

NEGATIVE HEALTH OUTCOMES IN MEN WHO HAVE SEX WITH MEN OF
COLOR: AN INVESTIGATION OF MINORITY STRESS AND PROTECTIVE
FACTORS

by

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DISSERTATION ABSTRACT

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The purpose of this study was to explore the intersection of multiple minority identities in men who have sex with men (MSM) of color, focusing on the relationship between experiences of minority stress and negative health outcomes. Specifically, this study aimed to identify how minority stress levels in MSM of color impact the following negative health outcomes: poor mental health, substance abuse, and risky sexual behavior. The role of ethnic identity belonging and religious practice as potentially moderating the relationship between minority stress and negative health outcomes was further explored. A cross-sectional online survey was utilized to test the research questions. The sample consisted of 152 participants who identified as racial/ethnic minorities and MSM between the ages of 18 and 29. Direct effects of minority stress reflected in self-reports of Lesbian, Gay and Bisexual (LGB) victimization, internalized homophobia, and perceived ethnic discrimination on negative health outcomes were tested using analysis software IBM SPSS.

The findings revealed that greater minority stress was associated only with increased mental health problems. As hypothesized, evidence emerged that ethnic identity belonging moderated the relationship between minority stress and both mental

health and substance use outcomes, suggesting that ethnic identity belonging may serve as a protective factor for MSM of color. Under conditions of high minority stress, MSM of color with greater engagement with formal religious practice were associated with the highest negative mental health outcomes, whereas lower degrees of religious practice predicted better mental health outcomes. This study identified MSM of color to be at risk for poor mental health and has highlighted the importance of ethnic identity belonging as a potential buffer against mental health and substance use issues. Further research is necessary to determine whether religiosity serves as a protective factor or risk factor for MSM of color. These findings will help researchers to better understand MSM of color and may have a potential impact on prevention and intervention efforts by identifying risk and protective factors that help to explain the aversive effects of minority stress.

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CHAPTER I

INTRODUCTION

Men who have sex with men (MSM) make up 2% of the United States population (Center for Disease Control and Prevention (CDC), 2010). The term MSM has been widely used within public health and Lesbian, Gay, and Bisexual (LGB) research. MSM is defined as male individuals who engage in sexual activity with members of the same sex, regardless of how their self-identified sexual orientation (CDC, 2010). Using the term MSM is more inclusive of men within research studies by focusing on the sexual act rather than identity.

Although MSM make up a small portion of the United States population, they are severely and disproportionately impacted by human immunodeficiency virus (HIV). MSM are the only group that has experienced a steady increase in HIV infection rates over the past two decades (CDC, 2010). MSM face an increased risk of contracting HIV due to their links to a wide variety of risky sexual behaviors, including low condom use, sexual compulsivity, drug use, and engaging with multiple sex partners (Dudley, Rostosky, Korfhage, & Zimmerman, 2004). In addition to HIV infections, this population is at risk for other physical and mental health problems, including high rates of sexually transmitted infections, alcohol abuse, and depression (Stole & Coutinho, 2002; De Santis & Vasquez, 2011).

When HIV was identified as a condition in 1981, Caucasian MSM were initially described as the highest risk group. Through the progression of time, there has been a large increase of HIV infection rates for racial/ethnic minority MSM (CDC, 2010). In particular, MSM who identify as African American or Latino populations are at an

increased risk of contracting the HIV infection in comparison to individuals who identify as a Caucasian (Hall, Byers, Ling & Espinoza, 2007). According to the Center for Disease Control and Prevention (2010), black MSM accounted for more new HIV infections than any other racial/ethnic group of MSM. For both African American and Latino populations, nearly half of the new HIV infections each year are attributed to adolescents and men in the youngest age group 13-29. As such, focusing on populations that have the highest risk of HIV infection and identifying risk and protective factors is at the forefront of preventive research efforts in this area (CDC, 2010).

Research on MSM of color (i.e., individuals that hold both ethnic/racial and MSM identities) is limited. When examining the current literature on the topic of minority stress within MSM of color, there are contradictory findings (Hayes, Chun-Kennedy, Edens, & Locke, 2011; Lemelle & Battle, 2004; Meyer, 2003; Meyer, 2010; Meyer, Dietrich, & Schwartz, 2008; Moradi, Wiseman, et al., 2010; Pachankis & Goldfried, 2004). More research is warranted to better understand experiences of MSM of color and identify risk and protective factors. The purpose of the current study is to explore these contradictory findings by examining dual load minority stress and resilience. The current study explores the concept of resilience by examining potential protective factors within the MSM of color population. Specifically, this study addresses whether MSM of color who experience heightened amounts of minority stress (i.e., racial discrimination, victimization, and internalized homophobia) report higher rates of negative health outcomes (i.e., substance abuse, poor mental health, and risky sexual behaviors). In addition, the current study investigates whether ethnic identity belonging and religious

practice serve as protective factors, buffering the association between minority stress and negative health outcomes for MSM of color.

The following sections will explore negative health outcomes, minority stress, and protective factors related to both minority identities within this population. Literature that bears on the dual load minority stress hypothesis and the resilience hypothesis will be explored. The current study was designed to clarify discrepancies within the research literature to better help support MSM of color in hopes of eliminating or decreasing their overall risk for negative health outcomes.

Rationale

This section examines the health outcomes relevant to MSM of color. The minority stress model will be introduced along with specific sources of stress and how they relate to identities associated with MSM of color (i.e., ethnic/racial, LGB, and MSM). Then the resiliency hypothesis will be described and how protective factors may act as buffers between sources of minority stress and negative health outcomes in MSM of color. Finally, the research questions and the hypothesized relationships will be presented.

Health Outcomes

Minority groups, in particular MSM of color, are at higher risk for negative health outcomes compared to majority populations (CDC, 2012; Meyer, 1995). Because there is an overall risk of negative health outcomes for MSM of color, this study was interested in how the stressors associated with the intersectionality of minority identities play a role in negative health outcomes. Therefore, the following section will examine negative health outcomes associated with the minority identities of MSM of color.

MSM of color hold two minority identities: their racial/ethnic identity and sexual identities (i.e., LGB). Each identity has been associated with health risk. Racial and ethnic minorities experience higher substance use, risky sexual behavior, and a lack of resources and access to mental health services (Beauvais & Oetting, 2002; CDC, 2005; Chartier & Caetano, 2010; Chisolm, Mulatu, & Brown, 2006; Surgeon General, 1999). Likewise, sexual minorities have increased negative health outcomes related to substance use, poor mental health, and risky sexual behavior (CDC, 2011, 2012; Gilman, Cochran, Mays, Hughes, Ostrow & Kessler, 2001). It is important to briefly explore the individual minority identities of MSM of color to determine whether or not dual minority identities increase one's risk for negative health outcomes.

Racial and ethnic minority status. A majority of the health research concerning racial and ethnic minorities has focused on identifying and addressing gaps in the quality of health in this population. There are documented racial and ethnic disparities related to substance use, mental health care, and sexual health (Beauvais & Oetting, 2002; Surgeon General, 1999). A national survey revealed differences in alcohol consumption across ethnic groups, including problematic patterns that are associated with risk for adverse effects of alcohol (SAMHSA, 2007). Chartier and Caetano (2010) found that Caucasians and Native Americans have a greater risk for alcohol use disorders in comparison to other ethnic groups, but once alcohol dependence occurs, African Americans and Latinos experience higher rates of recurrent or persistent dependence. In addition, they found the consequences of drinking were more profound for Native Americans, Latinos, and African Americans.

Researchers suggest that African Americans do not have a higher prevalence of psychiatric disorders than Caucasians within the general population (Kessler, Berglund, Demler, Jin, & Walters, 2005; Kessler et al., 1994), yet lack of access to treatment contributes to mental health disparities in ethnic and racial minority groups (Chisolm, Mulatu, & Brown, 2006). The U.S. Department of Health and Human Services (2001) found that disparities exist in access to, and quality of mental health services for ethnic minorities, which results in a greater collective burden of mental health disorders than nonracial minorities. Similarly, Sue and Chu (2003) suggest that many mental health disparities are due to provision of services rather than to inherent differences in the prevalence of disorders. Further research is necessary to fully explain ethnic and racial minority experiences related to mental health.

Sexual risk research, on the other hand, indicates racial disparities in the prevalence of sexually transmitted diseases and HIV/AIDS in the United States (CDC, 2005). Specifically, African Americans account for 48% of those living with AIDS within the United States, and Asian Americans and Latinos account for the fastest-growing HIV incidence rates (CDC, 2005).

Lesbian, Gay, and Bisexual (LGB) identities. LGB individuals have increased rates of negative health outcomes compared to heterosexual populations (Meyer 1995; Meyer 2003), including higher rates of substance abuse, lower rates of abstinence from alcohol and drug use, and continuation of heavy drinking into later life (CDC, 2012). Researchers have found homophobia, HIV/AIDS effects, and the coming out process as potential factors that contribute to these particular risky behaviors (Cheng, 2003).

In addition to problematic drinking issues, LGB individuals have high prevalence rates of poor mental health outcomes (i.e., anxiety, mood, and substance use disorders; and suicidal thoughts) (Gilman et al., 2001) and risky sexual behavior (CDC, 2011). Research indicates that adolescents who have same-sex attractions, relationships (i.e., dating and sexual), or identify as LGB are more likely than their heterosexual peers to experience depressive symptoms, hopelessness, and suicidality (Safren & Heimberg, 1999). Specifically, Gilman and colleagues (2001) found that individuals who reported having same-sex sexual partners in the past five years had higher incidences of anxiety, mood, and substance use disorders, and suicidal thoughts within the past 12 months than individuals who reported having heterosexual partners.

Alcohol is the most widely used drug among adolescents and young adults (Grunbaum et al., 2002), and individuals who consume alcohol are more sexually active and more likely to have unprotected sex than nondrinkers (Bailey, Pollock, Martin, & Lynch, 1999; Kotchick, Shaffer, Forehand, & Miller, 2001). Alcohol confers risk for HIV transmission by altering youths' perceptions and judgment, and increasing the likelihood of non-condom use or inaccurate condom use. A substantial body of research has focused on the topic of alcohol and illicit drug use among MSM, and its relationship to risky sexual behaviors and the spread of HIV (Beckett, Burnam, Collins, Ranouse, & Beckman, 2003; Garofalo, Mustanski, Mckirnan, & Donenberg, 2007; Shoptaw & Redback, 2007). Additionally, LGB individuals report more problems in other sexual health areas, like sexual coercion and dysfunction compared to heterosexual individuals (Henderson, Lehavot, & Simoni, 2009; Kuyper & Vanwesenbeeck, 2011).

Men who have sex with men (MSM). A range of negative health outcomes has also been documented within the MSM population (Cochran, Mays, & Sykkivan, 2003). MSM tend to consume more alcohol compared to heterosexual men (Patterson, Wolf, Hall, & Golder, 2009), engage more frequently in anonymous sex with multiple partners (Bimbi et al., 2006), and are at greater risk for sexually transmitted infections (Halkitis, Zade, Shrem, & Marmor, 2004). Research demonstrates a consistent association between substance use and risky sexual behavior, particularly among MSM (Wells, Golub, & Parsons, 2011).

A substantial body of research has focused on the topic of alcohol and illicit drug use among MSM, and its relationship to increased risky sexual behaviors and the spread of HIV (Garofalo, Mustanski, Mckirnan, & Donenberg, 2007; Shoptaw, Redback, & Freese, 2002). Mackesy-Amiti, Fendrich, and Johnson (2010) revealed similar findings; they found that men who engaged in risky sexual behavior in the past six months were more likely to be alcohol dependent and use other illicit drugs. The connection between risky sexual behavior and substance use in MSM may explain the fact that MSM have the highest HIV/AIDS rates compared to any other population (Garofalo, Mustanski, Mckirnan, & Donenberg, 2007; Shoptaw, Redback, & Freese, 2002).

Not only do MSM have high rates of negative health outcomes related to substance use and sexual risk, but MSM are also at increased risk of major depression, generalized anxiety, and bipolar disorder (CDC, 2012). Despite the efforts to provide more HIV prevention interventions for at-risk MSM, this population continues to represent the largest group of HIV infections and individuals living with HIV in the United States (CDC, 2012). Safren and Blashill (2011) identify three major assumptions

based on past literature: (a) MSM have higher rates of mental health problems than the general population, (b) these mental health problems co-occur with each other and interact to increase HIV risk, and (c) comorbid mental health problems may compromise the effectiveness of prevention programs.

Men who have sex with men (MSM) of color. MSM of color have the highest risk for negative health outcomes compared to other populations (CDC, 2010). De Santis and Vasquez (2011) investigated ethnic/racial differences in depressive symptoms, self-esteem, and sexual behaviors among 70 MSM. The researchers were interested in examining the increased risk of depression for MSM of color because of the combination of sexual minority and ethnic minority status. MSM in this study were at high risk for depressive symptoms, HIV infections, and/or contracting sexually transmitted infections because of the high levels of unsafe sexual behaviors (De Santis & Vasquez, 2011). This study found African American MSM to have higher levels of depressive symptoms when compared to other groups, however no other negative health outcomes differences were identified based on race.

On the contrary, other researchers have identified MSM of color to be at risk for other negative health outcomes. African American and Latino MSM in California reported higher rates of high-risk sexual behaviors compared to Asian and Caucasian MSM (Xia et al., 2006). Similarly, Rhodes, Yee, and Hergenrather (2006) found that African American and Latino MSM reported less condom usage during sexual activity compared to Caucasian MSM. Other researchers found supporting evidence that African American MSM reported more unsafe sexual practices compared to Caucasian MSM (Crosby, Holtgrave, Stall, Peterson, & Shouse, 2007). The only study that compared

Asian MSM to Caucasian MSM determined Asian MSM to have higher rates of unprotected anal intercourse, rectal gonorrhea, and early syphilis than Caucasian MSM (McFarland, Chen, Weide, Kohn, & Klausner, 2004).

Research on ethnic differences in MSM's substance use is inconsistent. Shoptaw and colleagues (2009) found that MSM who are also racial/ethnic minorities have similar alcohol consumption rates as Caucasian MSM, while other researchers have found heavy drinking and drug use to be a significant public health problem in MSM of color (Ramirez-Valles, Garcia, & Campbell, 2007). Similarly, Irwin and Morgenstern (2005) found differences in alcohol consumption among diverse ethnicities of MSM; African Americans reported a higher number of drinks per day compared to other racial and ethnic groups. They also found a high rate of comorbidity of drug and alcohol use disorders in their sample of ethnically diverse MSM.

The summarized findings on negative health outcomes reflect the complexities involved with the intersection of racial and sexual identities. Taken together, MSM of color, individuals who identify as both ethnic/racial and sexual minorities, are at increased risk for a constellation of negative health outcomes across mental health, substance use, and risky sexual behavior.

Minority Stress

Researchers have postulated that MSM of color may experience an increased amount of negative health outcomes given their multiple minority identities (Meyer 1995, 2003). Meyer (2003) identified minority stress as a potential reason for minorities to experience an increase in negative health outcomes compared to non-minorities. It is suggested that MSM of color experience higher rates of negative health outcomes due to

the dual minority stress they experience. Researchers have found higher levels of social stress in marginalized populations, which are posited to lead to negative health outcomes (Meyer, 2003; Williams, Yu, Jackson, & Anderson, 1997). One of the most prominent theoretical and explanatory frameworks for the heightened negative health outcomes observed in MSM population is the minority stress model (Meyer, 1995; Meyer, 2003). This section introduces the minority stress model and discusses different sources of stress for ethnic and sexual minority groups.

The term minority stress has been widely used in research pertaining to LGB individuals (Balsam, Molina, Beadnell, Simoni, & Walters, 2011; Cox, Dewaele, Houtte, & Vincke, 2010; Meyer, 1995; Frost & Meyer, 2009; Hequembourg & Brallier, 2009). Meyer (2003) defined minority stress as chronically high levels of stress faced by members of stigmatized minority groups. The concept of minority stress is based on the premise that individuals who identify as LGB or other minority groups are vulnerable to chronic stress related to stigmatization (Mirowsky & Ross, 1989). The minority stress model is a theoretical framework used to understand how stressful experiences associated with one's minority identities can affect mental health and negative health outcomes (Meyer, 1995; Meyer, 2003), with attention to the effects of dual load minority stress in MSM of color, due to their multiple minority identities.

The following section will explore different sources of minority stress for MSM of color that are derived from external and internal factors related to their ethnic/racial and sexual minority identities, namely racial discrimination, internalized homophobia, and victimization. Then, the section will examine how MSM of color may be at higher

risk because of the dual load minority stress that they may experience from stressors emanating from their experiences as racial minorities and sexual minorities.

Racial discrimination. Racial discrimination involves behaviors such as stigmatization, exclusion, social distancing, harassment, violence and other harmful acts (Contrada et al., 2000). The experience of discrimination based on racial and ethnic group membership is a lifelong struggle for many minorities in the United States. Researchers explored ethnic and racial minority stressors and how they contribute to higher negative outcomes, specifically greater mental health concerns (Williams, Yu, Jackson, & Anderson, 1997). Williams and colleagues (1997) identified racial discrimination to be a key source of minority stress for MSM of color because of its well-documented contributions to greater negative health outcomes in minority status individuals, and the disparities in health status of white majority versus minority populations (Anderson & Armstead, 1995; National Institutes of Health, 2000; Williams & Mohammed, 2009; Williams & Williams-Morris, 2000). Several studies show that perceived racial discrimination is associated with increased levels of stress, poor psychophysiological health outcomes (Boyce, 1997; Landrine & Klonoff, 1996; Smedley, Myers, & Harrell, 1993; Rodriguez, Myers, Morris, & Cardoza, 2000; as cited in Bernal, Trimble, Burlew, & Leong, 2003), substance use (Borrell et al., 2007; Finch, Catalano, Novaco, & Vega, 2003; Martin, Tuch, & Roman, 2003; Okamoto, Ritt-Olson, Soto, Baezconde-Garbanati, & Unger, 2009; Paradies, 2006), and risky behaviors (Roberts et al., 2012; Stevens-Watkins, Brown-Wright, & Tyler, 2010) among racial and ethnic minorities.

When examining these three negative health outcomes (i.e., mental health, risky sexual behavior, and substance use) and their link with discrimination, it is important to recognize that race and ethnicity may be a major component of MSM of colors' identity. In a recent study, researchers found that perception of racial discrimination was associated with panic disorder, posttraumatic stress disorder, and substance use disorders in varying degrees in three minority groups (i.e., Asian Americans, Latino Americans, and African Americans) (Chou, Asnaai, & Hofmann, 2012). Similar results of minority stress being associated with depression were found among undergraduate Latino/a students enrolled at a diverse college campus (Arbona & Jimenez, 2013).

Studies have also shown that perceived racism and experiences with racial discrimination are associated with increased alcohol use (Finch, Catalano, Novaco, & Vega, 2003; Martin, Tuch, & Roman, 2003), although most of this research has focused on African Americans and not other ethnic minorities (Borrell et al., 2007; Paradies, 2006). For example, Borrell and colleagues (2007) found that African Americans experiencing racial discrimination reported higher use of alcohol in the past year compared to those experiencing no discrimination. However, the limited research on Latino populations also found that individuals who report experiencing greater discrimination are also at risk for substance use (Okamoto, Ritt-Olson, Soto, Baezconde-Garbanati, & Unger, 2009).

Racial discrimination also may put one at greater risk for negative health outcomes related to sexual risk-taking behaviors. In a cross-sectional study, Stevens-Watkins, Brown-Wright, and Tyler (2010) found that after controlling for socioeconomic status (SES) and age at first intercourse, African American high school students who

reported more discrimination also reported greater numbers of sexual partners. Roberts and colleagues (2012) examined how early exposure to racial discrimination affected risky sexual behaviors in a diverse sample of African American youth. Youth who perceived more racial discrimination at the age of 10 or 11 engaged in more sexual risk taking at 18 or 19.

Racial discrimination, a source of minority stress in ethnic and racial minorities, has a strong connection with the three negative health outcomes of interest: poor mental health, substance use, and risky sexual behavior. Now that the main source of minority stress for the ethnic/racial minority identities associated with MSM of color have been investigated, it is necessary to explore the other sexual minority sources of stress (i.e., victimization and internalized homophobia) and their relation to the negative health outcomes.

LGB sources of stress. Previous studies have identified four sources of social stress that are specifically relevant to LGBs: (a) experiences of discrimination, (b) concealment or disclosure of sexual orientation, (c) expectations of prejudice and discrimination, and (d) internalized homophobia (DiPlacido, 1998; Meyer, 2003). For the current study, the sources of LGB minority stress are described as internal (i.e., internalized homophobia) and external (i.e., experiences of physical and verbal discrimination also known as victimization) stressors because each are well-documented sources of minority stress for LGB populations. It is important to note that racial discrimination and victimization are similar measures of external minority stress, but assesses specific experiences of external stressors for ethnic/racial minorities and LGB individuals.

Internalized homophobia. Internalized homophobia is the internalization of societal negativity toward homosexuals at the initial stages of individuals' sexual identity development, which may remain throughout life (Meyer, 1995). The internalization of negative social attitudes of one's stigmatized identity has been shown to contribute to sexual minority stress (Frost & Meyer, 2009). Meyer (2003) reviewed literature on internalized homophobia and how it contributes to the minority stress processes and showed how internalized homophobia is a significant correlate to poor mental health including depression and anxiety symptoms, substance use, and suicidal ideation. In addition, he discussed how internalized homophobia in LGB individuals has been linked with self-harm and HIV-risk-taking behaviors.

Williamson (2000) found that gay and bisexual men with high levels of internalized homophobia: (a) are likely to isolate themselves from the gay community and have less access to safer sex information, (b) have lower levels of self-esteem, and (c) have higher substance use and alcohol consumption rates. Similarly, researchers have underscored internalized homophobia as a key factor in depression and lower self-esteem among LGBs (Herek, Cogan, Gillis, & Glunt, 1997). Other researchers reported that high-internalized homophobia contributes to substance abuse problems and unprotected anal sex in a sample of young MSM (Cheng, 2003; Meyer & Dean, 1998; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001).

Victimization. D'Augelli (1998) described victimization as a specific external form of homophobia that is divided into three components: (a) verbal threats and insults; (b) being chased, followed, or having property damaged; and (c) being physically or sexually assaulted because of one's sexual minority identity. Many researchers have

examined reasons why individuals who identify as LGB experience high rates of depression with victimization and internalization as key contributing factors (Meyer, 1995, 2003). Hershberger and D'Augelli (1995) found that victimization in LGB youths was associated with mental health problems. Herek, Gillis, and Cogan (1999) identified stigma-based personal attacks on LGB adults as more detrimental to mental health concerns than any other types of attacks. Victimization, experiences of prejudice, and stigma are related to a wide variety of negative mental health outcomes like suicidal ideation and behaviors, anxiety, depression, demoralization, guilt, insomnia, and substance use (Balsam & Syzmanski, 2005; Diaz, Ayala, Bein, Henne, & Marin, 2001; DiPlacido, 1998; Herek, Cogan, Gillis, & Glunt, 1997; Meyer, 1995).

D'Augelli (1996) discovered that LGB youth have fewer opportunities to explore their identity without placing themselves at risk for victimization. Specifically, they tend to lack supportive environments in which to socialize with other gay peers to better understand their sexual identity. In addition, LGB youth who lack a positive social environment for self-exploration tend to not learn about protective and preventive behaviors which, in turn, increase isolation and risk for HIV infection (D'Augelli, 1996). Kuyper and Vanwesenbeeck (2011) highlighted that a majority of studies focus on the differences in mental health between LGB and heterosexual individuals; however there is little attention to the various aspects of sexual health and reasons for these discrepancies like minority stress. Higher LGB-specific factors (i.e., victimization, internalized homophobia or negative reactions related to sexual orientation), which can be perceived as minority stress, were associated with higher sexual coercion and sexual health care need.

In sum, it is evident that the sources of sexual minority stress (i.e., internalized homophobia and victimization) are linked to negative health outcomes in LGB individuals. Research has identified MSM of color as a high-risk population because of: (a) their high rates of negative health outcomes; and, (b) their heightened amount of minority stress. The cumulative effect of ethnic minority and sexual minority sources of stress (i.e., racial discrimination, victimization and internal homophobia) experienced by MSM of color was expected to place them at risk for negative health outcomes. As such, the first question examined in this study is: *Does the experience of minority stress (i.e., racial discrimination, victimization, and internalized homophobia) in MSM of color correspond with higher reported rates of negative health outcomes (i.e., poor mental health, substance use, and risky sexual behaviors)?*

Moderation of Minority Stress Effects

According to the dual load hypothesis (Meyer, 2010), MSM of color should experience more negative health outcomes due to having multiple minority identities that put them at risk for exposure to greater sources of minority stress. MSM of color experience multiple sources of stress resulting from racial discrimination and sexual minority related stressors in the forms of internalized homophobia and victimization. Indeed, as reviewed above, numerous studies have documented greater rates of negative health problems in LGB versus heterosexual samples (Balsam & Syzmanski, 2005; Diaz, Ayala, & Bein, 2004; DiPlacido, 1998; Gilman et al., 2001; Herek, Cogan, Gillis, and Glunt, 1997; Meyer, 1995; Meyer, 2003; Safren & Heimberg, 1999) and in ethnic minorities versus Caucasian samples (Beauvais & Oetting, 2002; CDC, 2005; Chisolm, Mulatu, & Brown, 2006; Karlsen & Nazroo, 2002; Paradies, 2006; Surgeon General,

1999; Williams, Neighbors, & Jackson, 2003; Williams, Yu, Jackson, & Anderson, 1997). Individuals that hold both minority identities (i.e., MSM of color) experience greater sources of stress and experience more negative health outcomes according to the dual load hypothesis (Ferraro & Farmer, 1996; Meyer, 2010).

Research focusing on the relationship between minority stress and negative health outcomes in LGB of color is limited. A majority of the literature examines the differences between LGB of color and Caucasian LGB experiences of minority stress, with little emphasis on how these sources of minority stress are related to negative health outcomes. Much of the research identifies greater risk as having high amounts of minority stress. The greater risk perspective suggests that, collectively LGB of color experience greater heterosexist stigma because of the heightened stigma in communities of color compared to Caucasian communities (Lemelle & Battle, 2004; Meyer, Schwartz, & Frost, 2008; Pachankis & Goldfried, 2004). Less research on the comparison between these two groups focuses on how these heightened sources of minority stress are connected to negative health outcomes like poor mental health, substance use, and risky sexual behavior.

Diaz and colleagues (2004) studied Latino gay men and found that participants reported multiple experiences of social discrimination related to both their sexual orientation and race/ethnicity. Individuals in this study experienced homophobia from the heterosexual community, but also experienced racial discrimination in the context of the gay community. Men who participated in risky sexual behavior reported more experiences of homophobia, racism, and financial distress than their low-risk peers (Diaz, Ayala, and Bein, 2004).

Together, the sources of minority stress (i.e., racial discrimination, internalized homophobia, and victimization) described above provide evidence for how MSM of color may experience a heightened amount of stress because of the dual load of their minority LGB and ethnic/racial identities. Researchers have identified this group with the term “double jeopardy” because MSM of color are exposed to stress related to both homophobia and racism (Ferraro & Farmer, 1996; Meyer, 2010). It has also been suggested that MSM of color have a higher chance of rejection because of their connection with their communities of origin, the LGB community, and the broader society (Meyer, 2010). This would suggest that MSM of color experience additional stressors related to their race/ethnicity and sexual orientation identities.

A recent study examined dual load minority stress in LGB of color and its relationship with negative health outcomes, specifically psychological distress (Hayes, Chun-Kennedy, Edens, & Locke, 2011). This study was conducted through the Center for Collegiate Mental Health (CCMH), which is comprised of 150 college counseling centers that are committed to participating in collaborative research. The large and nationally representative sample ($n = 18,725$) is a noteworthy strength of this study. The results demonstrated that LGB identified individuals reported more negative health outcomes (i.e., depression, eating concerns, substance use, generalized anxiety, etc.) compared to their heterosexual counterparts, and that students who identified as ethnic/racial minorities reported more clinical problems compared to the majority population. When examining the dual load minority stress, LGB of color did not experience more additive stress compared to Caucasian LGB students. However, the researchers did find that LGB of color reported more distress than heterosexual students

of color, though no differences emerged between LGB-identified students of color and Caucasian LGB students. Hayes and colleagues (2011) interpreted the set of findings as support for double jeopardy hypothesis for LGB students of color, but only relative to heterosexual students of color and not to Caucasian LGB students. These results allude to the complexities involved in LGB of color research and the necessity for continued investigation to better understand this population.

According to Meyer (2010), if the minority stress model is a valid measure of minority stress, then LGB of color, specifically for this study MSM of color, should experience poorer mental health outcomes compared to Caucasian LGB because of their heightened level of minority stress. A few studies identified evidence that complicates these findings regarding dual load minority stress, suggesting that even though LGB of color may be at higher risk of minority stress compared to Caucasian LGB, they are not at higher risk of negative health outcomes (Meyer, 2010; Meyer, Dietrich, & Schwartz, 2008; Moradi, Wiseman, et al., 2010).

Researchers examined perceived heterosexist stigma, internalized homophobia, and sexual orientation concealment in sample of Caucasian versus non-Caucasian LGBs and found the relationship between perceived stigma and internalized homophobia was stronger for Caucasian participants compared to participants of color (Moradi, Wiseman, et al., 2010). This directly contradicts the dual load hypothesis because regardless of the multiple sources of minority stress for LGB of color, Caucasian LGB in this study had higher stressors than LGB of color. On the contrary, another study found that African American and Latino LGB individuals are exposed to greater stressors and have less support and fewer resources than LGB, but they do not experience greater mental health

disorders (Meyer, Schwartz, & Frost, 2008). These findings partially support the dual load hypothesis because LGB of color experienced heightened minority stress compared to Caucasian LGB, but do not experience more mental health problems.

These studies suggest that there is not unequivocal evidence that dual load minority stress in LGB of color leads to increased negative health outcomes for this population. Research has determined that this population may experience dual load minority stress because of their multiple identities (Lemelle & Battle, 2004; Meyer, Schwartz, & Frost, 2008; Pachankis & Goldfried, 2004), however there is also evidence that suggests that dual load minority stress does not lead to heightened negative outcomes (Meyer, Dietrich, & Schwartz, 2008; Moradi, Wiseman, et al., 2010; Moradi, DeBlaere, & Huang, 2010). Meyer (2010) discussed the intersection of racial/ethnic and LGB identities, the question of stress and resilience, and two competing hypotheses on risk versus resilience in LGB of color. He noted that contrary to the double jeopardy notion, some evidence indicates that LGB of color do not experience more mental disorders than Caucasian LGB. He highlights the importance of continuing to investigate risk and protective factors with LGB of color because if the minority stress theory (Meyer, 2003) is accurate regarding the dual effects of minority stress emanating from stressors associated with both their sexual (i.e., victimization and internalized homophobia) and ethnic minority identities (i.e., racism), the search for moderators that may buffer their experiences of minority stress in LGB of color is critical.

Moradi and colleagues (2010) proposed that the reasons for the mixed findings on the dual load hypothesis may be due to LGB of colors' access to unique resources and skills (i.e., communities, stigma, prejudice coping skills, role flexing) that could result in

their being more resilient when faced with stressors compared to their Caucasian LGB peers. This concept is described as the resilience hypothesis where LGB people of color acquire coping strategies as evidence of resilience in face of heterosexist stigma (Moradi, DeBlaere, & Huang, 2010). For example, research has identified connection to religious communities (Miller, 2005; Wilson & Miller, 2002) and ethnic/racial community (Warren et. al., 2008) as buffers against heterosexist stigma in LGB people of color.

The following section will explore two possible minority stress moderators: ethnic identity belonging and religious practice. Specifically, how each moderator may buffer against negative health outcomes for MSM of color will be examined. This research highlights the early impact of racism on youth of color and the importance of one's ethnic/racial community as a primary source of support. Ethnic identity belonging refers to one's sense of belonging to an ethnic group and the part of one's thinking, perceptions, feelings, and behavior that is due to ethnic group membership (Phinney, 1990). In addition, religiosity, which for this study is defined as religious practice, has been identified as an important protective factor for LGB of color (Miller, 2005; Warren et. al., 2008; Wilson & Miller, 2002), but more so for the general population (Brady, Peterman, Fitchett, Mo, & Cella, 1999; Ellison, Gay, & Glass, 1989; Powell, Shahabi, & Thoresen, 2003). It is for this reason the current study examined the role of ethnic group belonging and religious practice as moderators between minority stress and negative health outcomes in MSM of color.

Ethnic identity belonging. Ethnic identity is increasingly recognized as an important component in self-concept. Initially, researchers examined the construct of ethnic identity as unique aspects of specific groups; however, Phinney (1990) determined

a number of central components to the construct of ethnic identity in a wide variety of ethnic groups. There is a vast amount of research that identifies a sense of belonging and pride in one's group to be key aspects of ethnic identity that are associated with positive health outcomes (Phinney, Cantu, & Kurtz, 1997; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003), which is why the current study focuses on ethnic identity belonging. According to Neblett, Rivas-Drake, and Umana-Taylor (2012) one's attitudes and behaviors that define significance of race and ethnicity in one's life are increasingly recognized as important protective factors against the harmful effects of racial and ethnic discrimination.

There is disagreement on whether ethnic identity belonging buffers or protects against mental health problems. Smith and Silva (2011) conducted a meta-analysis, which summarized the research examining the relationship between ethnic identity and personal well-being among people of color in North America. Ethnic identity belonging was consistently associated with measures of self-esteem and well-being, however, not strongly related to mental health symptoms (Smith & Silva, 2011). On the contrary, other studies suggest that self-identification, a sense of belonging and pride in one's group that is suggested to comprise key aspects of ethnic identity, is associated with higher levels of psychological well-being (Phinney, Cantu, & Kurtz, 1997; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003).

Mossakowski (2003) concluded that ethnic identity belonging buffered the relationship between perceived racial discrimination and mental health outcomes. Specifically, the results illuminated how ethnic identification was directly associated with fewer depressive symptoms in a population of Filipino Americans. Individuals who had

a sense of ethnic pride, were involved in ethnic practices, and had a cultural commitment to one's racial and ethnic group were examples of how those factors may have served as protection against mental health problems (Mossakowski, 2003). These findings suggest that ethnic identity belonging may be a coping resource for racial and ethnic minorities and should be further examined in racial/ethnic minority populations. When examining MSM populations, researchers found that in a sample of African American gay and bisexual men, individuals who indicated more positive self-identification as being African American and gay also reported higher levels of self-esteem, greater levels of life satisfaction, and lower levels of psychological distress (Crawford, Allison, Zamboni, & Sotto, 2002). The limited research examining ethnic identity development in MSM of color suggests that ethnic identity belonging buffers the negative effects of minority stress on one's psychological well-being.

In a variety of studies, ethnic identity belonging has been associated with sexual behaviors, attitudes, and beliefs. Oparanozie, Sales, DiClemente, and Braxton (2012) examined the relationship between ethnic identity belonging and risky sexual behavior among young (18 -29 year olds) African American heterosexual men. Positive attitudes toward being African American were identified as a predictor of fewer sexual partners. Racial centrality, which measures how strongly a person self-identifies with his or her race (Sellers, Rowley, Chabous, Shelton, & Smith, 1997), was associated with a decrease in multiple sexual partners at one time period, and marginally predicted increased condom use with their female partner. Likewise, in a sample of Latino MSM, researchers found that individuals who were connected to their ethnic community were about 40% less likely to report unprotected anal intercourse with a male partner and were 60% less

likely to have engaged in unprotected anal intercourse in their last sexual encounter (O'Donnell et al., 2002). Crawford and colleagues (2002) uncovered similar findings in that same-sex-attracted African American men in further phases of both African American ethnic and same-sex-attracted identity development reported higher degrees of HIV prevention self-efficacy than participants only scoring high on same-sex-attracted identity development.

Warren and colleagues (2008) specifically examined the importance of ethnicity and culture when investigating predictors for unprotected sex among African American, Latino, and Caucasian MSM. African American MSM who were in long-term relationships, had been kicked out of the house for having sex with men, and who initiated sex at a younger age were associated with having unprotected sex (Warren et al., 2008). Latino MSM on the other hand, displayed an opposite effect where unprotected sex was associated with more ethnic identity and older age at initiation of sex. This highlights the importance of further exploring how social support, culture, and ethnic identity belonging effect MSM of color.

Studies of Mexican Americans, other Latinos, American Indians, African Americans, Caucasian, and other adolescents of mixed ethnic backgrounds, have identified strong ethnic affiliation, attachment, and pride with less substance use and stronger negative beliefs about drugs (Kulis, Napoli, & Marsiglia, 2002; Marsiglia, Kulis, & Hecht, 2001; Marsiglia, Kulis, Hecht, & Sills, 2004). Specifically when examining African American youth, researchers found that positivity about one's racial group reported less alcohol use, especially among those for whom race was more central to their identity (Caldwell, Sellers, Bernat, & Zimmerman, 2004). Pugh & Bry (2007) found that

ethnic identity belonging served as a protective factor against substance use, in particular the consumption of beer and hard liquor, and a high level of African American ethnic identity belonging was related to lower levels of marijuana, beer, wine, and hard liquor use.

Overall, the literature on ethnic identity belonging in MSM of color is limited, but there is a wealth of research that recognizes ethnic identity belonging as a protective factor against minority stress, mental health issues, risky sexual behaviors, and substance use in diverse samples (Caldwell, Sellers, Bernat, & Zimmerman, 2004; Neblett, Rivas-Drake, & Umana-Taylor, 2012; Marsiglia, Kulis, & Hecht, 2001; Marsiglia, Kulis, Hecht, & Sills, 2004; Mossakowski, 2003; O'Donnell et al., 2002; Oparanozie, Sales, DiClemente, & Braxton, 2012; Phinney, Cantu, & Kurtz, 1997; Pugh & Bry, 2007; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003; Sellers, Rowley, Chabous, Shelton, & Smith, 1997). These connections have been identified as either direct or indirect connections to MSM of color identities and strengthen the hypothesis that ethnic identity belonging operates as a moderator, buffering the effects of minority stress on negative health outcomes in MSM of color.

Religious practice. Hill and Hood (1999) assert that religiosity consists of an individual's religious identity (i.e., religious group affiliation and religious self-identity), engagement in religious behaviors and practices (i.e., attendance at religious services or individual religious practices such as prayer or meditation and adherence to moral values), and also religious perceptions (i.e., religion's negative sanctions against certain behaviors). Due to the limited research on LGB and religiosity, the following section will explore a few studies focused on religiosity within LGB populations that define

religiosity differently within these specific research studies. Some studies discuss the similarities and differences between religiosity and spirituality, but this research only explores the construct of religiosity. The current study specifically examines a piece of religiosity, which is one's participation and engagement in formal religious practice. Specifically, the study investigates MSM of color and their participation in prayer, meditation, attending service, and reading or studying scriptures.

The literature on religiosity and health outcomes in LGB populations presents mixed findings. LGB researchers have identified religiosity as potentially acting as a health promoter (Lease, Horne, & Noffsinger-Frazier, 2005; Woods, Antoni, Ironson, & Kling, 1999), an inert variable (Rostosky, Danner, & Riggle, 2007), as well as a risk factor for LGB populations (Ream & Savin-Williams, 2005). The following section defines religiosity and explores mixed findings between religiosity and health outcomes for identities associated with majority and minority (i.e., racial and sexual minorities).

In the general population, research continues to identify religious practice as a protective factor that is associated with a decrease in risky sexual behaviors. Research examining adolescents has found that individuals who were more religious tended to delay sexual activity (Kirby, 2002; Rostosky, Wilcox, Wright, & Randall, 2004). Frequent attendance at religious services and religious youth activities, higher levels of importance of religion in their daily lives and religious feelings, and increased adherence to religious teachings were all significantly related to decreased rates of voluntary sexual debut within a group of teens (Fehring, Cheever, German, & Philpot, 1998; Holder et al., 2000; Lammers, Ireland, Resnick, & Blum, 2000; Lefkowitz, Gillen, Shearer, & Boone, 2004; McCree, Wingood, DiClemente, Davies, & Harrington, 2003; Nonnemaker,

McNeely, & Blum, 2003; Rostosky, Regnerus, & Wright, 2003). Similarly, in a study of adolescents and young adults, researchers found that those who viewed religion as very important, had frequent church attendance and held religious sexual attitudes, were less likely to have sex and had significantly fewer sex partners than their peers (Haglund & Fehring, 2010).

Studies have identified positive correlates between religiosity and positive health outcomes (i.e., Lease, Horne, & Noffsinger-Frazier, 2005; Siegel, Anderman, & Scrimshaw, 2001; Woods, Anotoni, Ironson, & Kling, 1999). Siegel and colleagues (2001) found that religiosity may attenuate stress by creating opportunities for people to meaningfully interpret stressful events, enhance coping resources, and increase one's access to social support. Lease and Horne and Noffsinger-Frazier (2005) examined religiosity and spirituality as partially overlapping terms rather than viewing them as separate constructs. Specifically, they explored LGB individuals' positive and negative relationship with religion and found affirming faith experiences to be related to positive psychological health. These studies provide support within the LGB research in identifying religiosity as a health promoter for this specific population.

Woods and colleagues (1999) found that in a population of HIV-positive gay men and women, religious behavior, such as prayer and attendance at services, was associated with higher CD4 cell counts. Support for the claim that participation in formal religious practices may moderate the relationship between stress and negative health outcomes has also been documented in majority populations, suggesting that religiosity weakened the relationship between stress and negative health outcomes (Fabricatore, Handal, & Fenzel, 2000; Forthun, Pidcock, & Fischer, 2003; Wills, Yaeger, & Sandy, 2003). The

research on religiosity as a protective factor for risky sex in LGB is limited, but there were a few studies on MSM. In a sample of 496 young MSM (ages 18-22), participants who reported being more religious, which was defined as utilizing a self-reported dichotomous variable (i.e., very or somewhat religious vs. not very or not at all religious), were at significantly less risk for club drug use (Kipke et al., 2007). Rosario, Yali, Hunter, and Gwadz (2006) also found that for gay and bisexual male youth (age 14 to 21), religiosity was a protective factor against having a risky sexual partner and having recently used an illicit drug. Researchers on transgender women found a similar theme when exploring formal religious practices (i.e., religious service attendance; and reading and studying scripture). Their findings suggest that formal religious practice may attenuate sexual risk taking behaviors (sex work, multiple partners, unprotected anal and receptive sex) where formal practices was significantly associated with sexual risk (Dowshen et al., 2011). There is a sufficient amount of evidence within the general populations and the limited LGB literature to support the argument why participating in religious behaviors may be a protective factor for MSM of color.

A qualitative study explored how spirituality could be a resource for African American gay men (Miller, 2005). This study highlights how an African American gay man living with AIDS used his spiritual, religious and cultural strengths to combat heterosexism and homophobia (Miller, 2005). This case study supports the theory that MSM of color could possibly utilize religiosity as a way to cope with minority stress and how it could possibly play an important role in moderating the relationship between minority stress and negative health outcomes for MSM of color.

Other studies suggest that religiosity is a risk factor for mental health problems

(i.e., Ream & Savin-Williams, 2005; Ritter & O'Neill, 1989; Siegel, Anderman, & Scrimshaw, 2001). Ream and Savin-Williams (2005) found that in a sample of LGB adolescents and young adults, individuals who had conflict related to their religion had poorer mental health and higher internalized homophobia. Conflict in this study was defined as leaving Christianity because of conflict with their religious and sexual identities. Researchers have found that it may be difficult to balance one's LGB identity and religious identity (Ritter & O'Neill, 1989; Rodriguez & Ouellette, 2000). Many LGB individuals feel that they must choose between being LGB and being religious (Rodriguez & Ouellette, 2000).

A more recent study examined the relationship between positive faith-based experiences and mental health outcomes in 583 LGB individuals who identified themselves as currently affiliated with a faith group (Lease, Horne, & Noffsinger-Frazier, 2005). Lease and colleagues (2005) indicated that individuals who have affirming messages from their faith groups have increased psychological health through greater spirituality and decreased internalized homophobia. This suggests that individuals who have positive experiences with their religious community may experience religiosity as a protective factor. This provides evidence for the current study in investigating the relationship between minority stress, mental health outcomes, and religiosity in MSM of color. According to the National Congregations Study (2012), American churches are becoming dramatically more welcoming to gay and lesbians. This nationally representative study also found significant differences in the rising diversity in religious communities, specifically a focus on conversations around racial and sexual equality (National Congregations Study, 2012). In light of the increase in gay affirming churches,

and research documenting positive correlates of experiences with gay-affirming churches, it was hypothesized that religiosity would operate as a protective moderator of stress on the health outcomes of MSM of color.

There are mixed findings on whether or not religiosity is a risk or protective factor against substance use for ethnic and sexual minority populations. There are few studies that investigate these relationships with individuals that identify and MSM of color. The research literature implies the need for further investigation on this topic, specifically in understanding experiences of MSM of color. Some research indicates that ethnic identity belonging and religious practice can at times serve as protective factors for mental health, sexual health, and substance abuse risk within general populations. However, few studies explore the role of ethnic identity belonging and religious practice on health outcomes for MSM of color. The extant research suggests that these factors may serve a protective function and help to alleviate stress and decrease negative health outcomes. As such, the second research question states: *Do ethnic identity belonging and religious practice serve as protective factors between minority stress and negative health outcomes for MSM of color (i.e., poor mental health, substance use, and risky sexual behaviors)?* The current study examined whether or not ethnic identity belonging and religious practice moderated the relationship between minority stress and negative health outcomes for MSM of color.

Research Questions

Taking into consideration the limited research conducted to date on the health and functioning of MSM of color, the current study was focused on testing relationships between minority stress and negative health outcomes in MSM of color and further examining whether the strength of ethnic identity belonging and/or religious practice

would buffer the negative effects of minority stress. MSM of color have higher negative health outcomes compared to majority populations. Hence, the main goals of this study were to determine whether negative health outcomes in MSM of color are associated with high levels of minority stress and whether the posited protective factors of ethnic identity belonging and/or religious practice moderate the relationship between minority stress and negative health outcomes in MSM of color.

The first aim of this study was to investigate whether greater minority stress in MSM of color influences their negative health outcomes. It was hypothesized that higher minority stress in MSM of color would be associated with more negative health outcomes, including poorer mental health, higher substance use, and increased risky sexual behaviors.

The second aim was to determine whether ethnic identity belonging and religious practice would moderate the relationship between minority stress and negative health outcomes. It was hypothesized that stronger ethnic identity belonging would moderate the relationship between minority stress and negative health outcomes. Specifically, it was predicted that the effects of minority stress on all three negative health outcomes (mental health, substance use and risky sexual behavior) would be buffered or attenuated by higher ethnic group belonging. In addition, it was hypothesized that religious practice (higher connectedness to religion) would buffer the effects of minority stress on each of the negative health outcomes.

CHAPTER II

METHODS

Participants

Participants were 152 adults who identified as both ethnic/racial minorities and MSM. The sample was 100% male and ranged in age from 18-29 with a mean age of 24.13 ($SD = 3.36$). Five participants did not report their age. Twenty one percent identified as African American, 20% identified as Latino, 21% identified as Asian, 2% identified as Native American, 32.9% identified as Multiracial, and 3% identified as Other. A majority of the participants identified as gay (84%), while others identified as bisexual (10%), heterosexual (3%), and questioning (3%). Ninety-two percent of the participants disclosed their sexual orientation to someone. The demographic question, revealed over half of the participants (52%) reported no religious affiliation, but this question is not related to the formal religious practices questionnaire. Fifty-nine percent of the participants identified as a current student. Participant demographic information is presented in Table 1.

Table 1. *Participant Demographics*

Variables	<i>n</i>	%	<i>M</i>	<i>SD</i>
Age				
18-29	146		24.1	3.4
Ethnicity				
African American	32	21.1		
Latino	30	19.7		
Asian	32	21.1		
Native American	3	2.0		
Other	4	2.6		
Multiracial	50	32.9		

Table 1. (Continued)

Variables	<i>n</i>	%	<i>M</i>	<i>SD</i>
Sexual Orientation				
Gay	127			
Bisexual	15			
Heterosexual	4			
Questioning	5			
Religious Affiliation				
Protestant Christian	23	15.1		
Roman Catholic	19	12.5		
Evangelical Christian	5	3.3		
Muslim	3	2.0		
Hindu	2	1.3		
Buddhist	3	2.0		
No Religious Affiliation	79	52.0		
Other	17	11.2		
Disclosure Status				
Yes	141	92.8		
No	11	7.2		
Current Student				
Yes	89	58.6		
No	59	38.8		

Participants were recruited through an Internet-based survey (Qualtrics) that was disseminated through e-mails to listservs of LGB and racial/ethnic-specific organizations at college campuses and community-based organizations within the United States. The survey was also specifically distributed to LGB and racial ethnic communities, and general online communities through Facebook groups and through Pride Foundation's monthly newsletter. An advertisement was created and promoted on the sidebar of the target populations' profiles. Using Internet-based surveys to collect data allowed recruitment and gathering of information from MSM of color who might not have felt comfortable filling out the survey within a different context. This mode of data collection assured access to a wide range of the MSM population. There was a balance

of recruitment between LGB organizations and communities, and racial/ethnic-specific organizations and communities.

Eligibility requirements for the study consisted of identification as MSM of color between the ages of 18 and 29 via self-report. This specific age group was chosen because consistent research on sexual and ethnic identity suggests that young adults (18 to 29 years old) are more at risk for stress and negative health outcomes compared to older age groups, especially for MSM of color (CDC, 2011; CDC, 2012; Oparanozie, Sales, DiClemente, & Braxton, 2012).

Procedures

Before recruiting participants, approval was obtained from the University of Oregon Institutional Review Board. Once approved, the recruitment process was initiated by networking with organizations at different colleges and organization throughout the United States that support ethnic/racial, LGB, and LGB of color populations. Participants were recruited through groups (i.e. universities and community-based organizations) that provide support and resources to MSM of color. In addition, the survey was distributed to different online social networks that support MSM of color. This study utilized a snowball sampling technique by asking all potential subjects to invite others to participate in the study that they felt fall within the study requirements.

At the end of the survey, participants were able to select one of three LGB based organizations (i.e., Pride Foundation, It Gets Better Project, PFLAG) to donate \$2 dollars for their participation. Participants were directed to a second, separate survey where they were instructed to provide identifying information to enter a raffle for an

Apple iPad. Only participants who opted to enter the raffle were asked to provide their name, address, and email address. Entering the raffle was voluntary and participants were informed that identifying information would be kept separate from the survey results. Participants names and contact information were kept locked in a filing cabinet in a locked office and destroyed as soon as the iPad was distributed to the winner.

The eligibility requirements were posted within the introduction of the study through outreach methods. If participants met the requirements of the study they were instructed to click a link to take in the study. The participants needed to identify as MSM and as an ethnic/racial minority between the ages of 18 and 29. Before taking the survey, they were directed to the informed consent document.

The informed consent statement presented participants with the opportunity to read a brief summary about the study including information about their rights as a participant to decline or discontinue at any time without negative consequences. Two suicide prevention resources (i.e., The Trevor Lifeline and the National Suicide Prevention Lifeline) were included within the consent form and at the end of the survey to assure that participants had access to support during and after their participation in the survey even though the potential risk and discomfort to participants were deemed minimal for this study.

The online survey took 15 to 20 minutes to complete. The data were gathered through the University of Oregon's Qualtrics survey system, which was password protected. Once the data were collected they was downloaded and transferred to SPSS. The computer and data file was also password protected. To ensure confidentiality, no identifying information was requested from participants for the study. The server used

to collect responses downloaded all data anonymously. A random ID code ranging from 001 - 200 was matched with each completed participant.

Measures

Demographic Questionnaire

Demographic information was collected to better understand contextual factors that may contribute to MSM of color negative health outcomes and protective behaviors and to understand the characteristics of the chosen population. Participants completed a demographic portion of the survey to assess basic information about their gender, age, ethnicity, anatomic sex, gender identity, sexual orientation, housing status, educational level, SES, and disclosure status. Assessment of demographic information was employed to evaluate and control for confounding variables.

Minority Stress

Participants completed the following measures to assess stress experience that are associated with their racial/ethnic and sexual minority identities.

Racial/ethnic minority stress. This construct was measured using the Perceived Ethnic Discrimination Questionnaire--Community Version (PEDQ-CV) (Brondolo et al., 2005). The 17-item scale was developed to assess perceived lifetime exposure to ethnic discrimination in adults. The four subscales assess different types of discrimination: (a) social exclusion, (b) stigmatization, (c) discrimination at work/school, and (d) threat/aggression. Each item begins with the phrase “Because of your ethnicity/race...” and ends with a description of a specific event or interaction. Items are rated on a scale from 1 to 5 with 1 = never and 5 = very often. Higher total scores on this measure indicated higher racial/ethnic minority stress. The scale demonstrated good internal

consistency in this sample (Cronbach's alpha = 0.91).

Sexual minority stress. This construct was divided into two categories: external (Victimization Scale) and internal (Homosexual Attitudes Inventory) homophobia. A 10-item Victimization Scale (D'Augelli, 1998) measured three components of victimization: (a) verbal threats and insults, (b) being chased or followed or having property damaged, and (c) being physically or sexually assaulted. The Victimization Scale has been demonstrated to be appropriate for this population (Garofalo, Mustanski, & Donenberg, 2008). It uses a 4-point Likert scale that ranges from never to three or more times. Higher scores indicate greater victimization. The Cronbach's alpha for the present study was .81.

The Homosexual Attitudes Inventory (HAI) (Nungesser, 1983) was used to measure the extent to which negative attitudes and beliefs about homosexuality are internalized and integrated into one's self-image and identity. An updated version of the HAI containing 11 items was used since it has been used in previous research on LGBTQ youth (Garofalo, Mustanski, Johnson, & Emerson, 2010). The tool uses a 4-point Likert scale that ranges from disagree strongly to agree strongly. Higher scores indicate more favorable attitudes toward homosexuality. The Cronbach's alpha for the present study was .71.

Composite variable for total minority stress. A composite score of ethnic and racial minority stress and LGB minority stress was calculated to create a total minority stress score using three scales: (a) Perceived Ethnic Discrimination Questionnaire--Community Version (PEDQ-CV), (b) Victimization Scale, and (c) Homosexual Attitudes Inventory. To assure the composite variable was equally representative of both

racial/ethnic minority stress and sexual minority stress, the variable was calculated using weighted means. Higher mean scores indicated higher total minority stress. The Cronbach's alpha of the composite variable for the present study was .83. This composite was used as the independent variable for the planned analyses.

Alternate measure of minority stress. The LGBT People of Color Microaggressions Scale (Balsam et al., 2011) is a relatively new measure that captures the unique experience of LGBT people of color. The scale is an 18-item self-report scale assessing the unique types of microaggressions experienced by ethnic minority LGBT adults. It consists of three subscales: (a) racism in LGBT community, (b) heterosexism in racial/ethnic minority communities, and (c) racism in dating and close relationships. Participants can select "0: Did not happen/not applicable to me" or if participants agree with the question, they can choose from "1: It happened, and it bothered me NOT AT ALL" to "5: It happened, and it bothered me EXTREMELY." Responses were recoded so that 0 and 1 = 1 (did not bother) and the rest of the responses remained the same. A mean was computed for all items, indicating the mean level of distress each participant felt related to the listed experiences. The psychometric properties are less well known so it was planned to repeat the analyses with this measure. The overall alpha for all 18 items in the final measure was 0.94. LGBT Racism ($\alpha = 0.93$), POC Heterosexism ($\alpha = 0.84$) as well as LGBT Relationship Racism ($\alpha = 0.76$) exhibited adequate internal consistency.

Negative Health Outcomes

Participants completed the following measures to assess different health outcomes that are associated with mental health, substance use, and risky sexual behaviors.

Psychological distress. Participants completed a questionnaire that measures psychological distress and psychiatric disorders in medical and community populations. The Brief Symptom Inventory 18 (BSI-18; Derogatis, 2000) is widely used to measure psychological distress and has been used previously with LGBT youth; 18 items are rated on a 5-point scale ranging from “0: not at all” to “4: extremely.” Participants respond according to how often the respondent has experienced a particular symptom. Items include “Faintness or dizziness,” “Feeling lonely,” “Feelings of worthlessness,” and “Thoughts of ending your life.” The current study focused on all three subscales: Somatization, Depression, and Anxiety. The Global Severity Index (GSI) was used to help measure the overall psychological distress level in that higher numbers suggest higher distress. The Cronbach’s alpha for the GSI in the current study was .96.

Substance use. Participants completed an instrument that assessed substance use and abuse. The Simple Screen Instrument for Substance Abuse (SSI-SA; Center for Substance Abuse Treatment, 1994) was developed to encompass a broad spectrum of signs and symptoms for substance use disorders. Specifically, these conditions are characterized by substance use that leads to negative physical, social, and/or emotional consequences and loss of control over one’s pattern and intake of substance(s) of abuse. The instrument was developed from screening items from 13 existing screening instruments. It is a 16-item scale, although only 14 items are scored ranging from 0 to 14. Item 1 and 15 are not scored. The participants answered either “0: no” or “1: yes.” Questions 1-13 focus on the participants’ behavior in the last six months, and questions 14-16 focuses on their lifetime experiences. The total score ranges from 0 to 14. Higher

scores suggest higher risk for substance abuse. The Cronbach's alpha for this scale was .63.

Risky sexual behaviors. Participants completed a questionnaire that assessed their sexual and drug behaviors associated with HIV infection, known as the Safer Sex Behavior Questionnaire (SSBQ; Dilorio, Parsons, Lehr, Adame, & Carlone, 1992). For the current study risky sexual behaviors and safer sex practices will be used interchangeably to describe this sample's sexual behavioral practices. The SSBQ is a 24-item measure of sexual behavior that asks questions regarding barriers used during intercourse, participation in high-risk sexual behaviors, exchanges of body fluids during sexual activities, and communication skills in navigating safer sex practices before sexual intercourse. Item responses range from "1-never" to "4-always." Sample items include "I insist on condom use when I have sexual intercourse," "I engage in anal intercourse without using a condom," and "I initiate the topic of safer sex with my potential sexual partner." Total scores range from 24 to 96, with higher scores indicating safer sex practices. The Cronbach's alpha for the current study was .83.

Protective Factors

Participants completed the following measures to assess the protective factors of ethnic identity and religious practice.

Ethnic identity belonging. Participants completed a questionnaire that assessed ethnic identity development, and connection with their racial/ethnic community. The Multi-Ethnic Identity Measure (MEIM) (Phinney, 1992) is a 24-item scale designed to assess levels of identification with the participant's most salient cultural affiliation. The measure has three subscales: affirmation and belonging (a sense of group membership

and attitudes toward the individual's group), ethnic identity achievement (sense of confidence and sense of his or her ethnicity), and ethnic behaviors (activities associated with group membership). The current study was particularly interested in the affirmation and belonging subscale, which has 7 items. The survey only included these 7 items, which range from "1: strongly disagree" to "4: strongly agree." Thus the scores ranged from 1 to 4. Items include "I have a strong sense of belonging to my own ethnic group" and "I have a lot of pride for my ethnic group." Higher scores on the measure define higher levels of ethnic identity belonging. For the current study the measure has a Cronbach's alpha of 0.94.

Religious practice. Participants completed the Religious Background and Behaviors Questionnaire (RBB), a brief measure of religious practices that assessed their connectedness to religion (Connors et al., 1996). The 13-item questionnaire is composed of two validated subscales: formal practices and God consciousness. The formal practices subscale includes eight items that assess meditation, worship service attendance, reading scriptures, and direct experiences with God. The God consciousness subscale includes five items reflecting religious self-description, prayer, and thoughts about God. All items are summed to obtain the total RBB score, which ranges from 0 to 56. This study was specifically interested in the formal practices subscale, which ranges from 0 to 34. Higher scores on the formal practice scales suggest more religious behaviors. The scale's total internal consistency was acceptable (Cronbach's $\alpha = 0.89$). The God consciousness component (Cronbach's $\alpha = 0.84$) and formal practices component (Cronbach's $\alpha = 0.87$) were also at acceptable levels.

Hypothesized Relationships

Data were analyzed with IBM SPSS version 21.0 (SPSS Inc., Chicago, IL, 2012). The independent variable for the current study is total minority stress. The following negative health outcomes are the dependent variables: (a) mental health outcomes, (b) substance use, and (c) risky sexual behavior. The hypothesized moderating variables are: (a) ethnic identity belonging and (b) religious practice. The hypothesized relationships are depicted in Figure 1 and Figure 2, which illustrate predicted relationships of health outcomes in MSM of color.

To test the dual load minority stress perspective, it was hypothesized that MSM of color who experienced high minority stress would have (a) poorer mental health outcomes, (b) higher substance use, and (c) higher risky sexual behavior. To test the resilience perspective there were three separate hypotheses for the three negative health outcomes for each moderator. It was hypothesized that ethnic identity belonging will positively moderate the relationship between: (a) minority stress and mental health, (b) minority stress and substance use, and (c) minority stress and risky sexual behavior. Similarly, it was hypothesized that religious practice would positively moderate the relationship between: (a) minority stress and mental health, (b) minority stress and substance use, and (c) minority stress and risky sexual behavior.

Figure 1. *Hypothesized Relationship between Minority Stress and Negative Health Outcomes in MSM of Color*

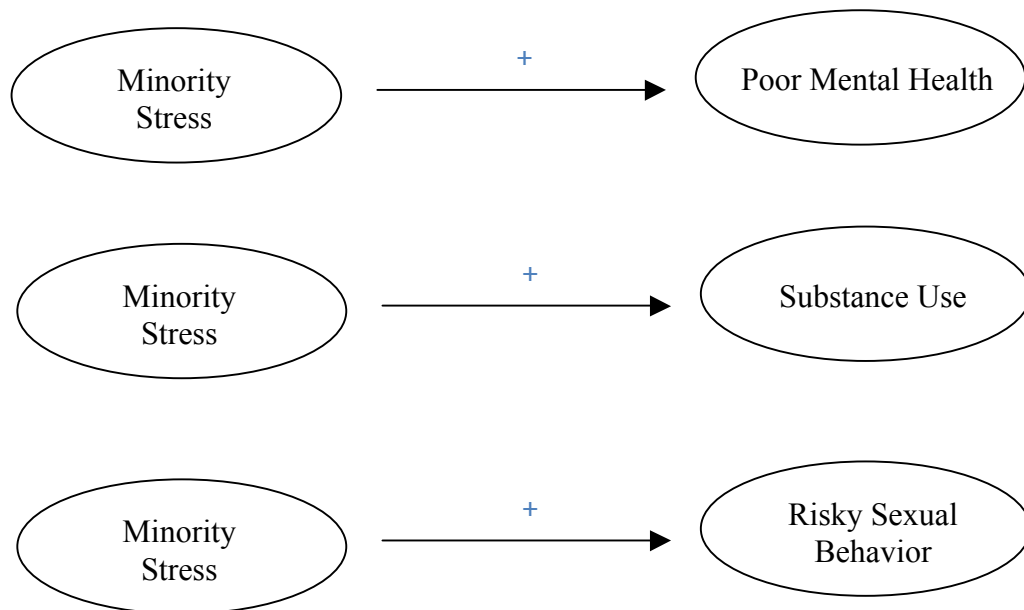
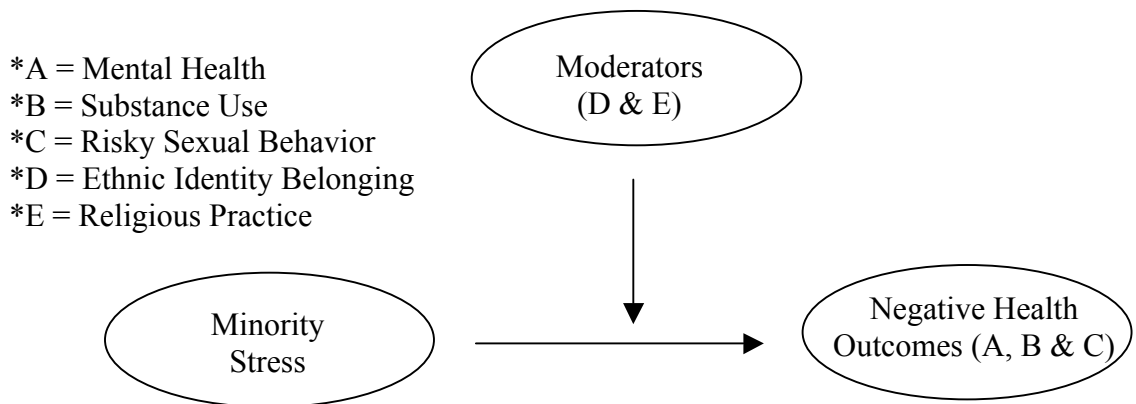


Figure 2. *Hypothesized Moderation Model Variations for MSM of Color*



CHAPTER III

RESULTS

This section will report the study's findings. A discussion of the preliminary and statistical analyses used for the study will follow. Descriptive statistics are noted to gain a better understanding of the targeted population. In addition, this section will explore the results of the hypothesized models and investigate the relationship between minority stress, negative health outcomes, and the moderators.

Data Analysis

Prior to the data analysis, data were cleaned and screened. Specifically, data were assessed to determine whether items had responses outside of the expected ranges. Observing if data deviate markedly from other members of the sample helped identify outliers. Data were examined for normality, heteroscedasticity, and multicollinearity to assure that no assumptions were violated. To test the location and variability within the dataset, skewedness and kurtosis were examined to assure univariate normality. Missing data were examined for randomness. The mental health variables were skewed with a high percentage of participants reporting no mental health issues. A Poisson Regression was considered, but a more accommodating measurement was used because the deviance was greater than two. A Negative Binomial Regression, which is a count-based model, was utilized for this variable to account for this finding. Composite scores were constructed based on past literature, and reliability analyses were conducted to assess internal consistency for each measure and composite variable (i.e., Cronbach's alpha). Reliabilities ≥ 0.70 were considered acceptable for analytical purposes (Mertler & Venatta, 2005).

A composite predictor variable was used to measure Total Minority Stress in MSM of color. This study also utilized an alternative minority stress variable (i.e., LGBT People of Color Microaggressions Scale), which was an existing measure created specifically for LGBT people of color for assessing external stressors specific for this specific population. These two variables had a low correlation ($r = .26$), with a positive direction of association. The alternate minority stress variable was only correlated to one of the three negative health outcomes of interest. It also was not significantly correlated with the two moderating variables. Due to the low correlation to the composite variable and the non-correlational findings with risky sexual behavior, substance use, ethnic identity belonging, and religious practice, this exploratory variable was not used in the advanced analyses.

Composite Variables

A composite variable for Total Minority Stress was created from the Victimization Scale, Homosexual Attitudes Inventory, and the Perceived Ethnic Discrimination Questionnaire--Community Version Scale. Each raw score was converted to a z-score (score – mean)/standard deviation. According to Campbell and Knapp (2001), if two of the three variables are added together, restandardized, and added to the third variable, the sum of the weights of the first two would equal the weight of the third. Once the z-scores were calculated for each scale and weighted equally (LGB minority stress versus racial and ethnic minority stress) they were summed within SPSS to create the total minority stress composite score.

Preliminary Analyses

Descriptive statistics and Spearman Rank Correlations are presented in Table 2. The means and standard deviations presented were calculated using data from all participants.

Eighty-five percent of the population had used “alcohol or other drugs such as wine, hard liquor, pot, coke, heroin, or other opioids, uppers, downers, hallucinogens, or inhalants.” Only 5% of the participants reported having a drinking problem or drug problem, yet 24% noted having blackouts or other periods of memory loss because of alcohol consumption, 26% reported feeling like they drank or used other drugs too much, 34% have tried to decrease or quit drinking or using other drugs, 20% have gotten into arguments or fights while drinking or using

Table 2. Means, SDs, and Intercorrelations of Study Measures

Notes. 1 = BSI-18. 2 = SSI-SA. 3 = SSBQ. 4 = RBB. 5 = MEIM. 6 = Composite variable: PEDQ-CV, Victimization Scale, and HAI Inventory. 7 = The LGBT People of Color

Variable	1	2	3	4	5	6	7
1. Mental health	-						
2. Substance use	.11	-					
3. Safer sex practices	.11	-.22*	-				
4. Religious practice	-.07	-.00	.04	-			
5. Ethnic belonging	-.18*	-.17*	.15	.12	-		
6. Total minority stress	.09	-.02	.07	.21*	.33***	-	
7. Alternate minority stress	.40***	.03	.04	.05	.02	.26**	-
<i>M</i>	1.70	5.28	66.22	17.43	22.07	-.02	1.64
<i>SD</i>	5.10	2.14	10.53	10.40	5.48	.76	.74
<i>N</i>	142	142	143	146	149	132	148

Microaggressions Scale.

* $p < .05$; ** $p < .01$; *** $p < .001$

drugs, and 26% reported that when they are drinking or using drugs they are more likely to partake in activities they would not normally do (i.e., break rules, break the law, have unprotected sex with someone).

Forty-three percent of the sample reported always insisting on condom use when having sexual intercourse. When responding to the statement “If swept away in the passion of the moment, I have sexual intercourse without using a condom,” 40% reported never. These findings suggest that over half (60%) of the sample participated in risk taking behaviors. More than half of the participants (60%) reported engaging in anal intercourse without using a condom sometimes (39.5%), most of the time (99.9%), and always (10.5%). A little less than half (47%) of the participants reported always refusing to have sexual intercourse if a sexual partner insisted on sexual intercourse without a condom.

Almost one-third of the population (32.9%) experienced symptoms of psychological distress. The distribution is skewed because a high percentage (60.5%) did not report distress within the past seven days ($M = 1.20$, $SD = 5.10$). Due to the large portion of zero scores, substantial skewedness and kurtosis were observed for mental health scores ($S = 7.34$, $K = 68.31$). The distribution for this variable demonstrated a negative binomial distribution; hence the analyses employed a negative binomial regression model (UCLA: Statistical Consulting Group, 2014). This analysis method is similar to Poisson regression, but it has an extra parameter to account for over-dispersion. For this specific analysis, the size of the change in the count of mental health concerns was calculated by exponentiating significant regression coefficients (Van Ryzin, Johnson,

Leve, & Kim, 2011). When exponentiated, a positive regression coefficient is greater than 1 and serves to increase the overall count. The negative binomial regression model method is the best method of regression when testing associations between mental health scores within this dataset and other variables of interest in the study.

Total Minority Stress was positively correlated with Ethnic Identity Belonging, $r = .33, p < .001$. The alternative minority stress variable, LGBTPOC, was positively correlated with Mental Health, $r = .40, p < .01$. The two predictor variables measuring minority stress were positively correlated, $r = .26, p < .01$.

When examining the relationship between the negative health outcomes and moderator variables, Mental Health was negatively correlated with Ethnic Identity Belonging, $r = -.18, p < .05$. Substance Use was negatively correlated with Safer Sex Practices, $r = -.22, p < .05$; and Ethnic Identity Belonging, $r = -.17, p < .05$.

Hypothesized Analyses

Linear regressions and hierarchical regressions were run to determine the relationship between the minority stress composite variable, the three outcomes variables (i.e., mental health, substance use, and sexual behavior), and the moderators (i.e., ethnic identity belonging and religious practice). Since the Mental Health variable was skewed, a negative binomial regression was used to test the relationship between minority stress, mental health, and the moderator variables.

A two-step process was conducted to complete the overall analyses. For Step 1 a linear regression was conducted to test the relationship between the composite Total Minority Stress variable (i.e., Perceived Ethnic Discrimination Questionnaire--Community Version, Victimization Scale, and Homosexual Attitudes Inventory) and the

three negative health outcome variables: (a) Mental Health (Brief Symptom Inventory 18), (b) Substance Use (Simple Screen Instrument for Substance Abuse), and (c) Risky Sexual Behavior (Safer Sex Behavior Questionnaire). Three separate analyses were conducted to determine the relationship between: (a) Total Minority Stress and Mental Health, (b) Total Minority Stress and Substance Use, and (c) Minority Stress and Risky Sexual Behavior.

Next for Step 2, a hierarchical regression was used to test the moderating effects of Ethnic Identity Belonging (Multi-Ethnic Identity Measure) and Religious Practice (Religious Background and Behaviors Questionnaire) on the composite minority stress and the negative health outcomes. The first component in running a hierarchical regression is assuring that the predictor and moderator variables were centered to reduce problems associated with multicollinearity among the variables in the regression equation (Frazier, Tix, Barron, 2004). A new product term was created to represent the interaction between the centered minority stress variable and the centered moderating variables (i.e., Ethnic Identity Belonging and Religious Practice). A structured hierarchical regression equation was created to test for moderator effects. Specifically, Ethnic Identity Belonging variable was regressed on: (a) Total Minority Stress and Mental Health, (b) Total Minority Stress and Substance Use, and (c) Total Minority Stress and Risky Sexual Behavior. In addition, the religious practice variable was regressed on: (a) Total Minority Stress and Mental Health, (b) Total Minority Stress and Substance Use, and (c) Total Minority Stress and Risky Sexual Behavior.

Variables were entered into the regression equation through a series of specified blocks. The first block included the centered variables representing the predictor, the

moderator variables, and the product terms reflecting the interactions. If there were no significant interactions, then the second block examined the main effects of the centered variables representing the predictor and moderator variables only (i.e., without the interaction term) on the outcome variable. For significant interactions within the regression models, MODPROBE was utilized to calculate regions of significance using the Johnson-Neyman technique (Hayes & Matthes, 2009).

Total Minority Stress and Negative Health Outcomes

The association between the total minority stress variable and negative health outcomes: (a) mental health, (b) substance use, and (c) risky sexual behaviors were tested. Results from the regression analyses are presented in Tables 3 - 8 and are described in a two-step process measuring the direct effects (i.e., hypothesis one) and the moderation effects (i.e., hypothesis two).

Addressing the first question within this study: *Do MSM of color who have high minority stress exhibit high negative health outcomes (i.e., poor mental health, substance use, and risky sexual behavior)?* A negative binomial regression was performed on total minority stress and mental health outcomes. The model predicting mental health outcomes with total minority stress was significant, $X^2(1, n = 124) = 38.06, p < .01$. Change in expected change in log count for one-unit increase in total minority stress was $e^B(.96) = 2.61, p < .01$, indicating that higher total minority stress in MSM of color was associated with greater psychological distress.

A simple regression analysis was also performed to examine the relationship between total minority stress and substance use; however, the relationship was not

significant, $F(1, 125) = 1.11, p = .75$. Another simple regression analysis was performed to test the relationship between total minority stress and safer sex practices. This model was not significant, $F(1, 124) = .18, p = .67$, indicating that there was no statistically significant effect between total minority stress and safer sex practices.

Total Minority Stress and Negative Health Outcomes: Moderated Effects

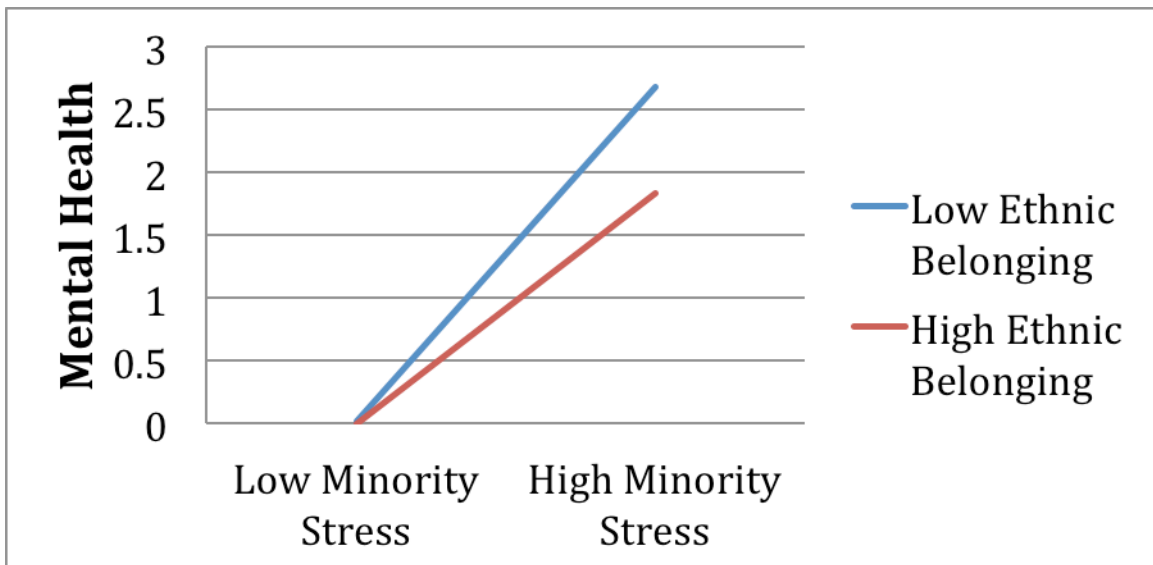
Next, the role of two moderator variables—ethnic identity belonging and religious practice—was examined to determine whether either buffered the effects of total minority stress on the negative health outcomes: (a) mental health (b) substance use and (c) risky sexual behaviors. These analyses address the second question within this study: *Does ethnic identity and religious practice in MSM of color moderate the relationship between minority stress and negative health outcomes (i.e., poor mental health, substance use, and risky sexual behavior)?* Results from these hierarchical analyses are presented in Tables 3 - 8.

Hierarchical Regression Testing Moderation Effects

Three separate hierarchical multiple regressions were performed to examine whether ethnic identity belonging scores or religious practice scores would moderate the effects of minority stress on each of the three negative health outcomes (i.e., mental health, substance use, and risky sexual behavior). Moderation effects were represented by the interaction between total minority stress and the moderator term, while main effects represents the individual main effects of the moderator and total minority stress on the outcome variable of interest (see Tables 3 - 8).

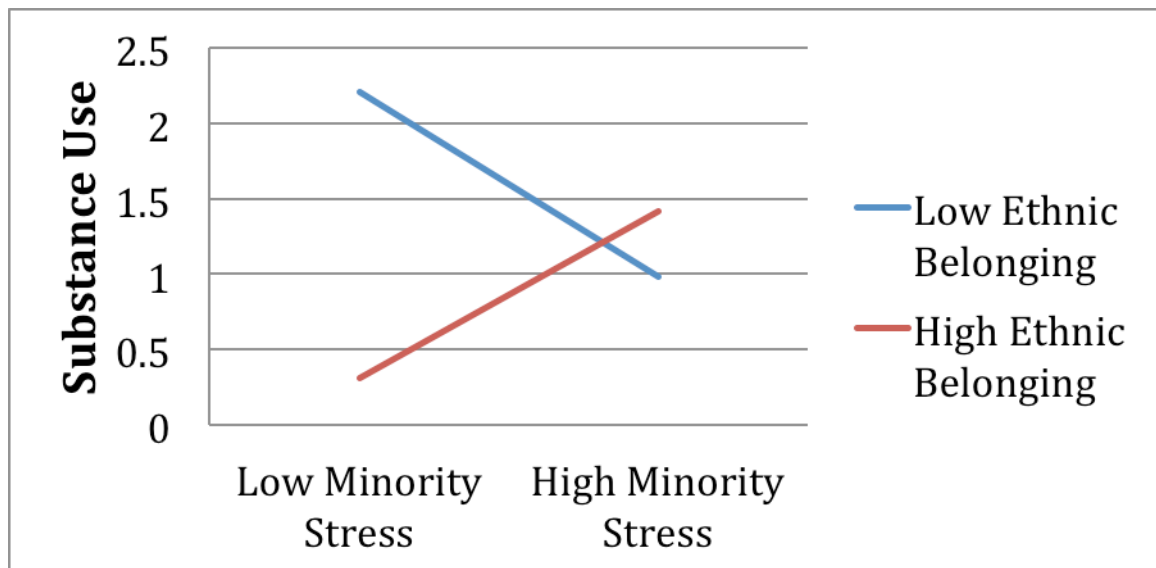
Ethnic identity belonging. To determine whether ethnic identity belonging moderated the effect of total minority stress on mental health outcomes in MSM of color, a hierarchical negative binomial regression analysis was employed (see Table 3). The coefficient for the interaction between the ethnic identity belonging and total minority stress was significant for mental health, $e^B(.30) = 1.35$, at $p = .04$. The odds ratio for total minority stress and ethnic identity belonging interaction term was 1.35, suggesting that among MSM of color who are experience high levels of minority stress, those reporting low ethnic identity belonging were likely to have 1.35 times higher mental health concerns compared to individuals who reported having high sense of ethnic identity belonging. As shown in Figure 3, this suggests that under conditions of high minority stress, ethnic identity belonging has a particularly significant protective effect. Individuals who reported greater ethnic identity belonging reported fewer mental health problems ($M = 1.84$) than did those who reported low ethnic identity belonging ($M = 2.69$).

Figure 3. Moderation Effect of Ethnic Identity Belonging on Minority Stress and Mental Health Outcomes



Ethnic identity belonging also moderated the effect of total minority stress on substance use in MSM of color. A hierarchical multiple regression model showed that ethnic belonging scores predicted 10% of the variance in substance use, $R^2 = .10$, $F(3, 125) = 4.52$, $p = .01$, (see Table 4). The coefficient for the interaction between ethnic identity belonging and total minority stress was significant for substance use, $B = .26$, $t = 3.07$, $p < .01$. A post hoc Johnson-Neyman Test was conducted to determine where the significant differences lay. Based on the results (Hayes & Matthes, 2009), the significance regions fell outside of the values 1.40 and .41. As shown in Figure 4, this interaction illustrates that under conditions of lower minority stress, ethnic identity belonging has a particularly significant protective effect. Individuals who reported lower ethnic identity belonging engaged in significantly higher substance use ($M = 2.21$) compared to substance use engagement ($M = .32$) in individuals who reported high ethnic identity belonging.

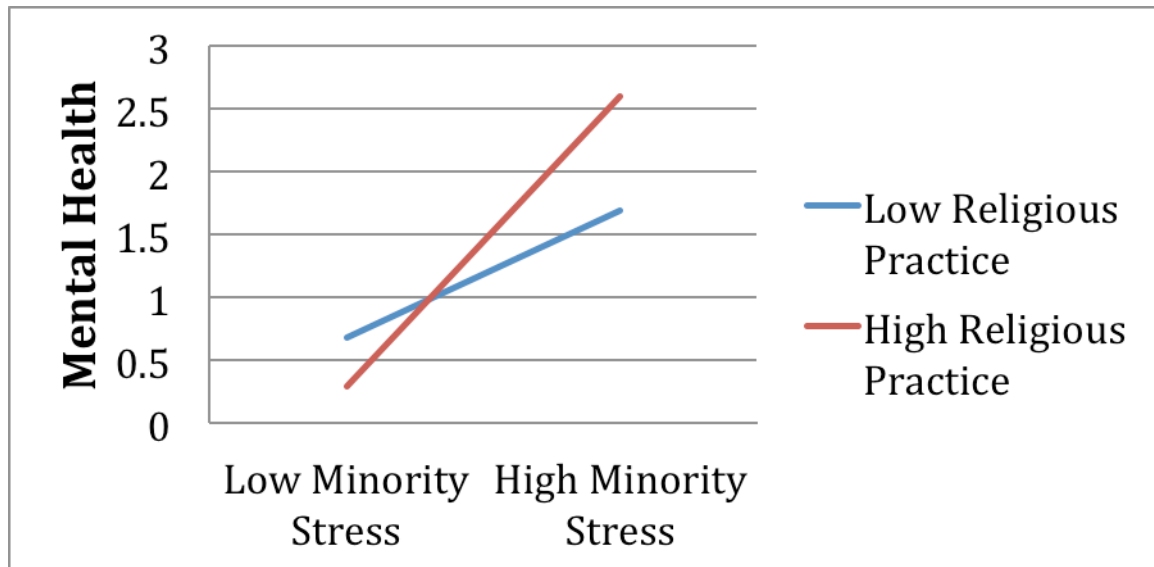
Figure 4. Moderation Effect of Ethnic Identity Belonging on Minority Stress and Substance Use



To determine whether ethnic identity belonging moderated the effect of total minority stress on safer sex practices in MSM of color, a hierarchical multiple regression was run (see Table 5). First, in step 1 entry of the minority stress variable, ethnic identity belonging and the interaction term revealed that there was not a significant interaction between minority stress and ethnic identity belonging on the safer sex practices variable. To test the main effects, a step 2 entry of the minority stress variable and ethnic identity belonging variable to predict safer sex practices revealed a significant main effect for ethnic identity belonging, $B = .19$, $t = 2.11$, $p < .05$ indicating that there is a positive relationship between ethnic identity belonging and safer sex practices. These results suggest that individuals with high ethnic group belonging engaged in higher safer sex practices.

Religious practice. To determine whether religious practice moderated the effect of total minority stress on mental health outcomes in MSM of color, a hierarchical negative binomial regression analysis (see Table 6) was run. The coefficient for the interaction between religious practice and total minority stress was significant for mental health, $e^B(.42) = 1.52$, at $p = .06$. The odds ratio for the total minority stress and religious practice interaction term was 1.52, suggesting that MSM of color who have high religious practice were likely to have 1.52 times more mental health concerns compared to those who reported having low religious practice. As shown in Figure 5, this interaction suggests that under conditions of high minority stress, individuals who reported high religious practice endorsed significantly poorer mental health outcomes ($M = 2.61$) compared to mental health outcomes ($M = 1.70$) of individuals who reported low religious practice.

Figure 5. Moderation Effect of Religious Practice on Minority Stress and Mental Health Outcomes



To determine whether religious practice moderated the effect of total minority stress on substance use in MSM of color, a hierarchical multiple regression was run (see Table 7). The coefficient for the interaction between religious practice and total minority stress was not significant. A second model was run to account for the main effects of total minority stress and religious practice on substance use. There was no significant main effect for total minority stress or religious practice.

Another hierarchical multiple regression was performed to test the moderation of religious practice on the relationship between total minority stress and safer sex practices (see Table 8). The model was not significant, $F(3, 122) = .20, p = .90$. There was no significant interaction effect between total minority stress and religious practice. A second model was run to account for the main effects of total minority stress and religious practice on sexual practices. There was no significant main effect for total minority stress. There was also no significant main effect for religious practice.

Table 3. Summary of Negative Binomial Regression Analysis for Variables Predicting Mental Health Outcomes

Variable	Direct Effect			Moderation Effect		
	X^2	<i>SE B</i>	e^B	X^2	<i>SE B</i>	e^B
Minority stress (S)	38.09	.16	2.61**	41.19	.14	2.94**
Ethnic belonging (E)				8.49	.20	.66**
S x E				4.37	.17	1.35*

Note. Minority stress and ethnic identity belonging were standardized.
* $p < .05$. ** $p < .01$.

Table 4. Summary of Hierarchical Regression Analysis for Variables Predicting Substance Use

Variable	Direct Effect			Moderation Effect		
	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>
Minority stress (S)	.03	.26	.33	.08	.90	.37
Ethnic belonging (E)				-.17	-1.95	.05*
S x E				.26	3.07	.00**
R^2	.00			.10		

Note. Minority stress and ethnic identity belonging were standardized.
* $p < .05$. ** $p < .01$.

Table 5. Summary of Hierarchical Regression Analysis for Variables Safer Sex Predicting Practices

Variable	Direct Effect			Main Effects			Moderation Effect		
	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>
Minority stress (S)	.04	1.30	.43	-.01	1.33	-.11	-.01	1.33	.14
Ethnic belonging (E)				.19	1.04	2.11*	.19	1.04	2.09*
S x E							-.07	1.32	-.82
<i>R</i> ²		.00			.04			.04	

Note. Minority stress and ethnic identity belonging were standardized.
p* < .05. *p* < .01.

Table 6. Summary of Negative Binomial Regression Analysis for Variables Predicting Mental Health Outcomes

Variable	Direct Effect			Moderation Effect		
	<i>X</i> ²	<i>SE B</i>	<i>e</i> ^{<i>B</i>}	<i>X</i> ²	<i>SE B</i>	<i>e</i> ^{<i>B</i>}
Minority stress (S)	38.09	.16	2.61**	39.20	.16	2.77**
Religious practices (P)				.39	.14	.91
S x P				3.61	.22	1.52†

Note. Minority stress and religious practice were standardized.
† Approaching significance. **p* < .05. ***p* < .01.

Table 7. Summary of Hierarchical Regression Analysis for Variables Predicting Substance Use

Variable	Direct Effect			Main Effects			Moderation Effect		
	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>
Minority stress	.03	.26	.33	.05	.26	.56	.05	.26	.57
(S)									
Religious practice (P)				-.07	.20	-.80	-.07	.20	.43
S x P							-.03	.29	.72
<i>R</i> ²			.00			.01			.01

Note. Minority stress and religious practice were standardized.
p* < .05. *p* < .01.

Table 8. Summary of Hierarchical Regression Analysis for Variables Predicting Safer Sex Practices

Variable	Direct Effect			Main Effects			Moderation Effect		
	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>	<i>B</i>	<i>SE B</i>	<i>t</i>
Minority stress	.04	1.30	.43	.04	1.32	.39	.04	1.33	.39
(S)									
Religious practice (P)				.04	1.01	.47	.04	1.02	.45
S x P							.04	1.45	.46
<i>R</i> ²			.00			.00			.01

Note. Minority stress and religious practice were standardized.
p* < .05. *p* < .01.

CHAPTER IV

DISCUSSION

The current study focused on MSM of color, because of their increased risk for negative health outcomes, with the goal of clarifying associations between minority stress, negative health outcomes, and identification of protective contextual factors that may buffer these negative outcomes. Not only are MSM at high risk for negative health outcomes related to substance use and sexual risk, they are at increased risk for major depression, generalized anxiety, and bipolar disorder (CDC, 2012). The chapter begins by exploring the study findings and how they relate to current research, theory, and practice. The study's limitations are explored as well as recommendations for future research and practice implications. The chapter ends with a concluding discussion. Better understanding of these contextual factors may inform prevention and intervention programs specifically designed to enhance positive health outcomes in MSM of color.

The primary goal of this study was to explore two hypotheses within LGB of color regarding the effects of minority-related stress on negative health outcomes in MSM of color. First, the current study investigated whether MSM of color are at risk for increased minority stress because of their multiple minority identities. Secondly, the study tested whether ethnic identity belonging and extent of religious practice would buffer the negative effects of minority stress on health outcomes of MSM of color.

The study hypothesized that MSM of color who experience high minority stress (i.e., racial discrimination, victimization, and internalized homophobia) would have: (a) poorer mental health outcomes, (b) higher substance use, and (c) higher risky sexual behavior. This hypothesis suggests that MSM of color may experience minority stress

because of the constellation of stressors associated with both their racial (i.e., racism) and sexual (i.e., victimization and internalized homophobia) minority identities. The results illustrate a positive association between minority stress and psychological distress, supporting the hypothesis that increased stress may lead to poor mental health in MSM of color.

The second focus of the study explored two potential moderators: (a) ethnic identity belonging and (b) religious practice. There were three separate hypotheses for the three different negative health outcomes for each moderator. First, it was hypothesized that ethnic identity belonging would moderate the relationships between: (a) minority stress and mental health, (b) minority stress and substance use, and (c) minority stress and risky sexual behavior. Second, it was hypothesized that religious practice would moderate the relationships between: (a) minority stress and mental health, (b) minority stress and substance use, and (c) minority stress and risky sexual behavior. One way that MSM of color may cope with heightened minority stress is through their connection with support networks (Moradi, DeBlaere, & Huang, 2010), which is why the current study explored the role of ethnic identity belonging and religious practice in MSM of color. Results indicated that ethnic identity belonging was a significant moderator of the effects of minority stress on mental health and substance use outcomes. Conversely, there was some evidence suggesting religious practice to exacerbate psychological distress in MSM of color.

Minority Stress and Negative Health Outcomes

In line with existing research (Balsam & Syzmanski, 2005; Diaz, Ayala, Bein, Henne, & Marin, 2001; DiPlacido, 1998; Herek, Cogan, Gillis, and Glunt, 1997; Meyer,

1995; Meyer & Dean, 1998; Williamson, 2000), there was a positive association between minority stress as measured by the composite total minority stress variable (i.e., racial discrimination, LGB victimization, and internal homophobia) and greater mental health concerns. These findings align with the minority stress model (Meyer, 1995), supporting the hypothesis that increased minority stress for individuals that identify as LGB have increased mental health issues. These results build upon earlier research on the minority stress model documenting links between heightened minority stress and greater mental health issues. Several researchers concur and have found racial discrimination (Boyce, 1997; Rodriguez, Myers, Morris, & Cardoza, 2000; Smedley, Myers, & Harrell, 1993; as cited in Bernal, Trimble, Burlew, & Leong, 2003), internalized homophobia (DiPlacido, 1998; Herek, Cogan, Gillis, & Glunt, 1997; Meyer & Dean, 1998; Williamson, 2000), and external homophobia also known as victimization (Balsam & Syzmanski, 2005; D'Augelli, 1998; Diaz, Ayala, Bein, Henne, & Marin, 2001; DiPlacido, 1998; Herek, Cogan, Gillis, & Glunt, 1997; Meyer, 1995) to be related to a wide variety of mental health problems. Since MSM of color hold multiple identities and are vulnerable to multiple sources of stress, it is understandable why individuals in this sample who reported high stress had poor mental health outcomes.

There was no way to determine the directionality of the effect between minority stress and mental health outcomes because one cannot infer causality, but there was a noteworthy positive relationship between the variables. According Meyer (2010), the minority stress model suggests that LGB of color should experience poorer mental health outcomes compared to Caucasian LGB. Specifically, Diaz and colleagues (2004) found that Latino gay men reported multiple experiences of discrimination related to both

minority identities. The current study did not use a control group and solely focused MSM of color, and as such it was not possible to test whether or not individuals in the sample experienced heightened minority stress compared to other populations. The current study supported the minority stress model because within MSM of color, heightened stress was associated with higher psychological distress.

Contrary to expectation, there were no significant associations observed between the minority stress levels on the one hand, and substance use and unsafe sex practices on the other, suggesting that if MSM of color are experiencing heightened minority stress, they are not necessarily going to experience more substance use and risky sexual behavior. Few studies have examined the impact of minority stress on other risk outcomes like risky sexual behavior and substance use in MSM, and of the research that has, none have established a link between minority stress, sexual risk behavior, and substance use in gay and bisexual men (Denato, Halkitis, & Orwat, 2013). Denato, Halkitis, and Orwat's (2013) study specifically examined the relationship between minority stress, substance use, and risky sexual behavior, but did not find a collective or consistent association among the minority stress factors. Researchers concluded that reasons for finding no association may be related to gay and bisexual men's development of vigilance, underscoring protective factors such as coping, adaptation, and resilience (Denato, Halkitis, & Orwat, 2013). In other words, researchers identified that gay and bisexual men may have increased coping mechanisms to withstand stressful experiences. The reason for finding a lack of association between minority stress, substance use, and sexual risky behaviors in the current study may be due to gay and bisexual men's unique coping strategies to decrease their negative health concerns. In the current study, there

may not have been a direct association between minority stress and the two negative health outcomes (i.e., substance use and risky sexual behavior) because MSM of color may have acquired protective factors that buffer the relationship between: (a) minority stress and substance and (b) minority stress and risky sexual behavior.

Similarly, Moradi and colleagues (2010) proposed that LGB of color may have access to resources and skills (i.e., communities, coping skills with stigma and prejudice, and role flexing) that could result in their increased resilience when faced with minority stress. Additional studies support the claim that LGB of color experience heightened minority stress, but do not experience heightened negative health outcomes compared to majority populations (Meyer, Dietrich, & Schartz, 2008; Moradi, DeBlaere, & Huang, 2010; Moradi, Wiseman, et al., 2010). This directly contradicts the minority stress model, which leads to the second objective of the study to explore possible protective factors within MSM of color.

Ethnic Identity Belonging Moderation Effects

Another goal of the current study was to further clarify the role of protective factors in MSM of color. The study's central findings identified ethnic identity belonging as an essential factor in health outcomes for this sample, which supports existing research that associates ethnic identity with positive health outcomes (Phinney, Cantu, & Kurtz, 1997; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003). The result suggests that ethnic identity belonging has a direct positive association with safer sex practices and supports previous studies that also found a significant association between high ethnic identity belonging and low risk taking sexual behaviors (i.e., multiple sexual partners, condom use) in a sample of African American heterosexual men (Oparanozie, Sales,

DiClemente, & Braxton, 2012). The revealed results support previous research that identified positive associations between ethnic identity and safer sex practices in MSM of color (Crawford, Allison, Zamboni, & Sotto, 2002; Mossakowski, 2003; O'Donnell, et al., 2002). The current study provides support for these previous findings in identifying a positive association between ethnic identity belonging and safer sex practices in MSM of color.

Second, ethnic identity belonging was identified as a moderator in the relationship between: (a) minority stress and mental health and (b) minority stress and substance use. These findings contribute to the research literature that associates ethnic identity belonging as a possible protective factor (Caldwell, Sellers, Bernat, & Zimmerman, 2004; Neblett, Rivas-Drake, & Umana-Taylor, 2012; Marsiglia, Kulis, & Hecht, 2001; Marsiglia, Kulis, Hecht, & Sills, 2004; Mossakowski, 2003; O'Donnell et al., 2002; Oparanozie, Sales, DiClemente, & Braxton, 2012; Phinney, Cantu, & Kurtz, 1997; Pugh & Bry, 2007; Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003; Sellers, Rowley, Chabous, Shelton, & Smith, 1997). There are few studies that focused on MSM of color, which is why these findings are important in contributing to LGB of color research by identifying ethnic identity belonging as a possible buffer between minority stress and negative health outcomes. These findings have identified ethnic identity belonging to be an important factor in the development of positive and negative outcomes for MSM of color.

The first moderation effect implies that if one is under high stress, a stronger sense of connection with one's ethnic group may support better mental health. For this sample of MSM of color who were under conditions of high minority stress, one's

connection to their ethnic group may have impacted how much mental health distress one experiences. These findings also illustrate and support the initial results that minority stress predicts mental health problems. It did not matter if one was well connected to their ethnic identity group in low stress conditions; individuals who reported high and low ethnic identity belonging experienced similarly low levels of mental health symptoms. This indicates an association between experiences of low minority stress and low mental health concerns, which aligns with LGB research regarding low minority stress and its relationship to low mental health outcomes (Meyer, 1995; Meyer, 2003).

Similarly, the second moderation finding implies that ethnic identity belonging may be an important factor in preventing substance use outcomes in MSM of color, but in contrast, only for those individuals who reported little stress exposure. The results reveal that under conditions of low stress, more ethnic identity belonging is associated with less substance use whereas less belonging predicted greater substance use. The moderation findings also suggest that ethnic group belonging is not relevant for those who experience high minority stress. This implies that in high minority stress conditions exert a direct effect on risk for substance use, regardless of whether or not you are connected to your ethnic group. This result highlights a need for future research to focus on MSM of color in low stress conditions when exploring the relationship between stress, ethnic identity belonging, and substance use.

The moderation effects for ethnic identity belong provide support for previous research identifying ethnic identity belonging as a significant moderator. These findings infer and support previous research that identified ethnic identity belonging as a strong protective factor for psychological distress and depression for individuals of color

(Crawford, Allison, Zamboni, & Sotto, 2002; Mossakowski, 2003). Specifically, Crawford, Allison, Zamboni and Sotto (2002) found that in a sample of African American gay and bisexual men, individuals that had higher positive self-identification as being African American reported higher levels of self-esteem and lower levels of psychological distress. This is consistent with the current study and specifically helps to strengthen the claim that ethnic identity belonging may buffer the relationship between minority stress and mental health issues. In addition, researchers identified ethnic identity belonging as a protective factor against substance use for MSM (Kulis, Napoli, & Marsiglia, 2002; Marsiglia, Kulis, & Hecht, 2001; Marsiglia, Kulis, Hecht, & Sills, 2004; Pugh & Bry, 2007), which is consistent with the positive associations in the current study. These results were not evident for individuals with high minority stress in the current study implying that ethnic identity belonging only moderated substance use if individuals experience low minority stress. Ethnic identity belonging may have a strong effect on MSM of color substance use regardless of experiencing minority stress. These findings provide evidence that ethnic identity belonging plays an important role in substance use outcomes in MSM of color.

The discussed findings indicate that minority stress is positively associated with mental health issues. These findings support previous research identifying stressors in MSM of color to be positively correlated with mental health concerns (Meyer, 2003; Meyer, 2010). In addition, the current study found minority stress to have a positive relationship with ethnic identity belonging and religious practice via the regression analyses.

Religious Practice Moderation Effect

Contrary to the hypothesis, religious formal practice was not a protective factor, but rather emerged as a possible risk factor for MSM of color, consistent with some studies (i.e., Ream & Savin-Williams, 2005; Schuck & Liddle, 2001; Wagner, Serafini, Rabkin, et al., 1994), and in contrast to other studies of sexual minority populations (i.e., Lease, Horne, & Noffsinger-Frazier; Woods, Antoni, Ironson, & Kling, 1999). The results indicated that under conditions of high stress, formal religious practice is associated with worse mental health outcomes than if one participates in low religious practice.

Past research has explored experiences of gay men and lesbian women with traditional religion and associations with mental health. Findings demonstrated that when religious institutions and communities stigmatized LGB individuals' sexual identities they experiences profound loss and alienation (Ritter & O'Neill, 1989). More recently, Ream and colleagues (2005) identified connection to religious communities as a risk factor for poor mental health in LGB individuals when they experience conflict with their religious communities. Similarly, Shilo and Savaya (2012) found that in a sample of Israeli LGB youth and young adults, high levels of religious practice (i.e., self-report from secular to orthodox) was associated with low levels of family and friends' support and acceptance, and high levels of internalized homophobia. Specifically, Shilo and Savaya (2012) suggest that the added burden of being both LGB and holding religious faith impacts their levels of support and self-acceptance. These findings provide support and a possible understanding for why the current study found religious practice to be a possible risk factor for MSM of color. They all support this notion that LGB individuals

are at increased risk for negative health outcomes when their religious communities are unsupportive.

Formal religious practice may have served as a moderator for this sample of MSM of color because of the conflict experienced between their sexual identity and religious communities. Religious practice or behaviors may be a risk factor for MSM of color in the current sample because these men may experience negative and non-gay affirming religious communities, which may have resulted in higher minority stress. Researchers have found LGB individuals who have a strong connection with non-gay affirming churches to have greater internalized homophobia (Meyer & Dean, 1998; Wagner, Serafini, Rabkin, et al., 1994). On the contrary, Lease and colleagues (2005) indicated that individuals who have affirming messages from their faith groups have increased psychological health through greater spirituality and decreased internalized homophobia. These findings provide support and possible conceptualization for outcomes within the current study. The moderation effect occurred in MSM of color who reported high minority stress, suggesting that religious communities acceptance and lack there of may have a large impact on MSM of color's experiences of stress.

The current study did not find any observable associations between religious practice and: (a) substance use or (b) safer sex practices. Rostosky, Danner and Riggle's (2007) research supports these findings in not finding religious practice to be a protective factor against substance use for sexual minorities. Similarly, the study defined religiosity as participation in formal religious practice (i.e., attending religious services, bible classes, and youth groups). Rostosky and colleagues (2007) found religiosity to reduce the odds of binge drinking, marijuana use, and cigarette smoking for heterosexuals, but

did not reduce odds of substance use for sexual minorities. This helps support the current study's findings in not identifying a significant moderation between religious practice and substance use. In addition, the current findings contradict previous findings that identify religious practice as protective factor against sexual-risk taking for LGBT individuals (Dowshen et al., 2011; Rosario, Yali, Hunter, & Gwadz, 2006). It is important to highlight that there are few studies investigating religiosity as a protective factor for LGB individuals and continued research is warranted.

Study Limitations

Although the current study provides valuable contributions that inform research and practice with MSM of color, the study limitations must be considered. The study utilized linear hierarchical and negative binomial regression analyses to test the hypothesized relationships. Although there were significant moderation effects, due to the nature of the analyses, one cannot determine causal directions within these relationships.

The data were collected through a voluntary self-reported online survey. A challenge within the current study was direct access to the target population because of the lack of resources in the city where the study was conducted which resulted in an online study. Consequently there was less control over confounding factors. The participants were recruited through listservs and online communities that support MSM of color. This may make it difficult to generalize these findings since individuals who may be experiencing high amounts of minority stress may not be involved in or seek out groups that support MSM of color. A total of 98% of the sample reported disclosing their sexuality to someone (i.e., mom, dad, sibling, extended family friends, teachers, or other), suggesting that a majority of the population was 'out' to someone. Researchers have

found comfort with sexual orientation (Kertzner, Meyer, Frost, & Stiratt, 2009) and involvement in the gay community (Zea et al., 2007) to be associated with disclosure. The recruitment process for the current study may have targeted a specific population within the MSM of color, which could have limited the findings.

The current study utilized a composite measure of minority stress that assessed stressors for each minority identity. Although these minority stress factors may have assessed minority stress within LGBT individuals in the past, findings may be different for MSM of color. A limitation to composite minority stress predictor was the chosen measures to represent internal and external stressors for each minority identity. These measures were used in past studies measuring stressors in LGB and ethnic/racial groups separately. It would have been advantageous to utilize measures that had been created for LGB people of color, but these types of measures are limited.

Another limitation to the study was using a substance use scale that was a screening tool to determine whether individuals are at risk for substance abuse. It may have been more beneficial to utilize a substance use measure that gathered more descriptive information and identified the types of alcohol or drug use as well as frequency of use. Similarly, the current study did not assess participants' involvement in gay affirming versus non-gay affirming churches. This would have provided more contextual information in exploring religious practices as a risk and protective factor for MSM of color.

In addition, this study used the Brief Symptom Checklist as a measurement of psychological distress. A large portion of the participants in the study reported "zero" symptoms. This resulted in a skewed representation of the data and required use of a

negative binomial regression analysis. It would have been advantageous to clearly identify psychological constructs of interests and determine the best measurement tools used in past research studies with similar sexual minority populations.

It is important to mention the inconsistent use of definitions and terms within the wider LGBT researcher literature. Specifically, when exploring research on MSM of color there are unique factors to consider. The current study used the term MSM as a way to be inclusive of others that do not identify as gay or bisexual. DeBlaere, Brewster, Sarkees, and Moradi (2010) discussed how some sexual minority persons of color may adopt identifications or terminology other than LGB. These researchers highlighted how different terms might be used across cultural communities to capture what is usually described as LGB within the research literature. The current study only used: homosexual/gay, bisexual, heterosexual, down low, and queer to describe the targeted population of MSM of color. It could have been helpful to explore other possible terms that LGB people of color may gravitate towards because using the term MSM does not advance assessment and understanding of the variability in self-identification (DeBlaere, Brewster, Sarkees, & Moradi, 2010).

Recommendations for Future Research

The results of the present study set the foundation for a variety of directions for MSM of color research. The current study identified three major findings that partially supported the study hypotheses: (a) a strong relationship between greater minority stress and poor mental health outcomes, (b) ethnic identity belonging exerted direct effects on less risky sex, and (c) ethnic identity belonging moderated the effects of minority stress on mental health and substance use, such that greater ethnic belonging was associated

with better mental health outcomes and less substance use. Like previously stated, there were limitations for the chosen analyses. Future research could replicate the current study using a larger sample size, which would allow researchers to use structural educational modeling or latent modeling to test the direction of the effects.

The first finding helps to support the dual load hypothesis confirming a heightened constellation of minority stress is associated with poor mental health. In addition, ethnic identity belonging was identified as a possible protective factor, buffering the negative effects of minority stress on mental health outcomes. Much of the research on MSM of color focuses on risk factors; this study focused on identifying protective factors that may bolster the experiences of MSM of color. By identifying ethnic identity belonging as a possible protective factor not only for mental health outcomes but also substance use, future researchers can replicate the methodology presented in the study with other outcomes. These findings also provide contextual information specific to MSM of color.

These findings also help to support the resilience hypothesis by identifying ethnic identity belonging as a possible protective factor for MSM of color. More research is warranted to further explore why ethnic identity belonging is protective for MSM of color. This study provides support and highlights the importance examining ways to decrease negative health outcomes in MSM of color. There is a need to continue to identify unique attributes that serve as protective factors for MSM of color is warranted. The current study invites researchers to investigate other types of communities or unique factors that may serve as protective mechanisms for MSM of color like the LGBTQ

community, gay affirming religious communities, online communities, and college campus communities.

The current study also found that religious practice may be a risk factor for MSM of color within this sample. This finding alludes to the idea that aversive communities like non-gay affirming churches could be related to negative health outcomes. The current study was interested in exploring religious practice as a protective factor because of the rise of acceptance of gay and lesbian individuals within religious communities (National Congregations Study, 2012). Future studies need to measure MSM of colors connectedness to gay affirming versus non-gay affirming religious communities to better understand how religiosity serves as a risk and protective factor for MSM of color.

It is important to continue to explore minority stress in MSM of color. There is a dearth of research on this topic and it would be beneficial to continue to explore the complexities involved in risk and protective factors within MSM of color populations. It would also be important to explore stressors associated with both minority identities to assure that the construct is accurately measuring experiences of MSM of color. To better understand how minority stress affects MSM of color it would be advantageous to explore between race differences. This would allow researchers to examine contextual factors among racial groups for this specific population. The sample consisted of a high number of multiracial (33%) individuals. Future studies could also explore contextual factors specific for multiracial groups. Specifically, future researchers could investigate the role ethnic identity belonging as a risk or protective factor for MSM of color who have multiple racial identities. Rosario, Schrimshaw, and Hunter (2004) conducted a study that investigated the racial differences in the coming-out process of LGB youth and

found that race a culture plays a large role in sexual identity development. Specifically, they found between race differences in connectedness to LGB community, disclosure, and attitudes toward homosexuality. It is important to explore between race differences to identify specific risk and protective factors for each racial group. Further investigation on this research topic could lead to a more comprehensive understanding of MSM of color.

Parks, Hughs, and Matthews (2004) detected that studies that include LGB of color have compared theories, constructs, and instruments developed for Caucasian LGB individuals, which in of itself could be a shortcoming. A unique aspect of the current study is that it examined a population of only MSM of color where Caucasian LGB individuals were not used as a framework or baseline. According to DeBlaere, Brewster, Sarkees, and Moradi (2010) previous approaches of comparing LGB people of color with Caucasian LGB may result in overlooking important questions specifically relevant to LGB persons of color. In addition, DeBlare and colleagues (2010) discussed the importance of utilizing theory to guide research. When examining intersecting minority identities it may be advantageous to include theoretical frameworks that account for the diverse contextual factors of the population of study. Lastly, DeBlare and colleagues (2010) proposed collaborating with LGB communities of color to generate research questions and directions for advancing scholarship. In the future it would be beneficial to foster healthy relationships with LGB communities of color in hopes of conducting research that is culturally appropriate and beneficial to the community (DeBlare et al., 2010). This would help in the recruitment of a diverse sample of MSM to help generalize the findings. Following these methodological suggestions would assure that future

studies address the complexities involved when examining populations with intersecting identities like MSM of color.

Practice Implications

The current study also provides practice implications for professionals working with MSM of color. Utilizing an ecological approach may be helpful in exploring how culture and contextual factors within MSM of color contribute to their beliefs, emotions, and behaviors. Bronfenbrenner (1979) proposed that multiple contextual factors influence human development and that they change across multiple systems within a person's ecology. This will allow counselors to collaboratively identify risk and protective factors specific to the client and their multiple identities. Utilizing the ecological model as a tool may be helpful in grounding the counselors' clinical work around the individual and the specific systemic factors that shape MSM of colors' life experiences.

Sue, Arredondo, and McDavis (1992) created a model of Multicultural Counseling Competencies, which has three components: awareness, knowledge, and skills. When working with MSM of color it would be advantageous to utilize this model to help better support individuals intersecting identities. Approaching one's clinical work from a multicultural and ecological lens will give the therapist a framework in assessing salient identities that can guide the therapeutic process. This is particularly important to explore with MSM of color, as they have acquired many intersecting minority identities. This will also allow the therapist to gather more contextual information in better understanding the client's worldview. In addition, it is necessary for therapists to have an increased awareness of one's own worldview and potential cultural biases associated with

MSM of color. It is essential for therapists to increase their knowledge about the various cultural factors that might influence the counseling process (Sue, Arredondo, & McDavis, 1992). The study findings identified ethnic identity belonging as an important factor for MSM color, so it would be important to explore clients' perceptions of their ethnic and racial communities. The current study also suggests that aversive communities might be a contributor to negative health outcomes, which is why it is also important to determine risk and protective factors for MSM of color within the therapeutic setting. Exploration of their sexual and ethnic identity development may give therapists a clearer understanding of whether or not certain communities may be a risk or protective factor. It will also be important to explore their thoughts of themselves and identities that they find particularly salient.

Conclusion

According to Meyer (2010) there is substantive research to support the minority stress model, suggesting that MSM of color who have high amounts of stress experience an increased amount of mental health issues. However, there is limited research that has tested the minority stress theory among gay and bisexual men in regard to other risk behaviors such as substance use and risky sexual behaviors (Denato, Halkitis, & Orwat, 2013). There are also limited studies that have investigated protective factors for MSM of color like ethnic identity belonging and religious practice. The current study is one of the few research investigations to explore the relationship between dual load minority stress and negative health outcomes (i.e., mental health, substance use, and risky sexual behavior), while also examining the moderating effects of religious practice and ethnic identity belonging on MSM of color. These findings will help to contribute to the

broader LGB people of color research by identifying specific experiences of MSM of color.

The present findings support research that indicates that dual load minority stress influences mental health outcomes in MSM of color. Ethnic identity belonging served an important factor in the relationship between minority stress and mental health outcomes. Similarly, ethnic identity belonging served as a moderator in the relationship between minority stress and substance use. The results also demonstrated an opposite hypothesized effect for religious practice. This suggests that religious practice may play a role in exacerbating negative health outcomes for the studied population. MSM of color who experience heightened minority stress may be at increased risk for mental health issues if they have high religious practice.

There is limited research on this topic, so these findings will help to better understand experiences of MSM of color. The results will contribute to expanding the understanding of MSM of color which will in turn help strengthen the association of ethnic identity belonging as a protective factor for this population. The current study also uniquely contributes by revealing contradicting themes in MSM of color depending on the amount of stress they are experiencing. More research is needed to better understand the complexities involved in MSM of color life experiences. Future studies would have the opportunity to explore trends within MSM of color, which would provide researchers with contextual factors to better understand risk outcomes within this population. Increasing the understanding of this population will help aid in the creation of prevention and intervention programs to decrease the overall risk for MSM of color.

APPENDIX

DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

The following questionnaire will give you the opportunity to share your experiences. Please answer openly and truthfully as this information is anonymous and confidential.

1. Age _____
2. Birth gender/Biological sex
 Male
 Female
3. How Do you self-identify?
 Male
 Female
 MTF Transgender
 FTM Transgender
4. Which of the following best describes you?
 Homosexual/Gay
 Lesbian
 Bisexual
 Heterosexual
 Questioning
5. The individuals to whom you are physical attracted to are:
 Only males
 Mostly males but some females
 Males and females equally
 Mostly females but some men
 Only females
6. Do you identify as any of the following?
 DL (down low)
 Queer
 I do not identify as either
7. I have disclosed my sexual identity to others.
 Yes
 No
8. Please Identify who you have disclosed your sexual identity to (Check all that apply)
 Mom
 Dad
 Sibling
 Extended family

- Friends
- Teachers
- Other

9. How do you describe your race or ethnic background? (Check all that apply)

- White (not Hispanic or Latino/a)
- Black/African American
- Latino/Latina or Hispanic
- Asian or Pacific Islander
- Native American
- Other
- Multi-racial

(For those that answer 'other' or 'multiracial')

10. Please describe your race or ethnic background _____

11. What is your religious affiliation?

- Protestant Christian
- Roman Catholic
- Evangelical Christian
- Muslim
- Hindu
- Buddhist
- No religious affiliation
- Other

12. Apart from events such as weddings and funerals, how often do you attend religious services?

- More than once a week
- Once a week
- Once or twice a month
- A few times a year
- Never

13. Which of the following most describes your living situation?

- Living alone in an apartment or house
- Living with parents or family
- Living with a roommate in an apartment or house
- Living with a romantic or sexual partner
- Group home or residential treatment facility
- No permanent address (homeless, squatting, etc.)

14. Please describe your educational background.

- Less than seventh grade
- Junior high
- Partial high school

- Partial college (at least one year)
- College education
- Graduate degree

15. Please describe your mother's educational background.

- Less than seventh grade
- Junior high
- Partial high school
- Partial college (at least one year)
- College education
- Graduate degree
- Unknown

16. Please describe your father's educational background.

- Less than seventh grade
- Junior high
- Partial high school
- Partial college (at least one year)
- College education
- Graduate degree
- Unknown

17. Are you currently employed?

- Yes
- No

18. What is your family income?

- Less than \$10,000
- \$10,000-\$19,000
- \$20,000-\$29,000
- \$30,000-\$39,000
- \$40,000-\$49,000
- \$50,000-\$59,000
- \$60,000-\$69,000
- \$70,000 & Above

19. Have you ever been arrested by the police?

- Yes
- No

20. Have you ever been in jail/juvenile detention?

- Yes
- No

REFERENCES CITED

- Amadio, D. M. (2006). Internalized heterosexism, alcohol use, and alcohol-related problems among lesbians and gay men. *Addictive Behaviors*, 31, 1153–1162.
- Anderson, N. B., & Armstead, C. A. (1995). Toward understanding the association of socioeconomic status and health: A new challenge for the biopsychosocial approach. *Psychosomatic Medicine*, 57, 213–225.
- Aneshensel, C. S., Rutter, C. M., & Lachenbruch, P. A. (1991). Social structure, stress and mental health—competing conceptual and analytic models. *American Sociological Review*, 56, 166–178.
- Arbona, C. & Jimenez, C. (2014). Minority stress, ethnic identity, and depression among latino/a college students. *Journal of Counseling Psychology*, 61(1), 162-168.
- Bailey, S. L., Polluck, N. K., Martin, C. S., & Lynch, K. G. (1999). Risky sexual behaviors among adolescents with alcohol use disorders. *J Adolescent Health*, 25(3), 179–181.
- Balsam, K. F., & Szymanski, D. M. (2005). Relationship quality and domestic violence in women’s same-sex relationships: The role of minority stress. *Psychology of Women Quarterly*, 29, 258–269.
- Balsam K. F., Molina Y., Beadnell B., Simoni J., & Walters, K. (2011). Measuring multiple minority stress: LGBT People of Color Microaggressions Scale. *Cultural Diversity & Ethnic Minority Psychology*, 17, 163–174.
- Bazargan, S., Sherkat, D. E., & Bazargan, M. (2004). Religion and alcohol use among African-American and Hispanic inner-city emergency care patients. *Journal for the Scientific Study of Religion*, 43, 419–428.
- Beauvais, F., & Oetting, E. R. (2002). Variances in the etiology of drug use among ethnic groups of adolescents. *Public Health Reports*, 117(1), 8–14.
- Beckett, M., Burnam, A., Collins, R. L., Ranouse, D. E., & Beckman, R. (2003). Substance use and high-risk sex among people with HIV: A comparison across exposure groups. *AIDS Behavior*. 7, 209-219.
- Bernal, G. (2003). Handbook of racial and ethnic minority psychology. In H. F. Myers, T. T. Lewis, & T. Parker-Dominguez (Eds). *Stress, coping, and minority health* (pp. 377–400). Thousand Oaks, CA: Sage.
- Bimbi, D. S., Nanin, J. E., Parsons, J. T., Vicioso, K. J., Missildine, W., & Frost, D. (2006). Assessing gay and bisexual men’s outcome expectancies for sexual risk under the influence of alcohol and drugs. *Substance Use & Misuse*, 41, 643–652.

- Borrell, L. N, Jacobs, D. R. Jr., Williams, D. R., Pletcher, M. J., Houston, T. K., & Kiefe, C. I. (2007). Self-reported racial discrimination and substance use in the coronary artery risk development in adults study. *American Journal of Epidemiology*, *166*, 1068–1079.
- Bowen-Reid, T. L., & Harrell, J. P. (2002). Racist experiences and health outcomes: An examination of spirituality as a buffer. *Journal of Black Psychology*, *28*, 18–35.
- Bowie, J. V., Ensminger, M. E., & Robertson, J. A. (2005). Alcohol-use problems in young Black adults: Effects of religiosity, social resources, and mental health. *Journal of Studies on Alcohol*, *67*, 44–53.
- Boyce, W. T., & Ellis, B. J. (2005). Biological sensitivity to context: I. An evolutionary–developmental theory of the origins and functions of stress reactivity. *Development and Psychopathology*, *17*, 271–301.
- Brady, M. J., Peterman, A. H., Fitchett, G., Mo, M., & Cella, D. (1999). A case for including spirituality in quality of life measurement in oncology. *Psycho-Oncology*, *8*, 417–428.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Brondolo, E., Brady, N., Thompson, S., Contrada, R. J., Cassells, A., Tobin, J., & Sweeney, M. (2008). Perceived racism and negative affect: Analyses of trait and state measures of affect in a community sample. *Journal of Social and Clinical Psychology*, *27*(2), 150–173.
- Brondolo E., Kelly, K. P., Coakley V., Gordon T., Thompson S., Levy E., et al. (2005). The perceived ethnic discrimination questionnaire: Development and preliminary validation of a community version. *Journal of Applied Social Psychology*, *35*(2), 335–365.
- Bux, D. A. (1996) The epidemiology of problem drinking in gay men and lesbians: A critical review. *Clinical Psychology Review*, *16*, 277–298.
- Caldwell, C. H., Sellers, R. M., Bernat, D. H., & Zimmerman, M. A. (2004). Racial identity, parental support, and alcohol use in a sample of academically at-risk African American high school students. *American Journal of Community Psychology*, *34*, 71–82.
- Campbell, J. P. & Knapp, D. J. (2001). Exploring the limits in personal selection and classification. *Business and Economics, Psychology Press*, 680.
- Center for Substance Abuse Treatment. (1994). *Screening instruments for outreach for alcohol and other drug abuse and infectious diseases*. Treatment Improvement Protocol (TIP) Series 11. DHHS Publication No. (SMA) 95–3058. Rockville, MD: Substance Abuse and Mental Health Services Administration.

- Centers for Disease Control. (2010). Lesbian, gay bisexual, and transgender health. *About LGBT Health*. Atlanta: Author. Retrieved from <http://www.cdc.gov/lgbthealth/about.htm>
- Centers for Disease Control. (2010). HIV among gay, bisexual, and other men who have sex with men (msm). Retrieved from <http://www.cdc.gov/hiv/topics/msm/index.htm>
- Centers for Disease Control. (2010). Substance abuse- gay and bisexual men's health. Retrieved from <http://www.cdc.gov/msmhealth/substance-abuse.htm>
- Centers for Disease Control. (2011). *Lesbian, Gay, Bisexual and Transgender Health*. Atlanta: Author. Retrieved from <http://www.cdc.gov/lgbthealth/youth.htm>
- Centers for Disease Control. (2012). *Gay and Bisexual Men's Health*. Atlanta: Author. Retrieved from <http://www.cdc.gov/MSMhealth>
- Centers for Disease Control. (2012). *HIV among Gay and Bisexual Men*. Atlanta: Author. Retrieved from <http://www.cdc.gov/hiv/topics/msm>
- Centers for Disease Control and Prevention. (2005). *HIV/AIDS Surveillance Report 2004* (Vol. 16, pp. 1–46). Atlanta: Author. Retrieved from <http://www.cdc.gov/hiv/surveillance/resources/reports/2004report/>
- Centers for Disease Control and Prevention. (2005). *2005 Sexually transmitted disease surveillance*. Atlanta: Author. Retrieved from <http://www.cdc.gov/std/stats05/>
- Chartier, K., & Caetano, R. (2010). Ethnicity and health disparities in alcohol research. *Alcohol Research and Health*, 33, 152–160.
- Cheng, Z. (2003). Issues and standards in counseling lesbian and gay men with substance abuse concerns. *Journal of Mental Health Counseling*, 25(4), 323–336.
- Chisolm, D. J., Mulatu, M. S., Brown, J. R. (2009). Racial/ethnic disparities in the patterns of co-occurring mental health problems in adolescents in substance abuse treatment. *Journal of Substance Abuse Treatment*, 37(2), 203–10.
- Chou, T., Asnaani, A., & Hofman, S. G. (2011). Perception of racial discrimination and psychopathology across three U.S. ethnic minority groups. *Cultural Diversity and Ethnic Minority Psychology*, 18(1), 74–81.
- Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for African Americans: A biopsychosocial model. *American Psychologist*, 54, 805–816.

- Cochran, S. D., Mays, V. M., & Sullivan, J. G. (2003). Prevalence of mental disorders, psychological distress, and mental health services use among lesbian, gay and bisexual adults in the United States. *Journal of Consulting and Clinical Psychology, 71*, 53–61.
- Connors, G. J., Tonigan, J. S., Miller, W. R. (1996). A measure of religious background and behavior for use in behavior change research. *Psychol. Addict. Behav., 10*, 90–96.
- Contrada, R. J., Ashmore, R. D., Gary, M. L., Coups, E., Egeth, J. D., Sewell, A., et al. (2000). Ethnicity-related sources of stress and their effects on well-being. *Current Directions in Psychological Science, 9*(4), 136–139.
- Contrada, R. J., Ashmore, R. D., Gary, M. L., Coups, E., Egeth, J. D., Sewell, A., et al. (2001). Measures of ethnicity-related stress: Psychometric properties, ethnic group differences, and associations with well-being. *Journal of Applied Social Psychology, 31*, 1775–1820.
- Cox, N., Dewaele, A., Houtte, M. V., & Vincke, J. (2010). Stress-related growth, coming out, and internalized homonegativity in lesbian, gay, and bisexual youth. An examination of stress-related growth within the minority stress model. *Journal of Homosexuality, 58*(1), 117–137.
- Crawford, I., Allison, K. W., Zamboni, B. D., & Soto, T. (2002). The influence of dual-identity development on the psychosocial functioning of African-American gay and bisexual men. *Journal of Sex Research, 39*, 179–189.
- Crosby, R., Holtgrave, D. R., Stall, R., Peterson, J. L., & Shouse, L. (2007). Differences in HIV risk behaviors among black and white men who have sex with men. *Sexually Transmitted Diseases, 34*(10), 744–748.
- DeBlarere, C., Brewster, M. E., Sarkees, A., & Moradi, B. (2010). Conducting research with LGB people of color: Methodological challenges and strategies. *The Counseling Psychologist, 38*(3), 331–362.
- 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*, 509–525
- De Santis, J. P., & Vasquez, E. P. (2011). A pilot study to evaluate ethnic/racial differences in depressive symptoms, self-esteem, and sexual behaviors among men who have sex with men. *Journal of Gay & Lesbian Social Services, 23*, 147–164.
- Derogatis, L. R. (2000). *Brief symptom inventory 18*. Minneapolis: National Computer Systems, Inc.

- Diaz, R. M., Ayala, G., Bein, E., Henne, J., & Marin, B. V. (2001). The impact of homophobia, poverty, and racism on the mental health of gay and bisexual Latino men: Findings from 3 US cities. *American Journal of Public Health, 91*, 927–932.
- Diaz, R. M., Ayala, G., & Bein, E. (2004). Sexual risk as an outcome of social oppression: data from a probability sample of latino gay men in three U.S. cities. *Cultural Diversity and Ethnic Minority Psychology, 10*(3), 255–267.
- DiIorio, C., Parsons, M., Adame, D., Lehr, Carlone, J. (1992). Measurement of safer sex behavior in adolescents and young adults. *Nursing Research, 41*, 203–208.
- DiPlacido, J. (1998). Minority stress among lesbians, gay men, and bisexuals: A consequence of heterosexism, homophobia, and stigmatization. In G. M. Herek (Ed.), *Stigma and sexual orientation, Vol. 4: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 138–159). Thousand Oaks, CA: Sage.
- Dowshen, N., Forke, C. M., Johnson, A. K., Kuhns, L.M., Rubin, D., Garofalo, R. (2010). Religiosity as a protective factor against hiv risk among young transgender women. *Journal of Adolescent Health, 48*(4), 410–414.
- Dudley, M. G., Rostosky S. S., Korfhage, B. A., & Zimmerman, R. S. (2004). Correlates of high-risk sexual behavior among men who have sex with men. *AIDS Education and Prevention, 16*(4), 328-340.
- Dunn, M. S. (2005). The relationship between religiosity, employment, and political beliefs on substance use among high school seniors. *Journal of Alcohol and Drug Education, 49*(1), 73–88.
- D'Augelli, A. R. (1989). Lesbians' and gay men's experiences of discrimination and harassment in a university community. *American Journal of Community Psychology, 17*, 317–321.
- D'Augelli, A. R. (1996). Lesbian, gay, and bisexual development during adolescence and young adulthood. In R. P. Cabaj & T. S. Stein (Eds.), *Textbook of homosexuality and mental health* (pp. 267-288). Washington, DC: American Psychiatric Press.
- D'Augelli, A. R. (1998). Developmental implications of victimization of lesbian, gay, and bisexual youths. In G. M. Herek (Ed.), *Stigma and sexual orientation: Understanding prejudice against lesbians, gay men, and bisexuals* (pp. 187-210). Thousand Oaks, CA: Sage.
- Eliason, M. K., Burke, A., van Olphen, J., & Howell, R. (2011). Complex interactions of sexuality, sex/gender, and religious/spiritual identity on substance use among college students. *Sexuality Research & Social Policy: A Journal of the NSRC, 8*(2), 117–125.

- Ellison, C. W., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction? *Social Forces*, *68*, 100–123.
- Fabricatore, A. N., Handal, P. J., & Fenzel, L. M. (2000). Personal spirituality as a moderator of the relationship between stressors and subjective well-being. *Journal of Psychology and Theology*, *28*, 221–228.
- Fehring, R., Cheever, K., German, K., & Philpot, C. (1998). Religiosity and sexual activity among older adolescents. *Journal of Religion and Health*, *37*, 229–247.
- Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, *26*, 399–419.
- Finch, B., Catalano, R., Novaco, R., & Vega, W. (2003). Employment frustration and alcohol abuse/dependence among labor migrants in California. *Journal of Immigrant Health*, *5*(4), 181–186.
- Forthun L. F., Pidcock, B., W., & Fischer, J. L. (2003). Religiousness and disordered eating: Does religiousness modify family risk? *Eating Behaviors*, *4*, 7–26.
- Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, *51*(1), 115–134.
- Ferraro, K. F., & Farmer, M. M. (1996) Double jeopardy to health hypothesis for African Americans: Analysis and critique. *Journal of Health and Social Behavior*, *37*, 27-43.
- Frost, D. M., Meyer, I. H. (2009). Internalized homophobia and relationship quality among gay men, and bisexuals. *Journal of Counseling Psychology*, *56*(1), 97–109.
- Gallo, L. C., & Matthews, K. A. (2003). Understanding the association between socioeconomic status and physical health: do negative emotions play a role? *Psychological Bulletin*, *129*, 10–51.
- Garofalo, R., Mustanski, B., & Donenberg, G. (2008). Parents know and parents matter; is it time to develop family-based HIV prevention programs for young men who have sex with men? *Journal of Adolescent Health*, *43*(3), 201-204.
- Garofalo, R., Mustanski, B., Johnson, A., & Emerson, E. (2010). Exploring factors that underlie racial/ethnic disparities in HIV risk among young men who have sex with men. *Journal of Urban Health*, *86*(2), 3118-323.

- Garofalo, R., Mustanski, B., McKirnan, D. J., Herrick, A., & Donenberg, G. R. (2007). Methamphetamine and young men who have sex with men: Understanding patterns and correlates of use and the association with HIV-related sexual risk. *Archives of Pediatric and Adolescent Medicine, 161*, 591–596.
- Gilman, S. E., Cochran, S. D., Mays, V. M., Hughes, M., Ostrow, D., & Kessler, R. C. (2001). Risks of psychiatric disorders among individuals reporting same-sex sexual partners in the National Comorbidity Survey. *American Journal of Public Health, 91*, 933–939.
- Grunbaum, J. A., Kann, L., Kinchen, S. A., Williams, B., Ross, J. G., & Lowry, R. (2002). Youth risk behavior surveillance: United States, 2001. *Morbidity and Mortality Weekly Report Surveillance Summary, 51*(SS04), 1–64.
- Haglund, K. A., & Fehring, R. J. (2010). The association of religiosity, sexual education and parental factors with risky sexual behaviors among adolescents and young adults. *Journal of Religion and Health, 49*, 460–472.
- Hayes, J. A., Chun-Kennedy, C., Edens, A., & Locke, B. D. (2011). Do double minority students face double jeopardy? Testing minority stress theory. *Journal of College Counseling, 12*, 117-126.
- Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behavior Research Methods, 41*, 924-936.
- Hays, P. (2001). Addressing cultural complexities in practice: A framework for clinicians and counselors. Washington, DC: American Psychological Association.
- Halkitis, P. N., Zade, D. D., Shrem, M., & Marmor, M. (2004). Beliefs about HIV non-infection and risky sexual behavior among MSM. *AIDS Education & Prevention, 16*(5), 448–458.
- Hall H. I., Byers R. H., Ling Q., & Espinoza L. (2007). Racial/ethnic and age disparities in HIV prevalence and disease progression among men who have sex with men in the United States. *American Journal of Public Health, 86*, 245–252.
- Henderson, A. W., Lehavot, K., & Simoni, J. M. (2009). Ecological models of sexual satisfaction among lesbian/bisexual and heterosexual women. *Archives of Sexual Behavior, 38*, 50–65.
- Hequembourg, A. L., & Brallier, S. A. (2009). An Exploration of sexual minority stress across the lines of gender and sexual identity. *Journal of Homosexuality, 56*(3), 273–298.
- Herek, G. M. (1993). Documenting prejudice against lesbians and gay men on campus: The Yale sexual orientation survey. *Journal of Homosexuality, 25*, 15–30.

- Herek, G. M., Cogan, J. C., Gillis, J. R., & Glunt, E. K. (1997). Correlates of internalized homophobia in a community sample of lesbian and gay men. *Journal of the Gay and Lesbian Medical Association, 2*, 17–25.
- Herek, G. M., Gillis, J. R., & Cogan, J. C. (1999). Psychological sequelae of hate crime victimization among lesbian, gay, and bisexual adults. *Journal of Consulting and Clinical Psychology, 67*, 945–951.
- Hershberger, S. L., & D'Augelli, A. R. (1995). The impact of victimization on the mental health and suicidality of lesbian, gay, and bisexual youth. *Developmental Psychology, 31*, 65-74.
- Hill, P. C., & Hood, R. W., Jr. (1999). Affect, religion and unconscious processes. *Journal of Personality, 67*(6), 1015-1046.
- Holder, D., Durant, R., Harris, T., Daniel, J., Obeidallah, D., & Goodman, E. (2000). The association between adolescent spirituality and voluntary sexual activity. *The Journal of Adolescent Health, 26*, 295–302.
- Huang, Y., Brwester, M. E., Moradi, B., Goodman, M. B., Wiseman, M. C., & Martin, A. (2010). Content analysis of literature about LGB people of color: 1998–2007. *The Counseling Psychologist, 38*(3), 363–396.
- Irwin, T. W., & Morgenstern, J. (2005). Drug-use patterns among men who have sex with men presenting for alcohol treatment: differences in ethnic and sexual identity. *Journal of Urban Health, 82*, 127–133.
- Karlsen, S., & Nazroo, J. Y. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *American Journal of Public Health, 92*, 624–631.
- Kertzner, R. M., Meyer, I H., Frost, D. M., & Stirratt, M. J. (2009). Social and psychological well-being in lesbians, gay men, and bisexuals: the effects of race, gender, age and sexual identity. *American Journal of Orthopsychiatry, 79*(4), 500-510.
- Kessler, R. C., Berlund, P., Demler, O., Jin, R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62*(6), 593–602.
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., et al. (1994). Life time and 12-month prevalence of DSM-III-R psychiatric disorders in the United States. Results form the National Comorbidity Survey. *Archives of General Psychiatry, 51*(1), 8–19.
- Kipke, M. D., Weiss, G. Ramirez, M., Dorey, F., Ritt-Olson, A., Iverson, E., & Ford, W. (2007). Club drug use in Los Angeles among young men who have sex with men. *Substance Use & Misuse, 42*(11), 1723-1732.

- Kirby, D. (2002). Antecedents of adolescent initiation of sex, contraceptive use and pregnancy. *American Journal of Health Behavior*, 26, 473–485.
- Kotchick, B. A., Shaffer, A., Forehand, R., Miller, K. S. (2001). Adolescent sexual risk behavior: A multi-system perspective. *Clinical Psychology Review*. 21, 493–519.
- Kulis, S., Napoli, M., & Marsiglia, F. F. (2002). Ethnic pride, biculturalism, and drug use norms of urban American Indian adolescents. *Social Work Research*, 26, 101–112.
- Kuyper L, Vanwesenbeeck I. (2011). Examining sexual health differences between lesbian, gay, bisexual, and heterosexual adults: The role of sociodemographics, sexual behavior characteristics, and minority stress. *Journal of Sex Research*, 48, 263–274.
- Lammers, C., Ireland, M., Resnick, M., & Blum, R. (2000). Influences on adolescents' decision to postpone onset of sexual intercourse: A survival analysis of virginity among youths aged 13 to 18 years. *The Journal of Adolescent Health*, 26, 42–48.
- Landrine, H., & Klonoff, E. A. 1996. The schedule of racist events: A measure of racial discrimination and a study of its negative physical and mental health consequences. *Journal of Black Psychology*, 22, 144–168.
- Lazarus, R. S., (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Lease, S. H., Horne, S. G., & Noffsinger-Frazier, N. (2005). Affirming faith experiences and psychological health for Caucasian lesbian, gay, and bisexual individuals. *Journal of Counseling Psychology*, 52, 378–388.
- Lefkowitz, E., Gillen, M., Shearer, C., & Boone, T. (2004). Religiosity, sexual behavior, and sexual attitudes during emerging adulthood. *Journal of Sex Research*, 41, 150–159.
- Lemelle, A. J., & Battle, J. (2004). Black masculinity matters in attitudes toward gay males. *Journal of Homosexuality*, 47, 39–41.
- O'Donnell, L., Agronick, G., San Doval, A., Duran, R., Myint-U, A., & Stueve, A. (2002). Ethnic and gay community attachments and sexual risk behaviors among urban latino young men who have sex with men. *AIDS Education and Prevention*, 14(6), 457–471.
- Mackesy-Amiti, M. E., Fendrich, M., & Johnson, T. P. (2010) Symptoms of substance dependence and risky sexual behavior in a probability sample of hiv negative men who have sex with men in chicago. *Drug and Alcohol Dependence*, 110(1–2), 38–43.

- Marsiglia, F. F., Kulis, S., & Hecht, M. L. (2001). Ethnic labels and ethnic identity as predictors of drug use among middle school students in the southwest. *Journal of Research on Adolescence, 11*, 21–48.
- Marsiglia, F. F., Kulis, S., Hecht, M. L., & Sills, S. (2004). Ethnicity and ethnic identity as predictors of drug norms and drug use among preadolescents in the US southwest. *Substance Use & Misuse, 39*, 1061–1094.
- Martin, J., Tuch, S., & Roman, P. (2003). Problem drinking patterns among African-Americans: The impacts of reports of discrimination, perceptions of prejudice and “risky” coping strategies. *Journal of Health and Social Behavior, 44*(3), 408–425.
- McCree, D., Wingood, G., DiClemente, R., Davies, S., & Harrington, K. (2003). Religiosity and risky sexual behavior in African–American adolescent females. *The Journal of Adolescent Health, 33*, 2–8.
- McFarland, W., Chen, S., Weide, D., Kohn, R., & Klausner, J. (2004). Gay Asian men in San Francisco follow the international trend: Increases in rates of unprotected anal intercourse and sexually transmitted diseases, 1999–2002. *AIDS Education and Prevention, 16*(1), 13–18.
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*, 38–56.
- Meyer, I. H. (2003). Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. *Psychological Bulletin, 129*(5), 674–697.
- Meyer, I. H. (2010). Identity, stress, and resilience in lesbians, gay men, and bisexuals of color. *The Counseling Psychologist, 38*(3), 442–454.
- Meyer, I. and Dean, L. (1998) Internalized homophobia, intimacy and sexual behaviour among gay and bisexual men. In Herek, G. (ed.), *Stigma and Sexual Orientation*. Sage, Thousand Oaks, CA, pp. 160–186.
- Meyer, I. H., Dietrich, J., & Schwartz, S. (2008). Lifetime prevalence of mental disorders and suicide attempts in diverse lesbian, gay, and bisexual populations. *American Journal of Public Health, 98*, 1004–1006.
- Meyer, I. H., Schwartz, S., & Frost, D. M. (2008). Social patterning of stress and coping: Does disadvantaged social statuses confer more stress and fewer coping resources? *Social Science and Medicine, 67*, 368–379.
- Miller, R. L. (2005). An appointment with God: AIDS, place, and spirituality. *Journal of Sex Research, 42*, 35–45.

- Millett, G., Flores, S. A., Peterson, J. L., & Bakeman, R. (2007). Explaining disparities in HIV infection among Black and White men who have sex with men: A meta-analysis of HIV risk behaviors. *Journal of the International AIDS Society, 21*(15), 2083–2091.
- Mirowsky, J., & Ross, C. E. (1989). Minority status, ethnic culture, and distress: A comparison of Blacks, Whites, Mexicans, and Mexican Americans. *American Journal of Sociology, 86*, 479–495.
- Moradi, B., DeBlaere, C., & Huang, Y. P. (2010). Centralizing the experiences of LGB people of color in counseling psychology. *The Counseling Psychologist, 38*, 322–330.
- Moradi, B., Wiseman, M. C., DeBlaere, C., Goodman, M. B., Sarkees, A., Brewster, M. E., & Huang, Y-P. (2010). LGB of color and White individuals' perceptions of heterosexist stigma, internalized homophobia, and outness: Comparisons of levels and links. *The Counseling Psychologist, 38*, 397-424.
- Mossakowski, K. N. (2003). Coping with perceived discrimination: Does ethnic identity protect mental health? *J Health Soc Behav, 44*(3), 318–331.
- Mustanski, B., Garofalo, R., Herrick, A., & Donenberg, G. (2007). Psychosocial health problems increase risk for hiv among urban young men who have sex with men: Preliminary evidence of a syndemic in need of attention. *Annals of Behavioral Medicine, 34*(1), 37–45.
- National Congregations Study. (2012). *American congregations at the beginning of the 21st century*. Retrieved from http://www.soc.duke.edu/natcong/Docs/NCSII_report_final.pdf
- National Institutes of Health. (2000). *The health of the nation: Highlights of the Healthy People 2000 goals. 1995 report on progress*. Washington, DC: Author. Retrieved from odphp.osophs.dhhs.gov/pubs/hp2000/pdf/midcours/midcours/midrvwl.pdf
- Neblett, E. W., Jr., Rivas-Drake, D., & Umaña-Taylor, A. J. (2012). The promise of racial and ethnic protective factors in promoting ethnic minority youth development. *Child Development Perspectives, 6*(3), 295–303.
- Nonnemaker, J., McNeely, C., & Blum, R. (2003). Public and private domains of religiosity and adolescent health risk behaviors: Evidence from the National Longitudinal Study of Adolescent Health. *Social Science & Medicine, 57*, 2049–2054.
- Nungesser, L. G. (1983). *Homosexual acts, actors and identities*. New York: Praeger.
- Okamoto, J., Ritt-Olson, A., Soto, D., Baezconde-Garbanati, L., & Unger, J. (2009). Perceived discrimination and substance use among latino adolescents. *American Journal of Health Behavior, 33*(6), 718–727.

- Oparanozie, A., Sales, J. M., DiClemente, R. J., & Braxton, N. D. (2012). *Journal of Black Psychology*, 38(1), 32–51.
- Pachankis, J. E., & Goldfried, M. R. (2004). Clinical issues in working with lesbian, gay, and bisexual clients. *Psychotherapy: Research, Practice, and Training*, 41, 227–246.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *Int. J. Epidemiology*, 35, 888–901.
- Patterson, D. A., Wolf, S., Hall, M., & Golder, S. (2009). Beliefs and behaviors regarding substance use and HIV risk among men who have sex with men (MSM) in a mid-sized U.S. community. *Journal of HIV/ AIDS & Social Services*, 8, 188–201.
- Phinney, J. S. (1990). Ethnic identity in adolescents and adults: A review of research. *Psychological Bulletin*, 108, 499–514.
- Phinney, J. S. (1992). The Multigroup Ethnic Identity Measure: A new scale for use with diverse groups. *Journal of Adolescent Research*, 7, 156–176.
- Phinney, J. S., Cantu, C. L., & Kurtz, D. A. (1997). Ethnic and American identity as predictors of self-esteem among African American, Latino, and White adolescents. *Journal of Youth and Adolescence*, 26, 165–185.
- Powell, L. H., Shahabi, L., & Thoresen, C. E. (2003). Religion and spirituality: Linkages to physical health. *American Psychologist*, 58, 36–52.
- Pugh, L. A., & Bry, B. H. (2007). The protective effects of ethnic identity for alcohol and marijuana use among Black young adults. *Cultural Diversity & Ethnic Minority Psychology*, 13, 187–193.
- Ramirez-Valles, J., Garcia, D., Campbell, R.T., et al. (2008). HIV infection, sexual risk behavior, and substance use among Latino gay and bisexual men and transgender persons. *American Journal of Public Health*, 98(6), 1036–1042.
- Ream, G. L. & Savin-Williams, R. C. (2005). Reconciling Christianity and positive non-heterosexual identity in adolescence, with implication for psychological well-being. *Journal of Gay & Lesbian Issues in Education*, 2(3), 19-36.
- Rhodes, S. D., Yee, L. J., & Hergenrather, K. C. (2006). A community-based rapid assessment of HIV behavioural risk disparities within a large sample of gay men in southeastern USA: A comparison of African American, Latino, and White men. *AIDS Care*, 18(8), 1018–1024.
- Ritter, K. Y., & O'Neill, C. W. (1989). Moving through loss: The spiritual journey of gay men and lesbian women. *Journal of Counseling and Development*, 68, 9–14.

- Roberts, M., Gibbons, F. X., Gerrard, M., Weng, C., Murry, V. M., Simons, L. G., Simons, R. L., & Lorenz, F. O. (2012). From racial discrimination to risky sex: Prospective relations involving peers and parents. *Developmental Psychology, 48*, 89–102.
- Rodriguez, N., Myers, H. F., Morris, J. K., & Cardoza, D. (2000). Latino college student adjustment: Does an increased presence offset minority-status and acculturative stresses? *Journal of Applied Social Psychology, 30*, 1523–1550.
- Rodriguez, E. M., & Ouellette, S. C. (2000). Gay and lesbian Christians: Homosexual and religious identity integration in the members and participants of gay-positive church. *Journal for the Scientific Study of Religion, 39*, 333-347.
- Rosario, M., Hunter, J., Manguen, S., Gwadz, M., & Smith, R. (2001). The coming-out process and its adaptational and health-related associations among gay, lesbian, and bisexual youths: stipulation and exploration of model. *American Journal of Community Psychology, 29(1)*, 133-160.
- Rosario, M., Yali, A. M., Hunter, J., & Gwadz, M. V. (2006). Religion and health among lesbian, gay, and bisexual youths: An empirical investigation and theoretical explanation. In A. M. Omatto & H. S. Kurtzman (Eds.), *Sexual orientation and mental health: Examining identity and development in lesbian, gay and bisexual people* (pp. 117-140). Washington, DC: American Psychological Association.
- Rosario, M., Schrimshaw, E. W., & Hunter J. (2004). Ethnic/racial differences in the coming-out process of lesbian, gay, and bisexual youths: a comparison of sexual identity development over time. *Cultural Diversity Ethnic Minority Psychology, 10(3)*, 215-228.
- Rostosky, S. S., Danner, F., & Riggle, E. D. (2007). Is religiosity a protective factor against substance use in young adulthood? Only if you're straight!. *Journal of Adolescent Health, 40(5)*, 440-447.
- Rostosky, S. S., Regnerus, M. D., & Wright, M. L. C. (2003). Coital debut: The role of religiosity and sex attitudes in the Add Health Survey. *Journal of Sex Research, 40(4)*, 358-367.
- Rostosky, S. S., Wilcox, B. L., Wright, M. L. C., & Randall, B. A. (2004). The impact of religiosity on adolescent sexual behavior: A review of the evidence. *Journal of Adolescent Research, 19(6)*, 677-697.
- Safren, A. S., & Blashill, A. J. (2011). Promoting the sexual health of MSM in the context of comorbid mental health problems. *AIDS and Behavior, 15*, 30–34.
- Sayette, M. (1999). Does drinking reduce stress? *Alcohol research and health, 23(4)*, 250– 255.

- Schuck, K. D. & Liddle B. J. (2001). Religious conflicts experienced by lesbian, gay, and bisexual individuals. *Journal of Gay Lesbian Psychotherapy*, 5, 63-82.
- Sellers, R. M., Caldwell, C. H., Schmeelk-Cone, K. H., & Zimmerman, M. A. (2003). Racial identity, racial discrimination, perceived stress, and psychological distress among African American young adults. *Journal of Health and Social Behavior*, 44, 302–317.
- Sellers, R. M., Rowley, S. A. J., Chavous, T. M., Shelton, J. N., & Smith, M. A. (1997). Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology*, 73, 805–815.
- Shilo, G. & Savaya, R. (2012). Mental health of lesbian, gay, and bisexual youth and young adults: Differential effects of age, gender, religiosity, and sexual orientation. *Journal of Research on Adolescence*, 22(2) 310-325.
- Shoptaw, S., Reback, C. J., & Freese, T. E. (2002). Patient characteristics, HIV serostatus, and risk behaviors among gay and bisexual males seeking for methamphetamine abuse and dependence in Los Angeles. *Journal of Addictive Diseases*, 21(1), 91–106.
- Shoptaw, S., Weiss, R. E., Munjas, B., Hucks-Ortiz, C., Young, S. D., Sherry, L., Gregory, D. V., & Gorbach, P. M. (2009). Homonegativity, substance use, sexual risk behaviors, and HIV status in poor and ethnic men who have sex with men in Los Angeles. *Journal of Urban Health*, 86(1), 77–92.
- Siegel, K., Anderman, S. J., & Scrimshaw, E. W. (2001). Religion and coping with health-related stress. *Psychology and Health*, 16, 631–653.
- Smedley, B. D., Myers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshman. *Journal of Higher Education*, 64, 434-452.
- Smith, T. B., & Silva, L. (2011). Ethnic identity and personal well-being of people of color: a meta-analysis. *Journal of Counseling Psychology*, 58(1), 42.
- Stata Data Analysis Examples: Negative Binomial Regression. UCLA: Statistical Consulting Group. from <http://www.ats.ucla.edu/stat/stata/dae/nbreg.htm> (accessed February 20, 2014)
- Stevens-Watkins, D., Brown-Wright, L, & Tyler, K. (2011). Brief report: The number of sexual partners and race-related stress in African American adolescents: Preliminary findings. *Journal of Adolescence*, 34(1), 191–194.
- Stole, I. G., & Coutinho, R. A. (2002). Risk behavior and STD are on the risk in gay men, but what is happening with HIV? *Current Options in Infectious Diseases*, 15(1), 37-41.

- SPSS Inc. (2012). SPSS Base 20.0 for Macintosh User's Guide. SPSS Inc., Chicago IL.
- Substance Abuse and Mental Health Services Administration. (2007). *National survey on drug use & health*. Rockville, MD: Author: Retrieved from [http://oas.samhsa.gov/NSDUH/2k7NSDUH/tabs/Sect2peTabs1to42.htm# Tab2.37A](http://oas.samhsa.gov/NSDUH/2k7NSDUH/tabs/Sect2peTabs1to42.htm#Tab2.37A)
- Sue, D.W., Arredondo, P., & McDavis, R.J. (1992). Multicultural counseling competencies and standards: A call to the profession. *Journal of Counseling and Development*, 70, 477-486.
- Sue, S., & Chu, J. Y. (2003). The mental health of ethnic minority groups: Challenges posed by the supplement to the surgeon general's report on mental health. *Culture, Medicine, and Psychiatry*, 27(4), 447-465.
- U.S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General*. Rockville, MD: Author.
- U.S. Department of Health and Human Services. (2001). *Youth violence: A report of the Surgeon General*. Rockville, MD: Author.
- Van Ryzin, M. J., Johnson, A. B., Leve, L. D., & Kim, H. K. (2011). The number of sexual partners and health-risking sexual behavior: Prediction from high school entry to high school exit. *Archives of sexual behavior*, 40(5), 939-949.
- Wagner G., Serafini J., Rabkin J., et al. (1994). Integration of one's religion and homosexuality: A weapon against internalized homophobia? *Journal of Homosexuality*, 26, 91-110.
- Walkup, J., Blank, M. B., Gonzalez, J. S., Safren, S., Schwartz, R., Brown, L., Wilson, I., Knowlton, A., Lombard, F., Grossman, C., Lyda, K., & Schumacher J. (2008). The impact of mental health and substance abuse factors on HIV prevention and treatment. *J Acquired Immune Deficiency Syndrome*, 47(1), 25-29.
- Warren, J. C., Fernandez, M. I., Harper, G. W., Hidalgo, M. A., Jamil, O. B., & Torrez, R. S. (2008). Predictors of unprotected sex among young sexually active African American, Hispanic, and White MSM: The importance of ethnicity and culture. *AIDS and Behavior*, 12(3), 459-468.
- Wells, B., Golub, S., & Parsons, J. (2011). Integrated theoretical approach to substance use and risky sexual behavior among men who have sex with men. *AIDS and Behavior*, 15(3), 509-520.
- Williams, D. R., Yu, Y., Jackson, J. S., & Anderson, B. B. (1997). Racial differences in physical mental health: Socioeconomic status, stress and discrimination. *Journal of Health Psychology* 2(3), 335-351.

- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine, 32*, 20–47.
- Williams, D. R., & Williams-Morris, R. (2000). Racism and mental health: The African American experience. *Ethnicity & Health, 5*, 243–268.
- Williams, D. R., Neighbors, H. W., Jackson, J. S., 2003. Racial/ethnic discrimination and health: findings from community studies. *American Journal of Public Health, 93*, 200–208.
- Williamson, I. R. (2000). Internalized homophobia and health issues affecting lesbians and gay men. *Health education research, 15*(1), 97-107.
- Wills, T. A., & Shiffman, S. (1985). Coping behavior and its relation to substance use: A conceptual framework. In S. Shiffman and T. A. Wills (Eds.), *Coping and substance use*. New York: Academic Press.
- Wills, T. A., Yaeger, A. M., & Sandy, J. M. (2003). Buffering effect of religiosity for adolescent substance use. *Psychology of Addictive Behaviors, 17*, 24–31.
- Wilson, B. D. M., & Miller, R. L. (2002). Strategies for managing heterosexism used among African-American gay and bisexual men. *Journal of Black Psychology, 28*, 371–391.
- Wolitski, R. J., Jones, K. T., Wasserman, J. L., & Smith, J. C. (2006). Self-identification as “down low” among men who have sex with men (MSM) from 12 US cities, *AIDS and Behavior, 10*, 519-529.
- Woods, T. E., Antoni, M. H., Ironson, G. H., & Kling, D. W. (1999). Religiosity is associated with affective and immune status in symptomatic HIV-infected gay men. *Journal of Psychosomatic Research, 46*, 165–176.
- Xia, Q., Osmond, D. H., Tholandi, M., Pollack, L. M., Zhou, W., Ruiz, J., & Catania, J. A. (2006). HIV prevalence and sexual risk behaviors among men who have sex with men: Results from a statewide population-based survey in California. *Journal of Acquired Immune Deficiency Syndromes, 41*(2), 238–245.
- Yip, T., Gee, G. C., & Takeuchi, D. T. (2008). Racial discrimination and psychological distress: The impact of ethnic identity and age among immigrant and United States-born Asian adults. *Developmental Psychology, 44*, 787–800.
- Zea, M. C., Reisen, C. A., Poppen, P. J., Bianchi, F. T., & Echeverry, J. J. (2007). Predictors of disclosure of human immunovirus-positive serostatus among Latino gay men. *Cultural Diversity and Ethnic Minority Psychology, 13*(4), 304-312.