% of the sample engaging in anal sex as a top and 60% as a bottom. In addition, more than 30% of the sample reported having condomless anal sex with a male. These sexual risk behaviors are important to further our understanding of AAMSM's risk of HIV infection and signify the need for HIV risk reduction education in this population.

As hypothesized, an increase in IH was found to be associated with an increase the number of condomless anal sex encounters with a male, as a top. Conversely, IH was not found to be associated with an increase in the number of condomless anal sex encounters with a male, as a bottom. Also, as hypothesized, higher levels of stigma, and racism and life experiences were found to be associated with an increase in the number of different male anal sex partners as a bottom. These findings are important because these sexual behaviors, engaging in male anal sex as a bottom and having multiple sexual partners are well known to increases HIV risk. Although an increase in church attendance was hypothesized to be associated with increased sexual risk behaviors, results showed that an increase in religious attendance was associated with a decrease in the number of different male anal sex partners as a bottom and a decrease in condomless male anal sex as a bottom. Despite the Black church's opposition of homosexuality and criticism regarding its role in perpetuating the HIV/AIDS epidemic, these finding show a protective effect of the church on sexual risk behaviors, behaviors that effect HIV transmission.

An examination of the differences in the level of IH among groups based on how individuals sexually identified to male friends, female friends and healthcare providers found significant mean differences between the groups. A majority of the differences were found between groups who identified as gay and bisexual, and the groups who identified has either gay or bisexual and the groups who identified as straight only having sex with women or those who did not label themselves or those who did discuss their sexual identity. Differences were also found in the levels of stigma based on how individuals identified to female friends, in the level of religious support and how individuals identified to female friends. According to

previous studies, AAMSM are less likely than other racial/ethnic groups to disclose their same-sex behaviors or identify as gay or bisexual, and are more likely to report having sex with women only due to fears of sexual discrimination and stigmatization, from their own community and abroad. Therefore, these findings are important to understanding the relationship between social-contextual factors and sexual identity. In the U.S., there is an urgent need to provide HIV prevention services to African American men who have sex with men and women (MSMW), but do not identify as gay or homosexual, but engaging these individuals in HIV prevention has historically been challenging (Saleh, Operario, Smith, Arnold, & Kegeles, 2011), especially HIV prevention services targeting AAMSM. Finding a way to reach individuals that fail to identify their same-sex behaviors is critical in order to reduce HIV transmission.

LIMITATIONS

There are several limitations of this study. One study limitation is the convenience sampling method used in obtaining the sample. Considering the sample consisted of only Jackson, M.S. residents, generalizability of the study findings to other populations is limited. In additions, study behaviors were self-reported, therefore relying on participant recall. Also, taking into consideration the sensitive nature of the survey questions, the results relied of the participants willingness to accurately report behaviors. Another limitation of the study is the limited number of sexual risk behaviors assessed in the study, as these selected behaviors are not an exhaustive list of sexual behaviors that fully capture the broad spectrum of behaviors

that fully measure sexual risk. In addition, the data is cross-sectional, so temporality and causality cannot be inferred.

IMPLICATIONS

In the U.S., prevention of HIV infection in the African American community is a national public health priority (Saleh et al., 2011), especially among AAMSM. Therefore, these study findings have critical public health implications. These thesis findings imply the need for further research examining social-structural factors and their association to sexual risk behaviors. This study not only fills the gap in research, but also provides valuable information that could assist in explaining the HIV disparity in AAMSM. The relationship found between higher levels of IH, stigma, racism and life experiences and risky sexual behaviors signify the need for individual, community and structural level interventions addressing societal homophobia, stigma and racism. Considering the observed effect of IH, stigma, and racism and life experiences on sexual behaviors in this young AAMSM sample, its important that the implementation of individual level interventions begin before or early in adolescence. Interventions should focus on increasing skills to cope with homophobia, stigma and racism. For example, mindfulness training has been shown to be a powerful tool to help different minority populations overcome negative outcomes associated with racism and stigma. Additionally, individual level behavioral interventions are needed, programs focusing on safe sex education, with an emphasis on consistent and correct condom use, education on anal sex risks and the risk with having

multiple sexual partners. Disseminating messages targeting young AAMSM about safe sex practices is also a much-needed intervention.

Thesis results also found differences in the levels of IH and stigma among groups based on how they sexually identified to male and female friends and in the level of IH based on how individuals identified to healthcare providers. These finding have significant public health implications and has challenged public health, because individuals that fail to identify as gay or bisexual are less likely to access HIV prevention services targeting the MSM population. Individuals that fail to disclose their sexual identity to healthcare providers may fail to receive recommended HIV testing and preventative education. In an effort to improve structural level interventions, healthcare providers need to be culturally sensitive, and provide a comfortable, non-judgmental environment where individuals feel comfortable disclosing their sexual identity and sexual behaviors and receive appropriate HIV risk reduction education and counseling. A difference in the level of religious support was found between groups based on how they identified to female friends and an increase in religious attendance was related to a reduction in the number of male anal sex partners as a bottom, therefore the implementation of community level interventions can be instrumental in combating the HIV epidemic in AAMSM, including educating Black religious institutions and the communities they serve about the role churches can play in reducing HIV risk sexual behaviors and ultimately HIV rates among AAMSM. These significant study findings not only stress the urgent need for effective intervention strategies, but also the dire need for further research exploring socio-cultural factors and their role in driving the HIV/AIDS epidemic in young AAMSM.

CONCLUSION

In the U.S., the HIV epidemic continues to disproportionately affect AAMSM and despite numerous studies examining correlates of sexual risk behaviors across racial/ethnic groups, studies have failed explain the HIV disparity. Research has found that AAMSM, compared to other racial/ethnic MSM groups, do not engage in riskier sexual behaviors. Therefore, an exploration into other factors contributing to the elevated rates of HIV among AAMSM is crucial. Determining the external root cause of the HIV/AIDS epidemic in this population is necessary before effective HIV risk reduction interventions can be implemented. Unfortunately, there is a scarcity of research examining socio-contextual factors and their association to sexual risk behaviors in AAMSM, so the purpose of this thesis was to provide a gap in research examining the relationship between IH, stigma, racism and religion and sexual risk behaviors among young AAMSM.

Higher levels of IH was found to be associated with an increase in the number of condomless anal sex encounters with a male, as a top. Higher levels of IH, stigma, and racism and life experiences were found to be associated with an increase in the number of male anal sex partners as a bottom. Furthermore, an increase in religious attendance was found to decrease an individuals risk of engaging in the riskiest type of anal sex, bottoming. In addition, differences in the levels of IH, stigma, religious support were found between groups based on how an individual sexually identified. Thus, these study findings provide valuable information that can assist in better understanding socio-contextual factors and their impact on sexual risk

behaviors in AAMSM.   The implementation of individual, community and structural

interventions addressing IH, stigma, racism and life experience, religious attendance and

support are important. In addition, behavioral HIV risk reduction interventions and program

targeting AAMSM are necessary, but these thesis findings also signify the vital need for further

research assessing socio-contextual factors and their role in driving the HIV/AIDS epidemic in

AAMSM.

REFERENCES

A. (2017, November 30). Jackson. Retrieved January 27, 2018, from

https://aidsvu.org/state/mississippi/jackson/

Ayala, G., Bingham, T., Kim, J., Wheeler, D. P., & Millett, G. A. (2012). Modeling the Impact of

Social Discrimination and Financial Hardship on the Sexual Risk of HIV Among Latino and

Black Men Who Have Sex With Men. *American Journal of Public Health*, *102*(S2), S242–

S249. https://doi.org/10.2105/AJPH.2011.300641

Bruce, D., Stall, R., Fata, A., & Campbell, R. T. (2014). Modeling Minority Stress Effects on

Homelessness and Health Disparities among Young Men Who Have Sex with Men.

Journal of Urban Health; New York, *91*(3), 568–580.

http://dx.doi.org.ezproxy.gsu.edu/10.1007/s11524-014-9876-5

CDC. (2017). African American | Gay and Bisexual Men | HIV by Group | HIV/AIDS | CDC.

Retrieved September 20, 2017, from https://www.cdc.gov/hiv/group/msm/bmsm.html

Christensen, J. L., Miller, L. C., Appleby, P. R., Corsbie-Massay, C., Godoy, C. G., Marsella, S. C., &

Read, S. J. (2013). Reducing shame in a game that predicts HIV risk reduction for young

adult men who have sex with men: a randomized trial delivered nationally over the web.

Journal of the International AIDS Society, *16*, n/a-n/a.

https://doi.org/10.7448/IAS.16.3.18716

Crosby, R. A., Mena, L., & Ricks, J. M. (2017). Correlates of sexual-risk behaviors among young

   black MSM: implications for clinic-based counseling programs. *AIDS Care*, *29*(6), 718–

   723. https://doi.org/10.1080/09540121.2016.1259449

Crosby, R. A., Salazar, L. F., Mena, L., & Geter, A. (2016). Associations Between Internalized

   Homophobia and Sexual Risk Behaviors Among Young Black Men Who Have Sex With

   Men. *Sexually Transmitted Diseases*, *43*(10), 656–660.

   https://doi.org/10.1097/OLQ.0000000000000505

Dentato, M. P., Halkitis, P. N., & Orwat, J. (2013). Minority Stress Theory: An Examination of

   Factors Surrounding Sexual Risk Behavior Among Gay and Bisexual Men Who Use Club

   Drugs. *Journal of Gay & Lesbian Social Services*, *25*(4), 509–525.

   https://doi.org/10.1080/10538720.2013.829395

Frye, V., Nandi, V., Egan, J., Cerda, M., Greene, E., Van Tieu, H., … Koblin, B. A. (2015). Sexual

   Orientation- and Race-Based Discrimination and Sexual HIV Risk Behavior Among Urban

   MSM. *AIDS and Behavior; New York*, *19*(2), 257–269.

   http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10461-014-0937-2

Fullilove, M. T., & Fullilove, R. E. (1999). Stigma as an Obstacle to AIDS Action: The Case of the

   African American Community. *American Behavioral Scientist*, *42*(7), 1117–1129.

   https://doi.org/10.1177/00027649921954796

Hamilton, C. J., & Mahalik, J. R. (2009). Minority stress, masculinity, and social norms predicting

   gay men's health risk behaviors. *Journal of Counseling Psychology*, *56*(1), 132–141.

   https://doi.org/10.1037/a0014440

Han, C., Ayala, G., Paul, J. P., Boylan, R., Gregorich, S. E., & Choi, K.-H. (2015). Stress and coping

with racism and their role in sexual risk for HIV among African American, Asian/Pacific

Islander, and Latino men who have sex with men. *Archives of Sexual Behavior*, *44*(2),

411–420. https://doi.org/10.1007/s10508-014-0331-1

HIV Basics | HIV/AIDS | CDC. (2017). Retrieved August 14, 2017, from

https://www.cdc.gov/hiv/basics/index.html

Lassiter, J. M., & Parsons, J. T. (2016). Religion and Spirituality's Influences on HIV Syndemics

Among MSM: A Systematic Review and Conceptual Model. *AIDS and Behavior; New

York*, *20*(2), 461–472. http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10461-015-1173-0

Levy, M. E., Wilton, L., Phillips, G., Glick, S. N., Kuo, I., Brewer, R. A., … Magnus, M. (2014).

Understanding Structural Barriers to Accessing HIV Testing and Prevention Services

Among Black Men Who Have Sex with Men (BMSM) in the United States. *AIDS and

Behavior; New York*, *18*(5), 972–996.

http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10461-014-0719-x

Maksut, J. L., Eaton, L. A., Siembida, E. J., Driffin, D. D., & Baldwin, R. (2016). An evaluation of

factors associated with sexual risk taking among Black men who have sex with men: a

comparison of younger and older populations. *Journal of Behavioral Medicine; New

York*, *39*(4), 665–674. http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10865-016-9734-x

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 and Behavior*, *18*(1), 10–25. https://doi.org/10.1007/s10461-013-

0476-2

Oster, A. M., Dorell, C. G., Mena, L. A., Thomas, P. E., Toledo, C. A., & Heffelfinger, J. D. (2011). HIV Risk Among Young African American Men Who Have Sex With Men: A Case-Control Study in Mississippi. *American Journal of Public Health; Washington*, *101*(1), 137–143.

Peterson, J. L., & Jones, K. T. (2009). HIV Prevention for Black Men Who Have Sex With Men in the United States. *American Journal of Public Health; Washington*, *99*(6), 976–980.

Puckett, J. A., Newcomb, M. E., Garofalo, R., & Mustanski, B. (2017). Examining the Conditions Under Which Internalized Homophobia Is Associated with Substance Use and Condomless Sex in Young MSM: the Moderating Role of Impulsivity. *Annals of Behavioral Medicine*, *51*(4), 567–577. https://doi.org/10.1007/s12160-017-9878-0

Puckett, J. A., Newcomb, M. E., Ryan, D. T., Swann, G., Garofalo, R., & Mustanski, B. (2017). Internalized Homophobia and Perceived Stigma: a Validation Study of Stigma Measures in a Sample of Young Men who Have Sex with Men. *Sexuality Research and Social Policy*, *14*(1), 1–16. https://doi.org/10.1007/s13178-016-0258-5

Quinn, K., Dickson-Gomez, J., DiFranceisco, W., Kelly, J. A., St. Lawrence, J. S., Amirkhanian, Y. A., & Broaddus, M. (2015). Correlates of Internalized Homonegativity Among Black Men Who Have Sex With Men. *AIDS Education and Prevention; New York*, *27*(3), 212–226. http://dx.doi.org.ezproxy.gsu.edu/101521aeap2015273212

Quinn, K., Voisin, D. R., Bouris, A., Jaffe, K., Kuhns, L., Eavou, R., & Schneider, J. (2017). Multiple Dimensions of Stigma and Health Related Factors Among Young Black Men Who Have Sex with Men. *AIDS and Behavior; New York*, *21*(1), 207–216. http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10461-016-1439-1

Reed, E., Santana, M. C., Bowleg, L., Welles, S. L., Horsburgh, C. R., & Raj, A. (2013). Experiences

of Racial Discrimination and Relation to Sexual Risk for HIV among a Sample of Urban

Black and African American Men. *Journal of Urban Health; New York*, *90*(2), 314–322.

http://dx.doi.org.ezproxy.gsu.edu/10.1007/s11524-012-9690-x

Shaw, S. A., & El-bassel, N. (2014). The Influence of Religion on Sexual HIV Risk. *AIDS and

Behavior; New York*, *18*(8), 1569–1594.

http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10461-014-0714-2

Stacy W. Smallwood, S. Melinda Spencer, Lucy Annang Ingram, Jim F. Thrasher, & Melva V.

Thompson-Robinson. (2017). Examining the Relationships Between Religiosity,

Spirituality, Internalized Homonegativity, and Condom Use Among African American

Men Who Have Sex With Men in the Deep South. *American Journal of Men's Health*,

11(2), 196–207. https://doi.org/10.1177/1557988315590835

Tieu, H., Murrill, C., Xu, G., & Koblin, B. A. (2010). Sexual Partnering and HIV Risk among Black

Men Who Have Sex with Men: New York City. *Journal of Urban Health; New York*, *87*(1),

113–121. http://dx.doi.org.ezproxy.gsu.edu/10.1007/s11524-009-9416-x

Watkins, T. L., Simpson, C., Cofield, S. S., Davies, S., Kohler, C., & Usdan, S. (2016a). The

Relationship Between HIV Risk, High-Risk Behavior, Religiosity, and Spirituality Among

Black Men Who Have Sex with Men (MSM): An Exploratory Study. *Journal of Religion

and Health; New York*, *55*(2), 535–548.

http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10943-015-0142-2

Watkins, T. L., Simpson, C., Cofield, S. S., Davies, S., Kohler, C., & Usdan, S. (2016b). The

Relationship of Religiosity, Spirituality, Substance Abuse, and Depression Among Black

Men Who Have Sex with Men (MSM). *Journal of Religion and Health; New York*, *55*(1),

255–268. http://dx.doi.org.ezproxy.gsu.edu/10.1007/s10943-015-0101-y