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HETEROSEXISM, MENTAL HEALTH, AND SUICIDE: INVESTIGATING THE  
MODERATING ROLE OF COPING IN SEXUAL MINORITY MEN

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science  
at Virginia Commonwealth University

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## **Abstract**

### **HETEROSEXISM, MENTAL HEALTH, AND SUICIDE: INVESTIGATING THE MODERATING ROLE OF COPING IN SEXUAL MINORITY MEN**

By Michael Anthony Trujillo

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science  
at Virginia Commonwealth University

Virginia Commonwealth University, 2015

Major Direction: Paul B. Perrin  
Assistant Professor  
Department of Psychology

This cross-sectional study examined if heterosexist experiences (harassment/rejection, workplace/school discrimination, other) were associated with suicidality (suicidal ideation, suicide attempts) and symptoms of anxiety/depression, and if symptoms of anxiety/depression were associated with suicidality in a national sample of sexual minority men (SMM;  $N = 89$ ). The study also examined if depression mediated the relationship between heterosexist events and suicidal ideation and whether active and disengaged coping styles moderated this relationship. All associations were significant and positive, with harassment/rejection and symptoms of depression generally independently associated with outcome variables. Symptoms of depression were a significant mediator of the harassment/rejection-suicidal ideation relationship; however, neither disengaged nor active coping moderated the mediation. Clinical research could focus on

reducing symptoms of depression associated with heterosexist events in order to influence suicidal ideation in SMM. Other implications are discussed.

## Heterosexism, Mental Health, and Suicide:

### Investigating the Moderating Role of Coping in Sexual Minority Men

#### **Suicide Epidemiology**

Self-directed violence (SDV; analogous to self-injurious behavior), defined as self-directed behavior that purposely results in injury or the potential for injury to oneself (Crosby, Ortega, & Melanson, 2011), is an important cause of morbidity and mortality in the United States. SDV encompasses a range of violent behaviors including suicide (death caused by self-injurious behavior with the intent to die from such behavior) and suicide attempts (non-fatal potentially self-injurious behaviors with an intent to die from such behaviors; Crosby, et al., 2011). Though not a behavior, suicidal ideation as active (a wish to die with a specific plan for how to carry out the death) or passive (a desire to die but without a specific plan for how to carry out the death) is especially important as suicidal ideation in general is a marker for future suicide attempts (Beck, Kovacs, & Weissman, 1979).

Suicidal behavior (i.e., suicide and suicide attempts) is a serious public health concern that can have a lasting effect on individuals, families, and communities. According to the Centers for Disease Control and Prevention (CDC), suicide deaths in the United States accounted for a total of 40,600 deaths and was the tenth leading cause of death among all age groups in 2012 (CDC, 2014). In the U.S., 1 person dies every 13 minutes from suicide (U.S. Department of Health and Human Services, 2012). Among young people, suicide ranked as the second leading cause of death among those aged 15-34 in 2012, has consistently ranked as the second or third leading cause of death among this population (CDC, 2014), and it is the second leading cause of death for those between the ages of 15 and 29 worldwide (World Health Organization, 2014).

The effects of suicide are far reaching and can have a significant impact on society. For instance, the National Center for Injury Prevention and Control (2014) estimates that in the United States, the combined medical and work loss costs associated with suicide deaths of people aged 10 and older reached upwards of \$44 billion in 2010 (expressed as U.S. prices in that year). In fact, suicide deaths accounted for more than 1.1 million years of potential life lost before the age of 75 in 2010 (CDC, 2014)—for reference, the average life expectancy in that year was 78.7 (Arias, 2014). Though there are no accurate counts of those who attempt suicide in the United States, the CDC identified that more than 490,000 people visited a hospital for self-harm related injuries in 2013 (American Foundation for Suicide Prevention, 2014). Given that many suicide attempts go unreported or untreated, it is suggested that at least 1,000,000 people each year engage in intentionally inflicted self-harm (American Foundation for Suicide Prevention, 2014).

### **Sexual Minority Men as an At-Risk Population**

One particular subset of the population that is especially at risk for suicide-related morbidity is gay, bisexual, and queer male adolescents and men. The findings of numerous studies have generally documented a higher risk for suicidal ideation (Bagley & Tremblay, 1997; Fergusson, Horwood, Ridder, & Beautrais, 2005; Herrell et al., 1999; Hill & Pettit, 2012; Remafedi, French, Story, Resnick, & Blum, 1998; Russell & Joyner, 2001), suicide attempts (Botnick et al., 2002; Cochran & Mays, 2000; Fergusson et al., 2005; Garofalo, Wolf, Wissow, Woods, & Goodman, 1999; Garcia, Adams, Friedman, & East, 2002; Gilman et al., 2001; King et al., 2008; Remafedi et al., 1998) and suicide deaths (Qin, Agerbo, & Mortensen, 2003) among sexual minority men (SMM) when compared to their heterosexual counterparts.

For roughly the past two decades, population-based surveys of U.S. young adults have consistently found higher rates of suicidal behavior in individuals identifying as a sexual minority than heterosexuals (Haas et al., 2011). A meta-analysis of adolescent studies (Marshall et al., 2011) determined that lesbian, gay, and bisexual (LGB) young adults were three times more likely than their heterosexual peers to endorse a lifetime suicide attempt and were four times more likely to make a medically serious attempt. Data from the National Comorbidity Survey indicates that for U.S. adults ages 15-54, the lifetime prevalence of suicidal ideation is 13.5 and for suicide attempts it is 4.6 (Kessler et al., 1999). When examined more closely, gender-specific analyses have found sexual orientation to be a stronger independent predictor of suicide attempts in male adolescents in comparison to female adolescents (Garofalo et al., 1999), which is generally consistent with other work examining elevated rates of suicide attempts in sexual minority young adults from studies utilizing probabilistic and convenience samples (Kulkin, Chauvin, & Percle, 2000; McDaniel, Purcell, & D'Augelli, 2001).

Across many different studies, a strong and consistent relationship between sexual orientation and suicidality has been observed (Mathy, 2002). Sexual minority adults are also more likely to report greater likelihood of suicidal ideation than the heterosexual adult population, 25.3% versus 13.7% of the sample respectively (Mathy, 2002). A meta-analysis of 25 international population-based studies that examined suicidal behavior and SDV in LGB adolescents and/or young adults largely concluded that gay/bisexual male adolescents and young men have a higher lifetime prevalence of suicide attempts than heterosexuals in the same age range (King et al., 2008). In the meta-analysis, gay and bisexual men had a 138% increase in risk for the prevalence of suicide attempts in the past 12 months and were roughly 2.4 times more likely to have attempted suicide in their lifetime than heterosexual men. In a male co-twin study

consisting of multiple pairs of twins whereby one twin was homosexual and one heterosexual, the homosexual twins were more likely than their heterosexual twin brothers to report that they had had thoughts about death, wanted to die, had thoughts about suicide, and attempted suicide (Herrell et al., 1999). All differences remained significant except for wanting to die even after adjusting for substance use and depression.

Most studies have found suicide attempt rates to generally be higher in gay/bisexual men than in lesbian/bisexual women, which is the opposite for what has been found in the general population in which women are more likely to attempt than men (Mathy et al., 2011). Further examination has identified the existence of a gender pattern such that risk for suicidal ideation tends to be higher for lesbian/bisexual women, while risk for suicide attempts is higher among gay/bisexual men (Haas et al., 2011). One U.S. survey found a higher rate of reported suicidal ideation for lesbian/bisexual women when compared to their heterosexual counterparts but no differences in rates for gay/bisexual men when compared to heterosexual men (Gilman et al., 2001). When examining prevalence of suicide attempts over the lifespan of SMM, studies have offered conflicting evidence with some indicating a decrease (Russell & Toomey, 2012) or increase (Meyer, Dietrich, & Schwartz, 2008) with increasing age. However, patterns of suicide attempts across the lifespan of sexual minorities have not been conclusively studied.

Determination of suicide deaths in SMM has routinely been more difficult for a number of reasons. The lack of information regarding sexual orientation and gender identity on death certificates has made determining rates of death by suicide in SMM difficult (U.S. Department of Health and Human Services, 2012). While some studies have attempted to identify whether nonheterosexuals are overrepresented among those who die by suicide through “psychological autopsy” (using reports from the deceased’s family and friends to determine sexual orientation),

many have focused on specific regions of the country, specific genders, used relatively small sample sizes, lacked control groups, or utilized an overrepresented prevalence of gay or bisexual individuals in the population (Haas et al., 2011). Thus, all of these barriers have made establishing precise estimates of death by suicide challenging. However, one study used Denmark's extensive registries of socioeconomic data to assess whether people in same-sex domestic partnerships (a proxy measure for sexual orientation) were overrepresented in those who died by suicide. In that study, Qin and colleagues (2003) determined that same-sex registered domestic partners were 3-4 times more likely to die by suicide than heterosexual married people; however, given that this was not a key focus, additional data on breakdown by gender was not provided. A limitation of the approach used in this study is that it only captures LGB individuals in officially recognized partnerships, thus limiting the generalizability of the results and potentially underestimating the increased risk of suicide in LGB individuals.

### **Minority Stress**

Suicidality among sexual minorities is undoubtedly related to a variety of factors; however, many researchers have generally preferred explanations that center on the basic tenet that sexual minorities are particularly susceptible to *minority stress* (Meyer, 1995, 2003). Stress can be described as “any condition having the potential to arouse the adaptive machinery of the individual” (Perlin, 1999, p. 163), which is associated with the development of physical or mental illness in individuals who exceed their capacity to tolerate such conditions or events. In general, this reflects the phenomenological meaning of stress as the physical, mental, or emotional pressure, strain or tension (Meyer, 2003).

Minority stress is distinguished from general conceptualizations of stress by defining minority stress as the *excess* stress that individuals from stigmatized social groups are exposed to

as a result of their social, often minority, position (Meyer, 1995). When examined further, minority stress is (a) unique, such that it is in addition to general stressors that are experienced by all people, and thus stigmatized people require further adaptation efforts than those who are not stigmatized; (b) chronic, such that it persists and is relatively stable to the underlying social and cultural structures; and (c) socially based, in that it stems from social processes, institutions, and structures that are greater than the individual as opposed to the individual events or conditions that are characteristic of general stressors (Meyer, 2003). Thus, conditions in the social environment, and not solely personal circumstances, are sources of stress that can lead to mental and physical problems for people belonging to stigmatized social groups such as sexual minorities.

According to Meyer (2003), minority stress can best be conceptualized through a distal-proximal distinction that identifies external social conditions as distal stressors which only become important once it is manifested in the individual as relevant or important. Distal stressors, such as social structures or attitudes, become proximal stressors only after cognitive appraisal occurs identifying the structure or attitude as important which is then manifested into thoughts, feelings, and actions. Distal stressors are objective measures that do not depend on an individual's perceptions of appraisals and can be seen as independent of personal identification of minority status (Diamond, 2000). Therefore, if an individual is perceived as being of minority status, the individual may suffer from distal stressors associated with that minority status, for example, anti-gay violence or employment discrimination. In contrast, proximal stress processes are more subjective and are therefore related to self-identity as lesbian, gay, bisexual, or queer. These identities are likely to vary in meaning and subsequently in the resulting stress associated with it. For sexual minorities, minority identity is linked to a number of stress processes



including experiences of rejection, concealment of their identity for fear of harm, or internalized stigma (internalized heterosexism; Meyer, 2003).

### **Heterosexist Experiences and Suicidality**

Sexual minorities experience heterosexism which is manifested both at the institutional and individual level. Heterosexism is defined as “a cultural ideology embodied in institutional practices that work to the disadvantage of sexual minority groups even in the absence of individual prejudice or discrimination” (Herek, 2007, p. 907). Heterosexism endorses the inferior status of sexual minorities relative to heterosexuals and promotes a heterosexual assumption (i.e., that all people are assumed to be heterosexual) that engenders LGB people as invisible to society. This form of sexual stigma exacerbates the “problem” of nonheterosexuals when they become visible. In a heterosexist society, nonheterosexuals, homosexual behavior, and same-sex relationships are considered unnatural and are regarded as inferior. Thus, anyone who does not identify or is not perceived as heterosexual can be subjected to heterosexism and become targets for harassment, differential treatment, and discrimination (Herek, 1990). Despite the increasing recognition and acceptance of sexual minorities to date, heterosexism remains pervasive.

Numerous studies have sought to identify the prevalence rates of anti-gay harassment and discrimination among this population. Herek and colleagues (1999) sampled 2,259 gay and lesbian adults from California and found that of the 1,089 men surveyed, 28% reported some form of violence or other criminal activity directed at them because of their sexual orientation over the course of their lifetime. In a separate survey conducted in three major U.S. cities, 10% of the 912 gay and bisexual Latino men reported anti-gay violence and 15-50% reported other forms of anti-gay discrimination and harassment in their adult lives, such as being made fun of as adult and/or subjected to job discrimination (Díaz, Ayala, Bein, Henne, & Marin, 2001).

Similarly, in a sample of 1,248 young gay and bisexual men recruited across three U.S. cities, 37% reported experiencing verbal harassment during the preceding 6 months because of their sexual orientation, 11.2% reported anti-gay discrimination (e.g., in employment, insurance, or housing), and 4.8% reported physical violence due to their sexual orientation (Huebner, Rebchook, & Kegeles, 2004). However, a more recent survey examining hate crimes and stigma-related experiences was conducted as part of a greater U.S. national probability sample of LGB adults in 2009. Of the 400 gay and bisexual men surveyed, 54% reported experiencing verbal abuse, 31.5% experienced violence, property crime, or attempted crime, 29% were threatened with violence, and 12% reported experiencing job or housing discrimination because of their sexual orientation (Herek, 2009). When examining victimization experiences overall, a recent meta-analysis of 386 studies and 500,000 participants between 1992 and 2000 found that 55% and 41% of LGB individuals reported experiencing anti-gay verbal harassment and discrimination, respectively, with higher rates found for male versus female samples (Katz-Wise & Hyde, 2012).

Over the past decade, there has been a general consensus among researchers that part of the explanation for the elevated rates of suicide attempts and ideation among SMM is because of experiences or expectations of anti-gay prejudice, harassment, physical violence, discrimination, or family rejection (D'Augelli et al., 2005; D'Augelli, Hershberger, & Pilkington, 2001; De Graaf, Sandfort, & Ten Have, 2006; King et al., 2008; Lea, de Wit, & Reynolds, 2014; Ryan, Huebner, Díaz, & Sanchez, 2009). With respect to victimization experiences, Garofalo and colleagues (1999) surveyed male adolescents who identified as gay, bisexual, or not sure of their sexuality and found that they were significantly more likely to report a suicide attempt in the past year if they experienced anti-gay violence or victimization. A study by Huebner et al. (2004),

found that SMM were 2 times more likely to report suicidal ideation if they had experienced anti-gay physical violence or anti-gay discrimination. Similarly, in a survey of gay and bisexual men across four metropolitan U.S. cities, men who were exposed to repeated anti-gay harassment (including being called names; repeatedly harassed meaning four or more times) before the age of 17 were almost 200% more likely to attempt suicide before the age of 25 (Paul et al., 2002). Such anti-gay verbal abuse has historically been used by oppressors to remind the oppressed of their subordinate status, and as such anti-gay verbal abuse constitutes a symbolic form of violence and a routine reminder of the threat of physical assault (Garnets, Herek, & Levy, 1990).

Anti-gay discrimination has also been found to be related to increased suicidal behavior among this population, as noted above. A survey of 986 gay and bisexual men found that more frequent experiences of stigmatizing or discriminatory events (e.g., being treated unfairly by an employer because of sexual orientation) predicted greater suicidal ideation in the previous 2 weeks among sexual minority men, even after accounting for outness, age, education, income, ethnicity, and HIV status (McGarrity, Huebner, & McKinnon, 2013). Comparably, a community-based participatory research project (Irwin, Coleman, Fisher, & Marasco, 2014) was conducted with 770 LGBT individuals from Nebraska that examined various correlates of suicidal ideation, including perceived discrimination (e.g., being threatened with violence, chased or followed, unfair treatment by employers) and perceived violence (e.g., been physically attacked, robbed or mugged, raped or sexually assaulted) because of sexual minority status. Results of this study identified that suicidal ideation was strongly associated with greater perceived discrimination and violence with perceived discrimination serving as a unique predictor of suicidal ideation. Similarly, population-based research from the Netherlands found an association between

perceived anti-gay discrimination and greater death wishes, suicidal contemplation, as well as a composite measure of suicidality among SMM (De Graaf et al., 2006).

Family rejection as a result of sexual orientation can also be a very serious concern for many SMM, which has been known to have an impact on suicidality. A study on family rejection among White and Latino LGB young adults aged 21-25 (Ryan et al., 2009) found that those who experienced greater family rejection due to sexual orientation were upwards of 8 times more likely to attempt suicide and more than 5 times more likely to have thoughts of suicide than those with families of LGB adults who were more accepting. Latino men in this study reported experiencing the greatest family rejection and were significantly more likely than Latina women and White respondents to report suicidal ideation in the previous 6 months. By extension, Ryan and colleagues (2010) in a follow-up study discovered that low family acceptance among sexual minority young adults was associated with greater suicidal ideation and suicide attempts. Surprisingly, participants who identified as “queer” rather than lesbian, gay, or bisexual were twice as likely to report lifetime suicide attempts suggesting that a “queer” identity may be a strong risk factor.

### **Heterosexist Experiences and Mental Health**

It is evident that many SMM are subjected to extensive heterosexist experiences, with many studies indicating that they are more likely to be exposed to higher levels of unpredictable and episodic stress than heterosexual people because of the stigmatization of homosexuality (Meyer, 2003) and that these experiences are associated with suicidality. By extension, heterosexist experiences have also been shown to be related to sexual minority psychological distress (Berrill, 1990; Díaz et al., 2001; Lea et al., 2014; Mays & Cochran, 2001; Meyer, 1995; Otis & Skinner, 1996). Institutional discrimination, such as living in states with policies that

restrict same sex marriage, while not a primary focus of this manuscript, has been shown to be related to greater odds of mental health problems (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Within the context of the minority stress model, stigma, prejudice, and discrimination help to create a stressful environment which causes mental health problems (Mays & Cochran, 2001; Meyer, 2003); thus, experiences of sexual minority victimization is likely to be associated with poorer mental health in SMM.

One of the most psychologically distressing forms of sexual minority victimization is that of anti-gay violence. While being the target of any violent crime is significantly distressful, those who are victims of anti-gay violence are at increased risk for psychological distress. According to Herek and colleagues (1999), lesbians and gay men who were the target of an anti-gay crime in the previous 5 years exhibited greater psychological distress (e.g., depression, traumatic stress, anxiety) than those who were targets of nonbiased crimes or no crimes at all, indicating that anti-gay violence is especially distressing for sexual minorities. When this was examined in men who have sex with men, Mills et al. (2004) found that men who experienced multiple episodes of anti-gay violence in the previous 5 years had greater distress and depression than those who experienced less than two episodes of such violence. Similarly, gay men who reported experiencing anti-gay violence or discrimination in the year prior to the survey were significantly more likely to have experienced anxiety, and feelings of sadness, dread, and helplessness among others (Meyer, 1995).

Similarly, SMM who experience anti-gay discrimination also exhibit poor mental health. Among men who identified as gay, bisexual, or had had sexual contact with a man in the prior year, McGarrity and colleagues (2013) found that those who experienced more personal discrimination in the previous year (e.g., being treated unfairly by an employer because of sexual

orientation) reported greater depressive symptoms. Experiences of perceived anti-gay discrimination were also associated with greater symptoms of mental distress (e.g., anxiety and depression) in sample of Latino SMM (Díaz et al., 2001) and were associated with higher rates of depressive symptoms among Asian and Pacific Islander gay men (Yoshikawa, Wilson, Chae, & Cheng, 2004). In addition, Mays and Cochran (2001) observed that sexual minority adults had greater odds of experiencing lifetime or day-to-day discrimination than heterosexuals and that both of these measures of perceived discrimination were positively associated with having any psychiatric disorders in the past year, rating their own mental health as “fair” or “poor” and having high current psychological distress.

### **Mental Health and Suicidality**

A preponderance of research provides direct evidence for the existence of mental health disparities in SMM relative to heterosexual men. In general, studies show that SMM exhibit poorer mental health and experience elevated rates of affective and anxiety disorders (Burgess, Tran, Lee, & van Ryn, 2007; Cochran & Mays, 2000a, 2009; Cochran, 2001; Faulkner & Cranston, 1998; Fergusson, Horwood, & Beautrais, 1999; Fergusson et al., 2005; Garofalo et al., 1999; Gilman et al., 2001; Herrell et al., 1999; Marshal et al., 2011; Mays & Cochran, 2001; Remafedi et al., 1998; Sandfort, de Graaf, Bijl, & Schnabel, 2001). Utilizing data from a population-based survey of U.S. residents, Cochran and colleagues (2003) examined the connections between sexual orientation and psychological morbidity in middle-aged U.S. adults, which was a replication and extension of a previous study (Cochran & Mays, 2000b). Cochran et al. (2003) found that SMM were at greater risk for the diagnosis of major depression and panic attack than heterosexual men and were also more likely to have at least one psychiatric disorder and show comorbidity for two or more psychiatric disorders than heterosexual men. When asked

to rate their own mental health at the time of the survey, SMM were more likely to rate their own mental health as “fair” or “poor” than heterosexual men. This general trend was also evident in a systematic review of mental disorders in LGB adults (King et al., 2008) indicating that the lifetime risk for anxiety and depression disorders was 2.4 and 2.7 times higher in gay and bisexual men, respectively. Similarly, the risk for anxiety and depression disorders in the previous 12 months was 1.9 and 1.6 times greater than heterosexual men. This pattern of results were extended a bit further in a more recent study (Bostwick, Boyd, Hughes, & McCabe, 2010) that used data from the NESARC, a longitudinal survey that aimed to estimate the prevalence of alcohol, drug, and mental disorders (affective, anxiety, and personality disorders) among the general population of the U.S. The results again showed that of the almost 15,000 men surveyed, those who identified as gay, bisexual, or unsure of their sexual orientation had higher rates of most lifetime mood (e.g., depression, dysthymia) and anxiety (e.g., panic, social phobia, generalized anxiety) disorders when compared to heterosexual men. These results generally held even when examined by sexual attraction (i.e., mostly female to mostly males) and sexual behavior (i.e., only had sex with males and had sex with both females and males).

In the general population, poor mental health and mental health disorders constitute the largest risk factor for suicidal behavior (Mościcki, 1997) with numerous studies reporting a strong relationship between poor mental health and suicidality in SMM (Botnick et al., 2002; Fergusson et al., 1999, 2005; Haas et al., 2011; Herrell et al., 1999; Irwin et al., 2014; Kessler, Borges, & Walters, 1999; McGarrity et al., 2013; Meyer et al., 2008; Remafedi, Farrow, & Deisher, 1991; Russell & Joyner, 2001; Schneider, Farberow, & Kruks, 1989; Silenzio, Pena, Duberstein, Cerel, & Knox, 2007; Van Heeringen & Vincke, 2000). One mental health disorder that can be considered a core feature in the pathogenesis of suicidality is depression, which has

consistently been related to both suicidal ideation and suicide attempt in SMM. In a study examining discrimination and mental health in 986 gay and bisexual men, greater symptoms of depression were associated with increased suicidal contemplation in the previous 2 weeks (McGarrity et al., 2013). Similarly, Botnick and colleagues (2002) investigated the psychosocial and behavioral correlates of attempted suicide in 345 gay and bisexual men. Relative to non-attempters, those who did attempt suicide had more depressive symptoms and were more likely to be diagnosed with a mood disorder (e.g., clinical depression). A New Zealand birth cohort study (Fergusson et al., 1999) found that higher rates of reported suicide attempts in LGB adolescents was associated with greater rates of depression and generalized anxiety disorder as assessed by a clinical interview than were observed among their heterosexual counterparts. When this cohort was reassessed in their mid-20s, Fergusson et al. (2005) found that elevated rates of anxiety and depression disorders were again associated with more suicide attempts and suicidal ideation and that these relationships were more pronounced in sexual minority men than women. A more recent study found similar results showing a positive association between depressive symptoms and suicidal ideation and that these symptoms were predictive of lifetime suicidal ideation in LGBT individuals (Irwin et al., 2014). Given the inclusion of women and transgender individuals in this particular study, the results should be inferred with caution specifically to SMM, the focus of the current thesis; however, the results add to the general trend linking depression to suicidal behaviors.

Another mental health issue that has generally been associated with suicidal behavior, albeit generally given less attention, is that of anxiety. Because suicidal ideation is a symptom in the diagnosis of depression (American Psychiatric Association, 2013), depressive disorders have been the focus of more research and have received greater attention in predicting suicide.



However, suicide generally occurs in the context of other conditions including anxiety disorders, which have been shown to be comorbid with depression (Bronisch & Wittchen, 1994). In spite of this, less research has been focused on anxiety in the prediction of suicidality among sexual minorities. A recent meta-analysis and systematic review of primarily longitudinal studies examining the association between anxiety disorders and suicidality (Kanwar et al., 2013) has identified that compared to those without anxiety, individuals with anxiety were more likely to endorse suicidal ideation, have attempted suicide, complete suicide, or engage in any suicidal activities. A study of approximately 5,000 community dwelling adults aged 20-64 that aimed to assess the relation between anxiety symptomology and suicidal ideation found that anxiety symptoms accounted for a larger proportion of suicidal ideation incidence than depressive symptoms. Additionally, many anxiety symptoms presented greater odds of suicidal ideation than depressive symptoms, suggesting that symptoms of anxiety may play a greater role in suicidal ideation than previously thought.

There is some evidence that these relationships also extend specifically to sexual minorities. According to D'Augelli & Hershberger (1993), greater thoughts of suicide were related to higher anxiety, and young SMM were more likely to have problems with anxiety when compared to young sexual minority women (SMW). Additionally, those who had made a past suicide attempt had more problems with anxiety and had significantly greater symptoms of anxiety when compared to those who had never attempted suicide. Similarly, higher rates of suicidal behavior have been associated with greater rates of anxiety disorders at baseline and at a five-year follow up in sexual minority young adults (Fergusson et al., 1999, 2005). Given the high prevalence and increased risk of anxiety disorders (Bostwick et al., 2010; Cochran & Mays, 2000b; King et al., 2008) even after controlling for other comorbid mental disorders (i.e., mood,

substance use, personality, psychosis; Bolton & Sareen, 2011) in SMM, anxiety is likely an important predictor of suicidal behavior in this population.

### **Coping with Minority Stress**

As previously discussed, SMM often experience minority stress as a result of anti-gay discrimination, harassment, and violence. These experiences are particularly problematic as they are associated with poorer mental health and more suicidal behavior in this population. As with the general population, sexual minorities utilize a range of coping strategies in an effort to manage and overcome the adverse effects of stress (Meyer, 2003), in this case that elicited by homonegativity or heterosexist experiences. Utilizing the minority stress model (Meyer, 2003), minority-related stressors such as homonegative experiences have an impact on mental health, and coping moderates this relationship. However, researchers have only recently begun to investigate the role of coping within this framework. In a recent meta-analysis of studies examining perceived discrimination and mental health (Pascoe & Richman, 2009), only nine of the 134 studies examined the influence of coping variables. Within the literature on SMM, most studies have been exploratory in nature or investigated isolated coping strategies used to deal with HIV/AIDS, preempting a more nuanced or integrated understanding of a larger range of coping strategies that SMM can employ to buffer the effects of discrimination.

The general literature on coping has identified two general styles of coping: emotion-focused and problem-focused coping (Lazarus & Folkman, 1984). Utilization of emotion-focused coping aims to manage negative emotions in response to perceived stress, while problem-focused coping aims to alter or eliminate the perceived stressor. Coping strategies can also be further differentiated as either adaptive that promotes positive mental health in the face of stressors and maladaptive that confer risk for negative mental health outcomes when faced with

stressors. Of the work surrounding the role of coping responses within sexual minority populations, evidence suggests that sexual minorities are more likely to engage in maladaptive coping strategies than their heterosexual counterparts (Feldman & Meyer, 2007; Rosario, Schrimshaw, & Hunter, 2010; Siever, 1994) even when responding to heteronegativity (Szymanski & Owens, 2008). Specifically, SMM are more likely to utilize emotion-oriented and avoidance coping styles (Martin & Alessi, 2012) when compared to heterosexual men (Sandfort, Bakker, Schellevis, & Vanwesenbeeck, 2009), which have been found to be related to anxiety and depression in diverse populations (Endler & Parker, 1994; Higgins & Endler, 1995; Mulder, de Vroome, van Griensven, Antoni, & Sandfort, 1999).

Nonetheless, research has indicated that SMM might cope with initial same-sex attractions and the negative perception of others pertaining to their sexual orientation by hiding their sexual orientation, or trying to change their attractions (Anderson, 1987). This denial of sexual feelings, or disengaging from the stressor, allows the person to maintain heterosexual privileges and potentially avoid homonegative experiences at the expense of denying an aspect of their identity. In fact, D'Augelli (1992) found that the primary coping strategy employed by a sample of sexual minority college students was to hide their sexual orientation, while 57% changed their lives to avoid discrimination or harassment which included avoiding certain locations or people, and distorting their presentation to others (e.g., lying about the sex of a dating partner). However, when faced with homonegativity, SMM have been known to disengage, avoid, dismiss, or diminish the impact of the homonegative experiences (Choi, Han, Paul, & Ayala, 2011) as well as suppress the expression of negative emotions (McDavitt et al., 2008), presumably to offset the negative impacts by stressors. Additionally, prior research has identified substance use as a form of emotion-focused coping strategy employed by this

population (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; McDavitt et al., 2008) which is evident by the high rates of alcohol and substance use among SMM (King et al., 2008). This is bolstered by the finding that disengagement, avoidance- and emotion-oriented coping styles are positively associated with anti-gay victimization among SMM (Martin & Alessi, 2012).

Despite this general trend, some research does exist that illustrates utilization of active coping strategies in SMM in response to heterosexist experiences (Pope & Schulz, 1991). For example, Ridge, Plummer, and Peasley (2006) found that SMM engaged in self-talk and self-help strategies to cope with homonegativity. Additionally, SMM have been known to utilize cognitive reframing of stigmatizing situations which limits the emotional impact of heterosexist attitudes and allows SMM to maintain key relationships and thus a semblance of support (McDavitt et al., 2008). SMM have also been found to turn to other sexual minorities and romantic partners as a source of emotional and instrumental support (Burns, Kamen, Lehman, & Beach, 2012; Talley & Bettencourt, 2011). In fact, 57% of gay male college students indicated that an LGB friend was the most important person in their life (D'Augelli, 1991). This may be especially important for SMM with unsupportive families or those from religious backgrounds that are less accepting of sexual minorities. Similarly, SMM are likely to utilize support groups as another method to cope with the effects of heterosexist events (Ridge et al., 2006), thus engaging in active coping strategies.

In keeping with the minority stress model (Meyer, 2003), research among sexual minorities provides some evidence for coping as a moderator of the relationship between minority stress and mental health outcomes. In a prior study of young sexual minorities, both avoidant coping and problem-solving coping were significant moderators of the relationship between anti-gay stigma and depressive symptomatology (Talley & Bettencourt, 2011).

Specifically, when perceived anti-gay stigma was high, those who utilized more avoidance coping had greater depressive symptoms, and those who utilized more problem-solving coping had reduced depressive symptoms. This suggests that avoidance coping strategies may exacerbate the effects of heterosexist events while problem-solving may reduce their effects. This is somewhat in line with the results of Szymanski (2009) that identified avoidant coping rather than social support or self-esteem as a significant predictor of psychological distress in gay men. However, contrary to the minority stress model, when these were examined as moderators of the relationship between heterosexist events and distress, only lower self-esteem exacerbated the effects of the heterosexist events on distress. This suggests that coping strategies may act as moderators in the link between heterosexist events and mental health, but further research is warranted to identify if active and disengaged coping styles attenuate or increase the effects of discrimination on mental health and suicidality.

## **Objectives**

Suicide has been identified as a serious public health concern in SMM and has been shown to be associated with experiences of heterosexism (D'Augelli & Grossman, 2001; De Graaf et al., 2006; Ryan et al., 2009) and mental health problems (Botnick et al., 2002; Irwin et al., 2014; McGarrity et al., 2013). Likewise, experiences of heterosexism have been associated with poorer mental health (Meyer, 1995; Mills et al., 2004), and coping styles employed by SSM can both exacerbate and buffer the effects of heterosexism on mental health. However, no study has created a comprehensive model that links all of these constructs together in a sample of SMM. As a result, the purpose of the current study is to explore the connections among heterosexism, mental health, and suicidality in a sample of SMM, as well as to explore which types of coping styles moderate these relationships.

## **Hypotheses**

**Hypothesis 1.** A wealth of literature has identified that experiences with heterosexism are associated with suicidal behavior in sexual minorities (De Graaf et al., 2006; Huebner et al., 2004; Lea et al., 2014; Ryan et al., 2009). Although all experiences with heterosexism can be detrimental, previous research has found that anti-gay discrimination and harassment are most strongly related to suicidal behaviors in sexual minorities (McGarrity et al., 2013). It is therefore hypothesized that heterosexism will generally be related to suicidal ideation and suicide attempts, but that experiences with heterosexist harassment and rejection will be the strongest predictors.

**Hypothesis 2.** Heterosexist events have previously been shown to be related to a number of poor mental health outcomes (anxiety, depression; McGarrity et al., 2013; Mills et al., 2004) in SMM. Furthermore, previous research has consistently identified that experiences with discrimination and harassment are associated with psychological distress (Díaz et al., 2001; Mays & Cochran, 2001; McGarrity et al., 2013). Therefore, it is hypothesized that more experiences with heterosexism will predict more symptoms of anxiety/depression. Specifically, it is hypothesized that harassment/rejection will be a unique positive predictor of symptoms of anxiety/depression.

**Hypothesis 3.** Mental health has previously been found to be associated with both suicidal ideation and suicide attempts in SMM (Botnick et al., 2002; D'Augelli & Hershberger, 1993). It is therefore hypothesized that greater symptoms of anxiety/depression will positively predict suicidal ideation and suicide attempts. Additionally, given that criteria for a diagnosis of depression is suicidal ideation (American Psychiatric Association, 2013) as well as the consistent reporting identifying the robust relationship between depression and suicide (Botnick et al.,

2002; Van Heeringen & Vincke, 2000), it is hypothesized that depression will be a unique positive predictor of suicidal ideation and suicide attempts.

**Hypothesis 4.** Given that mental health is associated with heterosexist events (Díaz et al., 2001) and suicidal ideation (Burgess et al., 2007), and that an explanation for the rates of suicide among SMM is anti-gay discrimination (Haas et al., 2011), it is hypothesized that symptoms of anxiety/depression will mediate the relationship between experiences with heterosexism and suicidality. Specifically, it is hypothesized that depression will fully mediate the relationship between harassment/rejection and suicidal ideation.

**Hypothesis 5.** Consistent with the minority stress theory (Meyer, 2003), coping has been shown to moderate the relationship between heterosexism and mental health (Talley & Bettencourt, 2011). Subsequently, it is hypothesized that coping styles will moderate the mediation specified in Hypothesis 4, resulting in a moderated mediation. Specifically, it is hypothesized that active coping mechanisms will buffer while disengaged will exacerbate the indirect (mediational) effect of heterosexism on suicidal ideation through symptoms of anxiety/depression (Szymanski, 2009; Talley & Bettencourt, 2011).

## **Method**

### **Participants**

Participants (N = 89) were recruited as part of a larger national online survey of lesbian, gay, bisexual, transgender, and queer (LGBTQ) people. The larger study was advertised as a project to empower the LGBTQ community by completing a survey interested in the health of LGBTQ individuals, especially those who identify as racial/ethnic minorities as this subset of the population has generally received less attention. Data regarding the location of participant residence as well as non-response rates were not collected. The sample included 54 gay (60.7%),

23 bisexual (25.8%), and 12 queer/other non-heterosexual orientation (13.4%) men. Data were automatically removed from the survey if there was evidence of false responding from a computer program (i.e., completion time of less than 20 minutes or greater than 24 hours), impractical response patterns (e.g., selecting the first response for every item), or if participations did not accurately answer at least 4 of 6 (66.6%) randomly placed validation questions (e.g., “Please select *strongly agree* for this item”). This automated deletion procedure was used due to the high likelihood of acquiring false responses when conducting online research involving incentives and the requirement by the host institution’s information security officer in order to prevent fraudulent use of state funds. Individuals were eligible for the study if they were at least 18 years old, identified as a cis-gender man, and identified as gay, bisexual, queer, or an “other” non-heterosexual sexual orientation.

Participants had a mean age of 30.8 ( $SD = 10.30$ ). The racial/ethnic composition of the sample was 28.1% White/European-American (non-Latino), 27.0% Asian/Asian-American/Pacific Islander, 22.5% Black/African-American (non-Latino), 7.9% Latino/Hispanic, 4.5% American-Indian/Native-American, and 10.1% Multiracial/Multiethnic. The majority of participants pursued education beyond high school: 27.0% some college (no degree), 7.9% 2-year/technical degree, 37.1% 4-year college degree, 18.0% master’s degree, and 3.4% doctorate degree, with 6.7% having a high school degree/GED or lower. In regards to current employment status, participants were employed full time (53.9%), part-time (14.6%), college or university students (6.7%), college or university students and employed (12.4%), and unemployed (12.4%).

## **Measures**



Participants completed a set of questionnaires assessing experiences of heterosexism, symptoms of anxiety and depression, suicidal behaviors, and coping styles. Demographic information was collected through a researcher-created questionnaire.

**Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS).**

Experiences of heterosexism were assessed with the HHRDS (Szymanski, 2006), a 14-item self-report questionnaire consisting of three factors: Harassment/Rejection, Workplace/School Discrimination, and Other Discrimination. For the present study, the term “LESBIAN” was substituted with the phrase “an LGBTQ individual” to comprehensively evaluate numerous forms of heterosexism experienced by different sexual minorities. Responses were measured on a 6-point rating scale (1 = *the event has never happened to you* to 6 = *the event happened almost all of the time*), and participants were instructed to indicate the number that best describes events in the past year. Example items include: “How many times have you been made fun of, picked on, pushed, shoved, hit, or threatened with harm because you are an LGBTQ individual?” and “How many times have you been treated unfairly by your employer, boss, or supervisors because you are an LGBTQ individual?” Szymanski (2006) reported high internal consistency for the total scale (Cronbach’s  $\alpha = .90$ ) with adequate to good consistency for the subscales ( $\alpha$  range = .78 - .89). Validity was supported by an exploratory factor analysis, by significant positive correlations with measures of depression, anxiety, and overall distress (Szymanski, 2006), and by good internal consistency among gay and bisexual men ( $\alpha = .90$ ; Szymanski, 2009).

**Hopkins Symptoms Checklist 25 (HSCL-25).** Severity of anxiety and depression symptoms were assessed using the HSCL-25 (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). The HSCL-25 is a 25-item self-report questionnaire composed of 15 items measuring depression and 10 items measuring anxiety. Individuals were asked to indicate how often each

symptom bothered or distressed them over the past week. Responses ranged from 1 (*not at all*) to 4 (*extremely*), with higher scores indicating greater symptoms. Examples of items include “feeling hopeless about the future” and “blaming yourself for things” for the depression subscale and “feeling fearful” and “feeling tense or keyed up” for the anxiety subscale. Evidence of validity was demonstrated by correlations of the HSCL-25 with medical doctor’s global assessment of psychological distress and other measures of emotional symptoms (Hesbacher, Rickels, Morris, Newman, & Rosenfeld, 1980), and it has been used in a sample of same-sex couples (Leung, Cheung, & Luu, 2013). Given that the depression subscale includes an item of suicidal ideation, which would significantly overlap with suicidal ideation as the outcome, that item was removed in the calculation of the subscale and total score. All analyses utilizing the depression subscale or the total score did not include the suicidal ideation item.

**Suicide Behaviors Questionnaire (SBQ).** The Suicide Behaviors Questionnaire (SBQ; Linehan, 1996) is a 34-item measure that assesses suicidal ideation and behaviors; however, for the purpose of this study only the 5-item Suicidal Ideation subscale of the measure was used. This subscale measures suicidal ideation in the past several days, months, year, as well as over one’s lifetime with higher scores indicating higher levels of suicidal ideation. The scoring algorithm weights more recent suicidal ideation more highly, giving a longer-term index of ideation but being a better reflection of current ideation. Respondents are asked to respond to items on a 5-point scale with the frequency that they have thought about killing themselves (0 = *Not at all* to 4 = *Very often*). Given that the subscale was unaltered, the validity of the whole measure is appropriate. The SBQ has demonstrated high internal reliability ( $\alpha$  range = .73 - .92) among men and women and has been used in many settings and in both clinical and non-clinical populations. The scale has demonstrated good convergent validity indicated by positive

correlations with other measures of suicidal ideation, depression, and hopelessness (Linehan, 1996; Osman et al., 2001).

**Suicide attempts.** Suicide attempts were assessed by a researcher-created item. Participants were asked to respond to the following question: “Over the course of your life, how many times have you attempted suicide?” Participants provided a numerical value for this item. Single item measures of suicide attempts have been used successfully in a number of studies (Cochran & Mays, 2000a; D’Augelli et al., 2005). For this study, suicide attempts was recoded as zero attempts, one attempt, and two or more attempts.

**Brief COPE.** Coping styles were assessed using the Brief COPE scale, which examines general use of coping styles (Carver, 1997). This modified version of the COPE inventory (Carver, Scheier, & Weintraub, 1989) is comprised of 28 items tapping specific coping strategies across 14 conceptually distinct scales: Active Coping, Planning, Positive Reframing, Acceptance, Humor, Religion, Emotional Support, Instrumental Support, Self-distraction, Denial, Venting, Substance Use, Behavioral Disengagement, and Self-blame. The first eight subscales reflect active or adaptive coping, while the final six subscales represent maladaptive or disengaged coping styles. The 14 subscales are each composed of two items for which participants indicate on a 4-point Likert scale the frequency with which they implement the coping strategy (0 = *I haven’t been doing this at all* to 2 = *I’ve been doing this a lot*). The COPE subscales generally exhibit strong convergent and discriminant validity in that they correlate in expected patterns with self-esteem, hardiness, optimism, and trait anxiety (Carver et al., 1989). A two-factor structure (i.e., Active Coping, Disengaged Coping) has been identified using confirmatory factor analysis revealing reasonable fit among a sample of gay men with Cronbach’s alphas ranging from .74 to .87 (David & Knight, 2008).

## **Procedure**

Participants were recruited through various Internet forums and groups. Information regarding recruitment for the study was emailed to national and regional LGBTQ organizations (e.g., National Gay Men's Advocacy Coalition, The Center Orlando) and online LGBTQ social and community groups (e.g., LGBT People of Color Yahoo Group), with a particular focus on organizations catering to LGBTQ individuals of color in order to increase sample racial/ethnic diversity. Comparable details were posted to online social and community groups' message boards, and information was submitted to group moderators for groups that did not permit non-member posting. If approved, study details were posted to message boards or sent out to the listserv.

Interested individuals were told in the recruitment flyer to email the research coordinator who screened subjects to determine whether they met study criteria. Individuals were not allowed to participate if they did not respond, provided illogical responses, did not meet inclusion criteria, or appeared to be a computer program. Eligible individuals were provided with a link and access code to the online survey via email. Upon completion, participants were compensated with a \$15 electronic Amazon.com gift card. All individuals consented to participation in the study under the Institutional Review Board approved guidelines.

## **Data Analysis Plan**

**Preliminary analyses.** Before conducting the primary statistical analyses to assess the study's hypotheses, descriptive statistics (i.e., means, standard deviations, frequencies, and percentages) of participant's mental health and suicidality will be reported. Based on the clinical cutoff scores empirically derived by scale developers, the percentage of participants that meet clinically significant sources for the HSCL will be reported.

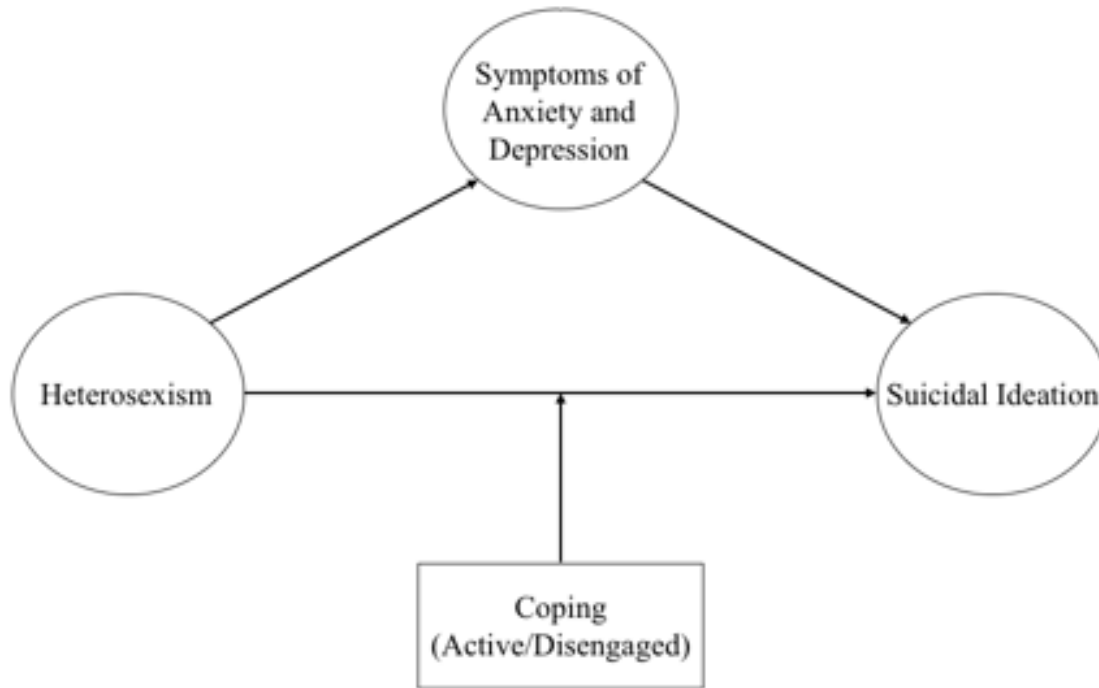
Normality tests (i.e., skewness and kurtosis) will be conducted to determine whether the scales and subscales are normally distributed. Critical values of 2.0 will be used to identify variables that are skewed or kurtotic. Transformation of data will be used where appropriate to correct abnormal distributions, and data will be checked for multicollinearity via correlation coefficients among all independent variables (with a goal  $r < .70$  among all predictors).

A correlation matrix will be created to assess the bivariate correlations among heterosexual experiences, depression, anxiety, suicidal ideation, suicide attempts, and coping.

**Primary analyses.** In order to identify the patterns of connections among heterosexism, mental health, and suicidality in SMM, a series of simultaneous multiple regressions will be performed. The first and second regressions will include the three subscales of the HHRDS (Harassment/Rejection, Work/School, and Other) as predictor variables and suicidal ideation and suicide attempts as separate criterion variables. The third regression will include the three subscales of the HHRDS regressed onto the total score of the Hopkins Symptoms Checklist (Anxiety plus Depression) as the criterion variable. The fourth and fifth regressions will regress the subscales of the HSCL onto both suicidal ideation and suicide attempts.

Meditational path models will be developed using AMOS 21.0 (Arbuckle, 2012) to validate patterns of relationships that emerge among the primary variables under scrutiny in the prior series of regressions, whereby the strongest unique predictors from the regressions will be chosen for the path models. In these models, the most highly predictive index of heterosexism will be specified to lead to the most highly predictive index of symptoms of anxiety/depression, which will then be specified to lead to suicidal ideation. Then, the meditational models will each be expanded to two moderated mediations (producing two moderated mediation models),

whereby the mediation will be examined differentially as a function of participants scoring high or low (via a median split) on active and disengaged coping styles.



*Figure 1.* Proposed Model of the Relationship Between Heterosexism, Symptoms of Anxiety/Depression, and Suicidal Ideation Moderated by Coping.

## Results

### Preliminary Analyses

**Descriptive statistics.** The means and standard deviations for all study variables appear in Table 1. A cutoff score of  $\geq 1.75$  for the subscale mean score was used to identify clinically relevant cases of anxiety and/or depression on the Hopkins Symptom Checklist-25 (Sandanger et al., 1999) with 10.1% and 15.7% of the sample meeting cutoff scores indicative of anxiety and depression, respectively. With respect to suicidality, the majority of the sample (93.3%) had not attempted suicide in the past year, while 2.2% had attempted suicide only once, and 4.5%

attempting suicide two or more times in the past year. When comparing suicide non-attempters to attempters, non-attempters had a mean suicidal ideation score of 7.33 ( $SD = 14.07$ ) and attempters had a mean score of 44.67 ( $SD = 11.72$ ). A breakdown of suicidal ideation found that the majority of participants endorsed lifetime suicidal ideation (66.3%), with 41.6% endorsing ideation in the last year, 29.2% in the previous four months, 23.6% in the last month, and 18% in the previous several days.

**Normality assumptions.** Normality assumptions were assessed prior to running the primary analyses. The HHRDS Harassment/Rejection and Other subscales, Anxiety and Depression subscales of the HSCL-25, as well as the Active and Disengaged factors all met criteria for skewness and kurtosis with absolute values less than 2.0. The Work/School subscale of the HHRDS had a skewness value of 1.29 and a kurtosis value of 2.45 and thus did not meet the assumption of normality. To address this violation, a natural log transformation of the data was performed and produced a new skewness value of 0.15 and kurtosis value of -.44. Tolerance and VIF values were used to assess multicollinearity. Tolerance values ranged from .39 to .54, and VIF values ranged from 1.85 to 2.59, indicating the absence of multicollinearity. When bivariate correlations were assessed, the anxiety and depression subscales of the HSCL were significantly correlated at .80 with all other correlations observed less than .70. Because the correlation between anxiety and depression was higher than the .70 cutoff for multicollinearity established by Tabachnick and Fidell (2007), the absence of unique effects in regressions using both of these predictors simultaneously should be interpreted with caution.

**Bivariate correlations.** In terms of bivariate correlations (Table 1), the HHRDS subscales (i.e., Harassment/Rejection, Work/School, and Other) were each positively correlated

Table 1.

*Bivariate Correlations, Means, and Standard Deviation Scores on the HHRDS and HSCL-25 subscales, Suicidality, and Coping.*

	1	2	3	4	5	6	7	8	9	10
1. HHRDS - Harassment/Rejection	(.83)									
2. HHRDS - Work/School	.59***	(.80)								
3. HHRDS - Other	.65***	.64***	(.79)							
4. HSCL - Anxiety	.43***	.36**	.39***	(.90)						
5. HSCL - Depression	.47***	.38***	.34**	.78***	(.93)					
6. HSCL - Total score	.48***	.40***	.38***	.92***	.97***	(.96)				
7. Suicidal Ideation	.38***	.31**	.31**	.52***	.62***	.62***	-			
8. Suicide Attempts	.36***	.43***	.33**	.34**	.38***	.39***	.55***	-		
9. Active Coping	.04	-.18	-.06	-.06	-.17	-.13	-.14	.13	(.81)	
10. Disengaged Coping	.41***	.52***	.52***	.46***	.57***	.56***	.42***	.29**	-.14	(.73)
<i>M</i>	2.76	2.08	2.50	0.86	0.95	0.92	9.84	0.18	1.77	1.09
<i>SD</i>	0.96	0.91	1.03	0.65	0.74	0.67	16.75	0.86	0.49	0.50

*Note.* HHRDS = Heterosexist Harassment, Rejection, and Discrimination Scale; HSCL-25 = Hopkins Symptom Checklist. Values

across the diagonal represent subscale reliability.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .



with the anxiety and depression subscales of the HSCL-25, suicidal ideation, suicide attempts, and disengaged coping. Anxiety and depression were each positively related to suicidal ideation, suicide attempts, and disengaged coping. Disengaged coping was positively correlated with both suicidal ideation and suicide attempts. Suicidal ideation and suicide attempts were also positively correlated with each other. Active coping was not significantly correlated with any variable. All HHRDS subscales were positively associated with each other, as were anxiety and depression.

### **Multiple Regressions**

**Heterosexism and suicidality.** Two multiple regressions were conducted to address the first hypothesis that heterosexism is generally related to suicidal ideation and suicide attempts and that heterosexist harassment/rejection will be uniquely related to both outcomes.

In the first multiple regression, suicidal ideation was entered as the dependent variable with the three subscales of the HHRDS (i.e., Harassment/Rejection, Work/School, and Other) entered as independent variables. The test was significant,  $F(3, 85) = 5.02, p = .003, R^2 = .15$ , with the Harassment/Rejection subscale uniquely and positively associated with suicidal ideation ( $\beta = .29, p < .035$ ). Neither the Work/School nor Other subscales were independently related ( $ps > .50$ ). In the second regression, suicide attempts was entered as the dependent variable with the three subscales of the HHRDS entered as the independent variables. The test was significant,  $F(3, 85) = 5.95, p = .001, R^2 = .17$ , though none of the subscales were uniquely related to suicide attempts (all  $ps > .09$ ).

**Heterosexism and symptoms of anxiety and depression.** A multiple regression was conducted to address the second hypothesis that heterosexism in general would be associated with anxiety/depression and that the heterosexist Harassment/Rejection subscale would exert a unique effect.

In the third multiple regression, the Hopkins Symptom Checklist total score was entered as the dependent variable, with the three subscales of the HHRDS entered as independent variables. The test was significant,  $F(3, 85) = 9.10, p < .001, R^2 = .24$ , with the Harassment/Rejection subscale determined to be uniquely and positively associated with symptoms of anxiety/depression ( $\beta = .37, p = .005$ ). Neither the Work/School nor Other subscales were independently related ( $ps > .42$ ).

**Symptoms of anxiety and depression with suicidality.** Two multiple regressions were conducted in a similar manner to the three to attend to the third hypothesis that symptoms of anxiety/depression would be related to suicidal ideation and suicide attempts. It was hypothesized that depression would be independently associated with both measures of suicidality.

In the fourth multiple regression, the anxiety and depression subscales of the HSCL-25 were entered as the independent variables with suicidal ideation as the dependent variable. The test was significant,  $F(2, 86) = 27.72, p < .001, R^2 = .39$ , with the depression subscale identified as a being uniquely and positively related ( $\beta = .56, p < .001$ ). The anxiety subscale was not uniquely associated to suicidal ideation ( $p = .52$ ).

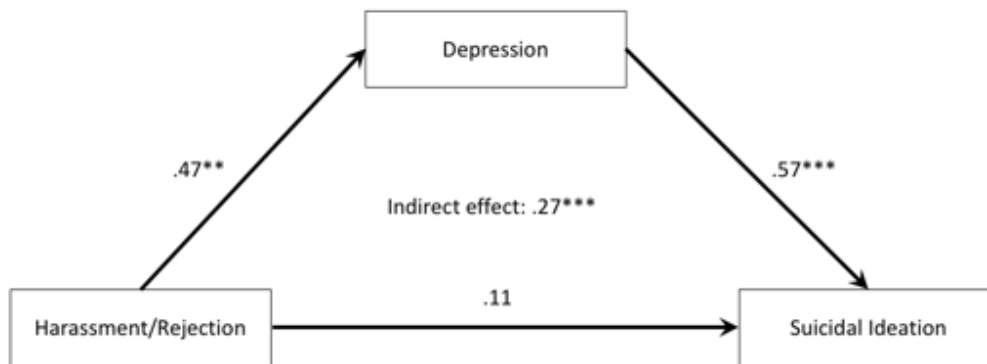
A fifth multiple regression was conducted similarly to the previous analysis, except suicide attempts was entered as the dependent variable. Like the prior regression, this was also significant,  $F(2, 86) = 7.63, p = .001, R^2 = .15$ , with depression trending in significance ( $\beta = .30, p = .06$ ), suggesting that greater symptoms of depression was associated with more suicide attempts. The anxiety subscale, however, was not independently associated with suicide attempts ( $p = .51$ ).

### **Mediation Path Model**

**Harassment/rejection, depression, and suicidal ideation.** A mediational path model was created and analyzed whereby the largest unique predictor of each prior multiple regression was entered into a model from heterosexism leading to anxiety/depression symptoms and finally to suicidal ideation. It was hypothesized that the most highly predictive index within anxiety/depression symptoms would mediate the relationship between the most highly predictive index within heterosexism and suicidal ideation. Specifically, it was hypothesized that depression would fully mediate the relationship between harassment/rejection and suicidal ideation.

The multiple regression analyses identified that the Harassment/Rejection subscale was the most highly predictive index within heterosexism, and depression was the most highly predictive index within anxiety/depression symptoms. As such, a mediational path model was constructed and analyzed in AMOS with harassment/rejection leading to depression leading to suicidal ideation. Because the sample size in the current study is less than the suggested 200 recommended by Boomsma & Hoogland (2001), fit indices were omitted. Rather, the focus was on magnitude and significance of the direct and indirect effects.

In the model, the direct effect of harassment/rejection on past suicidal ideation was not significant ( $\beta = .11, p = .24$ ); however, the direct effect to depression was significant ( $\beta = .47, p = .002$ ). The direct effect of depression on suicidal ideation was significant ( $\beta = .57, p < .001$ ). To determine if depression mediated the above relationship, the indirect effect of harassment/rejection on suicidal ideation through depression was significant ( $\beta = .27, p < .001$ ), suggesting a full mediation (Figure 2).



\*\* $p < .01$ , \*\*\* $p < .001$ .

Figure 2. Standardized Path Loadings of the Mediation Model.

### Moderated Mediation Analyses

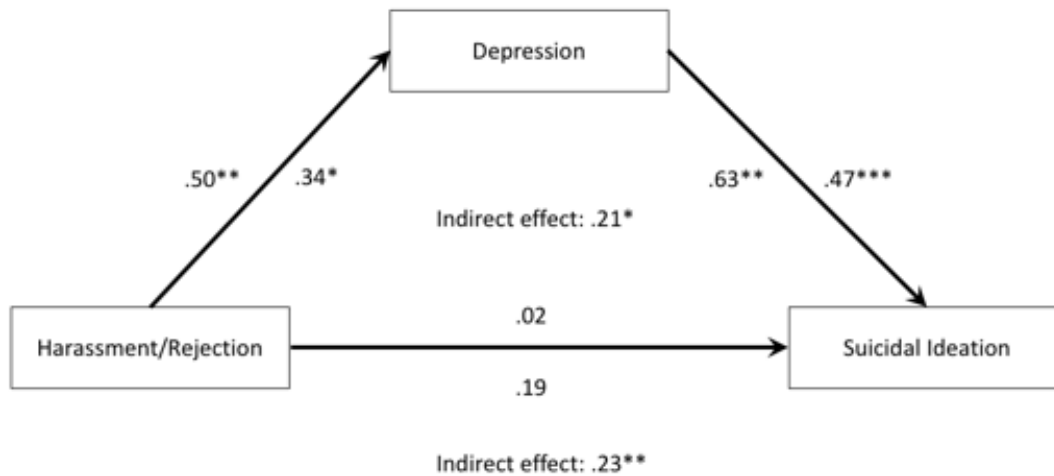
A series of moderated mediations were conducted with active and disengaged coping styles as moderators of the above mediation in order to address the fifth hypothesis: that mediational effect of depression on the relationship between harassment/rejection and suicidal ideation would be moderated by low versus high disengaged and active coping.

**Moderation by disengaged coping.** To determine if disengaged coping styles moderated the above mediation, participants were first grouped into low versus high disengaged coping styles via a median split such that participants who scored below 1.08 were identified as low disengaged copers (48.3%) while those who scored above were identified as high disengaged copers (51.7%), which produced two models.

In similar fashion to the primary mediational analysis, the direct and indirect effects of the mediation were examined separately for those evidencing low versus high disengaged coping styles. For participants with low disengaged coping styles, the direct effect of harassment/rejection on suicidal ideation was not significant ( $\beta = .02, p = .82$ ) while the direct

effect on depression was significant and positive ( $\beta = .34, p = .048$ ). The direct effect of depression on suicidal ideation was similarly significant and positive ( $\beta = .63, p = .002$ ). The indirect effect of harassment/rejection on suicidal ideation through depression was significant ( $\beta = .21, p = .037$ ), suggesting that greater harassment and rejection is associated with more depressive symptoms, which is associated with greater suicidal ideation.

For participants evidencing high disengaged coping styles, the direct effect of harassment/rejection on suicidal ideation was not significant ( $\beta = .19, p = .21$ ), but the direct effect on depression was significant and positive ( $\beta = .50, p = .003$ ). The direct effect of depression on suicidal ideation was also significant and positive ( $\beta = .47, p = .001$ ). The indirect effect of harassment/rejection on suicidal ideation through depression was significant ( $\beta = .23, p = .002$ ), such that greater harassment and rejection was associated with increased depressive symptoms, which was associated with greater suicidal thoughts. Provided the lack of differential effects between the low and high disengaged coping groups, disengaged coping does not significantly moderate the mediation (Figure 3).



*Note.* Values on the interior of the model reflect low disengaged coping while values on the exterior reflect high disengaged coping.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

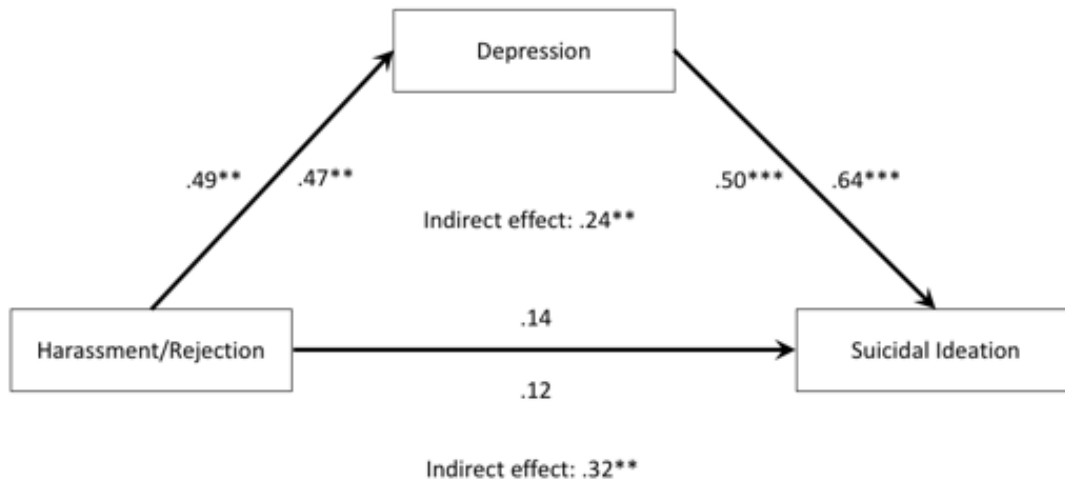
*Figure 3.* Standardized Path Loadings of the Mediation Model Moderated by Disengaged Coping Style.

**Moderation by active coping.** Similar to disengaged coping, participants were split into low and high active coping styles via a median split of 1.68 such that those scoring below the median were grouped as low (47.2%) and those scoring above were grouped as high (52.8%) in order to determine if active coping moderated the mediation.

The direct and indirect effects for those in the low and high disengaged coping groups were conducted separately. For those in the low active coping group, the direct effect of harassment/rejection on suicidal ideation was not significant ( $\beta = .14, p = .32$ ) while the effect on depression was significant and in the positive direction ( $\beta = .47, p = .004$ ). The direct effect of depression on suicidal ideation was significant and positive ( $\beta = .50, p = .001$ ). The indirect effect of harassment/rejection on suicidal ideation through depression was significant ( $\beta = .24, p$

= .002), such that greater harassment/rejection is associated with greater depressive symptoms, which then is associated with greater suicidal ideation.

Among participants evidencing high active coping styles, the direct effect of harassment/rejection on suicidal ideation was not significant ( $\beta = .12, p = .33$ ) with the direct effect on depression significant and in the positive direction ( $\beta = .49, p = .006$ ). Similarly, the direct effect of depression on suicidal ideation was significant and positive ( $\beta = .64, p = .001$ ). The indirect effect of harassment/rejection on suicidal ideation through depression was significant ( $\beta = .32, p = .004$ ), such that greater harassment and rejection is associated with more depressive symptoms, which is associated with more suicidal ideation. Given the lack of differential effects between low versus high active copers, active coping style does not moderate the mediation (Figure 4).



*Note.* Values on the interior of the model reflect low active coping while values on the exterior reflect high active coping.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Figure 4. Standardized Path Loadings of the Mediational Model Moderated by Active Coping Style.

### Exploratory Analyses

A total of two exploratory moderation analyses were conducted to explore if low versus high active or disengaged coping styles moderated the pathway from harassment/rejection to symptoms of anxiety/depression. This is keeping in line with the minority stress model (Meyers, 2003) that posits coping moderates the relationship between minority stressors and mental health. Prior to conducting the analyses, harassment/rejection was centered, and its interactions with both active and disengaged coping styles were separately created.

In the first set of regressions, the Hopkins Symptom Checklist total score was set as the dependent variable with harassment/rejection entered as the predictor in step one, the active coping group entered at step two, and the harassment/rejection by active coping interaction entered at step three. The overall model at step three was significant,  $F(3, 85) = 9.09, p < .001, R^2 = .24$ , with harassment/rejection uniquely associated with the outcome ( $\beta = .59, p < .001$ ). Neither coping style nor the interaction was independently related to the total score (all  $ps > .33$ ).

Similar to the first regression, in the second regression harassment/rejection was entered in step one, disengaged coping at step two, and the interaction of both predictors in step three. The overall model was significant,  $F(3, 85) = 17.07, p < .001, R^2 = .38$ . Disengaged coping was uniquely associated ( $\beta = .33, p < .001$ ), as was the harassment/rejection by disengaged coping interaction ( $\beta = .30, p = .015$ ). An examination of the scatterplot and a line of best fit by coping group (Figure 5) shows that those who experience more heterosexist harassment and rejection and who utilize a high disengaged coping style experience greater symptoms of anxiety and depression than those with a low disengaged coping style.



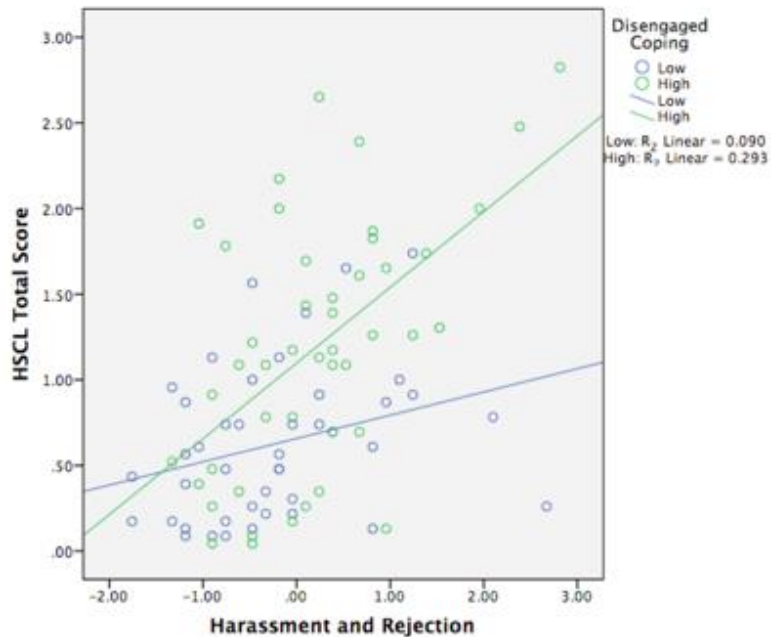


Figure 5. Scatterplot of Harassment/Rejection Regressed onto Symptoms of Anxiety/Depression Moderated by Disengaged Coping.

## Discussion

Suicide is a serious public health concern especially for SMM, who are susceptible to minority stress. Prior research has identified that experiences with heterosexism (e.g., anti-gay harassment, discrimination, violence) are positively related to suicidality and poor mental health, and poor mental health separately associated with suicidality in SMM. Utilizing the minority stress model, coping has been posited to moderate the relationship between heterosexism and mental health; however little is known about how the relationship among heterosexism, mental health, and suicidality might be moderated by active and disengaged coping. The present study investigated a series of relationships among experiences with heterosexism, symptoms of anxiety and depression, and suicidality (suicidal ideation, suicide attempts) and also whether a path

model of heterosexism leading to anxiety/depression symptoms leading to suicidal ideation was moderated by active and disengaged coping.

### **Heterosexism and Suicidality**

As hypothesized, experiences with heterosexism was positively associated both with suicidal ideation and with suicide attempts. When experiences with heterosexism was further examined by subscale, harassment/rejection was uniquely related to suicidal ideation, as predicted, while no specific subscales (Harassment/Rejection, Work/School, Other) were independently associated with suicide attempts in the past year, which did not support the hypothesis. These results are generally in line with past research indicating that experiences with heterosexism are positively related to both suicidal ideation (De Graaf et al., 2006; Huebner et al., 2004) and suicide attempts (Hidaka & Operario, 2006; Ryan et al., 2009). SMM experience profound stigma as a marginalized group living in a society where heterosexuality is seen as “normal” and all other sexualities as “abnormal” and must contend with negative societal attitudes towards these “other” sexualities. This view of heterosexuality as superior to all other expressions of sexuality creates a hostile climate for sexual minorities as well as profound and chronic distress (Meyer, 1995) which has been associated with greater suicidal ideation in adolescents (Wilburn & Smith, 2005) and both suicidal ideation and attempts in college students (Grover et al., 2009). Thus the experience of chronic stress may be especially important for understanding the relationship between suicidality and experiences of heterosexism or other similar chronic stressors.

A more fine-grained analysis revealed a unique positive association between experiences of harassment and rejection and suicidal ideation in SMM, which is also supported by prior research (Huebner et al., 2004; Ryan et al., 2010). According to Garnets and colleagues (1990),

when individuals are victimized because they are perceived to be gay, those experiences with victimization remove that individual's sense of security and invulnerability. As a result, individuals may begin to internalize the stigma and feel that the victimization was a justified punishment for being gay in an attempt to make sense of the attack, especially if they perceive the world as a just place. Such self-blame can lead to feelings of depression and helplessness (Janoff-Bulman, 1979), which has been shown to predict suicidal ideation (Lester & Walker, 2007). This suggests that experiences with harassment and rejection may affect suicidal ideation through general self-devaluation and identity degradation.

The lack of a relationship between harassment/rejection with suicide attempts in the current study suggests that anti-GBQ harassment and rejection may be particularly important for suicidal ideation but not attempts. While experiences with harassment and rejection are associated with suicidal ideation, and suicidal ideation is a known risk factor for suicidal behavior, the majority of those with thoughts of suicide do *not* go on to attempt suicide (Glenn & Nock, 2014). Additionally, much of the prior research surrounding the relationship between harassment/rejection with suicide attempts tends to be conducted in adolescents or young adults (e.g., D'Augelli et al., 2005; D'Augelli, Hershberger, & Pilkington, 2001; Garofalo et al., 1999; Lea, de Wit, & Reynolds, 2014; Ryan et al., 2009), suggesting that experiences of harassment and rejection may be more impactful earlier in development when individuals are still forming their identities and are more susceptible to social and peer pressures. Given the current sample's relatively older age ( $M = 30.8$ ), it is possible that experiences of heterosexist harassment and rejection may be interpreted in a more multifaceted way that no one manifestation of heterosexism on its own is responsible for suicide attempts. Rather it is the cumulative

experience of heterosexism in its many forms (e.g., workplace discrimination, being treated unfairly by people in service jobs, family rejection) that likely contributes to suicide attempts.

### **Heterosexism and Symptoms of Anxiety and Depression**

Experiences with heterosexism were also positively associated with symptoms of anxiety/depression as predicted. Upon closer examination, experiences of anti-GBQ harassment and rejection were uniquely related to greater symptoms of anxiety and depression. These results are very much in line with previous studies identifying that more heterosexist experiences, especially those related to harassment and rejection, are related to more anxiety and depression (Díaz et al., 2001; Herek et al., 1999; McGarrity et al., 2013; Mills et al., 2004; Otis & Skinner, 1996; Yoshikawa et al., 2004).

In keeping with the minority stress model (Meyer, 2003), SMM experience unique chronic stressors as a function of their disadvantaged minority status in addition to routine stressors experiences by non-minorities. Therefore, it is the added experience of heterosexist stigma, prejudice, and discrimination that creates a hostile and stressful environment leading to poorer mental health outcomes among SMM; however, experiences of anti-GBQ harassment and rejection may be of particular importance. For instance, one study identified that those who experienced an anti-gay violent attack exhibited greater psychological distress (e.g., depression, anxiety) than victims of nonbiased crimes (Herek et al., 1999). Relatedly, those who were verbally and physically harassed by being called gay experienced significantly greater symptoms of anxiety and depression than those who were harassed for other reasons (Swearer, Turner, Givens, & Pollack, 2008). Those who were bullied by being called gay also experienced more harassment than those than bullied for other reasons. Taken together these results indicate that while experiencing harassment and violence is especially distressing, the nature of the

victimization specifically as anti-gay or gay-related is associated with greater psychological distress and suggests that these events may be internalized as profoundly more negative and powerful than the act alone. This is reflective of the cultural shaming of anyone perceived to be part of the sexual minority community as less than or inferior to those in the heterosexual majority which aids in devaluing sexual minorities and contributing to poorer mental health.

### **Symptoms of Anxiety and Depression with Suicidality**

In line with prior research (D'Augelli & Hershberger, 1993; Irwin et al., 2014) and in support of the current study's hypotheses, more anxiety and depression was associated with greater suicidal ideation and attempts in the current sample of SMM. By extension, depression was independently associated with greater suicidal ideation, as predicted and noted in previous research (Botnick et al., 2002; McGarrity et al., 2013; Russell & Joyner, 2001; Van Heeringen & Vincke, 2000). Similarly, depression was trending in significance in its relationship with suicide attempts, partially supporting the hypotheses, although previous research has more convincingly found this effect (Silenzio et al., 2007).

A wealth of research in the area of mental health and suicidality has identified significant positive relationships between aspects of poor mental health (e.g., anxiety, depression) and greater suicidality in SMM. Furthermore, given that depression is generally considered a core feature in the development of suicidal behaviors (Van Heeringen & Vincke, 2000) and that suicidal ideation is a symptom of major depressive disorder (American Psychiatric Association, 2013), the identification of depression as being uniquely related to suicidal ideation is not surprising, especially in SMM who are at greater risk for depression than heterosexuals (King et al., 2008). While the relationship between depression and suicide attempts was only trending in significance ( $p = .06$ ), the results are in the same direction as past work (Botnick et al., 2002;

Fergusson et al., 1999) and can generally be interpreted in the same way: greater symptoms of depression is associated with greater suicide attempts. However, one potential reason for the trending association may be the high multicollinearity between anxiety and depression in this multiple regression, leaving little remaining variance to uniquely predict suicide attempts. Also, the relatively small sample size may have hindered identification of significant findings. While depression is a risk factor for suicidal ideation, not all people with suicidal ideation go on to attempt suicide (Nock, Hwang, Sampson, & Kessler, 2010), suggesting that the relationship between depression and suicidality is more nuanced than might be assumed. Taken together, depression is particularly important for suicidal ideation and may be a significant risk factor for suicide attempts in SMM.

### **Mediational Path Model**

Much of the literature examining the impact of heterosexist discrimination and victimization has identified that experiences of harassment and/or rejection are especially powerful and have a significant negative impact on mental health, especially in the development of depression. By extension, there is a consistent pattern of results illustrating depression as a significant risk factor for suicidality, as noted above. The results of the current study identified that depression fully mediates the effect of harassment/rejection on suicidal ideation as predicted and generally keeps with the literature on the topic.

The results of this study are consistent with minority stress theory (Meyer, 2003) that SMM, in large part because of their marginalized social status, experience heterosexism manifested in a variety of ways including verbal and physical harassment, rejection, and discrimination in the broad sense. These distal stressors are experienced in addition to general life stressors and that this leads to the development of poor mental health outcomes, including

anxiety and depression. Results also indicate that for SMM, experiences of harassment and rejection may play a unique role in the relationship between heterosexism and symptoms of anxiety and depression, such that these experiences appear to be the most meaningful and/or impactful in comparison to other forms of heterosexism. Because of the substantial negative influence of these experiences, this leads to greater symptoms of depression, which are robustly associated with suicidal ideation.

Despite a wealth of literature examining these associations, only a few studies have tested an integrative model such as the one in the current study. In one of the only studies that has specifically examined sexual minority victimization and suicidality (Mustanski & Liu, 2013), the authors found that symptoms of major depressive disorder partially mediated the relationship between LGBT victimization and suicide attempts in young adults. The results of the current study are somewhat consistent with these previous findings suggesting that greater victimization is associated with greater suicidality through increased depressive symptoms; however, the relationship between victimization and suicidality remained even after accounting for depressive symptoms in Mustanski and Liu's (2013) study but did not in the current study. A few notable differences between the studies may explain the differential results. First, the inclusion of lesbians and transgender individuals bar generalization to SMM as sexual minority women are less likely to experience victimization than SMM (Katz-Wise & Hyde, 2012) while transgender individuals may experience gender identity- and/or sexual orientation-based victimization, therefore making it difficult to identify what form of victimization is being experienced. Additionally, young adults were utilized in the prior study ( $M = 18.8$  years old) while the current study had a significantly older sample ( $M = 30.8$  years old). Suicide occurs more frequently among adolescents and young adults (Haas et al., 2011), and LGB youth are also more likely to

experience greater victimization than adults (Katz-Wise & Hyde, 2012). This suggests that experiences of victimization may be just as important as depression in predicting suicide attempts for adolescents while depression may be of greater significance for adults, as reflected in the full mediation. Also, suicidal ideation was not examined as the outcome in the previous study. While it is strongly correlated with attempts, many suicide attempts are also impulsive in nature (Simon et al., 2001), suggesting that the comparison between both studies should be exercised with caution.

A number of related studies have generally examined various mediators of the relationship between sexual orientation and mental health or suicidality. One study found that experiences of victimization mediated the relationship between sexual orientation and poor mental health (Mays & Cochran, 2001) in adults. In Russell and Joyner (2001), the authors identified that depression mediated the relationship between sexual orientation and suicidal thoughts for LGB adolescents, with Langhinrichsen-Rohling and colleagues (2011) discovering similar results, that sexual attraction was associated with suicide proneness through increased depression in same-sex or both sex attracted college students. Taken together, these previous results are very consistent with the results of the current study, and they are supportive of the current study's model—that victimization affects depression, which increases suicidality in SMM.

### **Moderation**

**Disengaged coping.** The results of the first moderation indicate that disengaged coping style did not significantly moderate the relationships among harassment/rejection, symptoms of depression, and suicidal ideation, which did not support the proposed hypothesis. However, disengaged coping style did moderate the relationship between harassment/rejection and



symptoms of anxiety/depression in the exploratory analyses, which is consistent with prior research (Talley & Bettencourt, 2011). Specifically, greater experiences of harassment/rejection were associated with greater symptoms of anxiety/depression but only among those who reported high versus low levels of disengaged coping style.

The null results of the moderated mediation analysis are interesting in light of those from the exploratory analyses. Although disengaged coping did not moderate the indirect effect of harassment/rejection on suicidal ideation through depression, it did moderate the first component of the model (via the exploratory analyses) of harassment/rejection onto symptoms of anxiety and depression. Despite this significant exploratory analysis, the results of the moderated mediation are actually consistent with Szymanski (2009), who found no support for the moderating role of avoidant coping in the association between experiences with heterosexism and psychological distress in SMM. The current results are also in line with those from Barnes and Lightsey (2005) which failed to find moderating effects of three different types of coping styles including avoidant coping on the relationship between perceived stress and life satisfaction in African American students.

The previous results are juxtaposed to the results of the exploratory analyses indicating that SMM who utilize high disengaged coping styles experience greater symptoms of anxiety/depression as a result of greater harassment/rejection when compared to those with low levels of disengaged coping. These findings, however, do generally provide support for the minority stress model indicating that disengaged coping strategies, including avoidant strategies to stigmatizing events are profoundly harmful for psychological adjustment (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). Results are consistent with those of Talley and Bettencourt (2011) who identified avoidant coping to be a significant moderator of the

association between perceived stigma and depressive symptoms and Connor-Smith & Compas (2002) who found that disengaged coping exacerbates the negative effects of social stress and symptoms of anxiety/depression. While disengaged coping may be beneficial in the short-term by escaping the feelings of distress caused by the stressor, it is typically ineffective at reducing distress over the long-term and is generally associated with greater anxiety and depression (Carver & Connor-Smith, 2010). For SMM, it is possible that those who utilize greater disengaged coping effectively prolong the impact that anti-GBQ harassment and rejection may cause, which may lead to poorer mental health.

One reason for the differential results might be the lack of power to find a significant moderated mediation in the path analysis given the relatively small sample size ( $N = 89$ ). This is reasonable given that the direct effect of harassment/rejection onto depressive symptoms in the mediational model for low disengagement was significant at  $p = .048$ , suggesting that disengagement may be a significant moderator of the harassment/rejection-depression pathway in a larger sample. Additionally, these results are also suggestive of a stronger association between disengaged coping and overall psychological distress. While disengaged coping did not moderate the mediational model with depression as the mediator, it did interact with harassment/rejection in its association to symptoms of anxiety/depression, which is consistent with the minority stress theory. Taken together, this suggests that disengaged coping might affect psychological distress more generally rather than one particular set of symptomology (i.e., only depression), which is consistent with a meta-analysis indicating that utilization of greater escape-avoidance coping is associated with overall poor psychological health (Penley, Tomaka, & Wiebe, 2002). This may also be true in the context of these results, as anxiety and depression were highly correlated with each other in this study and are also found to co-occur in the general

population (Bronisch & Wittchen, 1994) suggesting that disengaged coping is likely to affect both indiscriminately.

It is also important to note the potentially significant role of age and race/ethnicity in the observed difference between the exploratory results of the current study and the primary results of Szymanski (2009). In Szymanski (2009), the sample characteristics were older ( $M = 36.3$ ) and predominantly White (86%), while in the current study the sample was younger ( $M = 30.8$ ) with the majority of the sample identifying as non-white (73%). These differences are important because previous research has identified that younger age (18-29 years) is associated with worse psychological well-being (Kertzner, Meyer, & Stirratt, 2010), with younger SMM experiencing greater harassment and victimization than older SMM (Huebner et al., 2004). This is also exemplified in the differences in mean heterosexist experiences between Szymanski (2009) and the current study (1.65 vs. 2.51). Literature examining the role of race/ethnicity have also identified that Black SMM are more likely to use disengaged coping than White SMM (David & Knight, 2008), with other studies finding greater use of avoidance coping mechanisms in non-White SMM to mitigate the impact of racism and heterosexism (Choi et al., 2011). Taken together these results suggest that the younger age and a greater percentage of non-White SMM might have accounted for the perceived differences between the two studies and indicate age and race/ethnicity should be considered in future studies.

**Active coping.** In contrast to what was expected, active coping style did not moderate the paths linking harassment/rejection, symptoms of depression, and suicidal ideation, which did not provide support for the study's hypothesis. Similarly, active coping did not moderate the relationship between experiences of harassment/rejection and symptoms of anxiety/depression in the exploratory analyses. Contrary to other findings (Talley & Bettencourt, 2011), active coping

did not moderate the mediational model or the exploratory path from harassment/rejection to symptoms of anxiety/depression. This makes sense given that active coping style was not significantly correlated with any construct in the current study.

One explanation for the lack of relationships may be the nature under which active coping styles are typically used. Literature on active coping has identified that individuals tend to utilize this style of coping when they perceive a stressor as controllable (i.e., susceptible to change; Carver & Connor-Smith, 2010). It can be argued that experiences of heterosexism are perceived as more immutable and are thus less susceptible to change or control given that heterosexism occurs not only at the individual level but also at the institutional, political, and cultural level. This is especially evident for many sexual minorities provided that a federal law barring discrimination based on sexual orientation across all states has yet to be passed (American Civil Liberties Union, 2015). Indeed, when stressors are viewed as uncontrollable, distraction or disengaging coping strategies may be the only realistic coping tactic rather than more active styles (e.g., Altshuler & Ruble, 1989).

By extension, experiences of heterosexist harassment and victimization also target an individual's sense of identity (Mallett & Swim, 2009) by denigrating a core aspect of the self (Norris & Kaniasty, 1991). There is a minority view that sexual orientation is a "lifestyle" or mental illness that is susceptible to change with some going as far as to "change" their orientation through conversion or reparative therapy, a "treatment" whereby altering one's sexual orientation is the ideal outcome (McDaniel et al., 2001). It should be noted that these forms of therapy have been condemned by most professional organizations as unethical, is likely to increase suicide risk, and are unlikely to change sexual orientation (McDaniel et al., 2001). Indeed, research has shown that sexual orientation has a substantial genetic component (Hamer,

Hu, Magnuson, Hu, & Pattatucci, 1993). Additionally, when an event threatens one's sense of identity, especially in cases of victimization and harassment, it can create a negative sense of self. This can hinder an individual's ability to cope effectively, as a positive sense of gay identity is essential to cope with the stresses created by societal prejudice (Garnets et al., 1990). Taken together, this suggests that utilization of active coping styles in the face of unalterable stressors may not be an effective means of blunting the negative effects of harassment on mental health and suicidal ideation.

### **Clinical Implications**

While these results are too preliminary to suggest concrete clinical intervention strategies, they do highlight the importance of targeting experiences of heterosexism, symptoms of anxiety and depression, and coping style in SMM. Experiences of heterosexist events are profoundly distressing and as expected can contribute to symptoms of anxiety/depression and suicidality in SMM; however, these events have also been known to lead to feelings of alienation, lack of integration, and problems with self-acceptance (Potter, Goldhammer, & Makadon, 2008). Therefore it would behoove clinicians to assist SMM in recognizing the existence and negative impact of heterosexism on their lives. By increasing an awareness of these stressors, SMM will be provided with a tool to better understand their experiences and reactions as well as be better able to place appropriate ways of coping into the sociocultural context (Kashubeck-West, Szymanski, & Meyer, 2008). For example, integration into supportive group social structures plays a crucial role in overcoming the adverse effects of heterosexism, as these supportive organizations allow sexual minorities to experience social environments where they are not stigmatized and allow them to compare themselves to similar others rather than those part of the dominant culture (Meyer, 2003). This may be especially important for SMM who experience

rejection from family and friends, as these social structures promote a “come as you are” form of acceptance that may not be supported in other social organizations.

The results of this study also suggest a need to effectively treat depressive symptoms, which were associated with suicidality and mediated the heterosexism-suicidal ideation relationship. One way this can be accomplished is through an LGBT cognitive behavioral therapy (CBT)-based group intervention set within an anti-oppression framework. Previous literature has found that CBT is an effective method to treat people with depression (Kuyken, Watkins, & Beck, 2005) by educating clients how situations, thoughts, moods, and behaviors can reinforce depressive symptoms. Utilizing a group-based mode of therapy fosters a sense of solidarity with other SMM clients who might be experiencing similar issues, which could be prove beneficial for SMM experiencing rejection. Framing the therapy as LGB and contextualizing it as anti-oppressive also allows for discussion of specific LGB minority stressors and how they affect self-esteem and contribute to the internalization of anti-gay stigma, which has been shown to be associated with greater depression in SMM (Szymanski & Ikizler, 2013). This form of CBT has been shown to increase self-esteem and reduce symptoms of depression in a cohort of LGBT individuals (Ross, Doctor, Dimito, Kuehl, & Armstrong, 2008), suggesting that this form of intervention could prove beneficial for SMM.

Reducing the use of maladaptive coping styles such as disengaged coping might also be an appropriate method to attenuate the negative effects of heterosexism on symptoms of anxiety/depression. While the results of this study did not address which exact disengaged coping mechanisms may be especially harmful (e.g., avoidant, denial, self-distraction), they do suggest that interventions aimed at reducing the use of disengaged coping styles may reduce psychological distress. In a study by Carrico and colleagues (2006), HIV-positive gay men who

reduced their use of denial coping through a cognitive behavioral stress management intervention saw an improvement in depressed mood. In other studies, adolescents and adults who evidenced less avoidance coping over time also saw an improvement in their mental health at follow up sessions (Herman-Stahl, Stemmler, & Petersen, 1995; Holahan & Moos, 1986). These studies suggest that helping SMM decrease their use of maladaptive coping strategies in response to heterosexist events may be an effective means for reducing their symptoms of anxiety and depression.

Finally, despite a significant increase in visibility and decline in sexual orientation prejudice over the last four decades (Herek, Chopp, & Strohl, 2007), there remains a need for additional societal reform surrounding sexual discrimination. Given the deleterious effects of heterosexist experiences, there is an urgent need to reduce stigma and increase the social acceptance of sexual minorities. Increased community education surrounding the detrimental effects of sexual orientation based-violence, discrimination, harassment, and intolerance on sexual minorities as well as heterosexuals would be one method of fostering greater acceptance of this community. Additionally, passing more anti-discrimination and hate-crime legislation protecting sexual minorities (sexual orientation and gender identity) at both the state and federal level would help shift the cultural landscape in how sexual minorities are perceived and treated by society. The passage of same-sex marriage laws is one way by which the stigma of sexual minorities is waning signaling that societal transformation is occurring, albeit very slowly. Providing greater protections for sexual minorities paves the way toward better mental health and hopefully a reduction in suicidality.

### **Limitations and Future Directions**

The present study has some limitations that should be considered in the interpretation of the findings and subsequently are directions for future research. The first set of limitations is in regard to the sample characteristics. This study had a small sample size ( $N = 89$ ) which contributes to low power and as a result may have reduced the ability to detect a true effect. This may have influenced the lack of significant findings in the mediational model moderated by disengaged coping style as the exploratory results suggests that disengaged coping style does indeed act as a significant moderator. Additionally, the small sample size precludes information regarding model fit of the mediational analyses and as a result, fit statistics were omitted. Additionally, the sample was relatively well educated which may have buffered the negative effects of harassment, as a higher level of education tends to be associated with less psychological distress. Future research should therefore recruit larger samples as well as participants who are more representative of the general population including SMM from lower educational backgrounds. For instance, future research could benefit from the use of epidemiological samples to replicate the findings in larger samples and also improve the generalizability of the results.

Second, racial/ethnic minority status was not incorporated into the theoretical framework or final analyses because of sample size limitations. Sexual minorities of color experience racial discrimination, as well as heterosexism, which is profoundly stressful and might have elevated their symptoms of anxiety and depression. Similarly, sexual minorities of color might have differential access to resources or supportive networks that affects their ability to effectively cope with the stressor. For instance, the family plays a supportive role in African American and Latino cultures during times of stress, suggesting that racial/ethnic minority status might be a protective factor for the effects of heterosexism. However, this can also be detrimental for SMM



who experience familial rejection because of their sexual identity, as they lose or no longer have access to an important support network that improves coping. Future research should integrate and assess racial/ethnic status in models that assess heterosexism and coping to determine if the results generalize to more diverse sexual minority populations.

Third, a factor analysis of the Brief-COPE was not conducted. While a confirmatory factor analysis of the measure was conducted in a sample of gay men that yielded adequate fit statistics for the two-factor structure (David & Knight, 2008), an exploratory factor analysis (EFA) was not conducted. For instance, self-distraction was part of disengaged coping in this study and in that of David & Knight (2008); however, a number of studies have identified that intentionally engaging in positive activities is a way to effectively adapt to uncontrollable situations (Carver, 2010). Fourth, specific coping strategies were not assessed during data analysis. More information regarding which coping strategies are uniquely related, how they are related, as well as their level of impact could be prove beneficial to improve our overall understanding of coping with heterosexism. Future research should conduct a more thorough factor analysis of the Brief-COPE including an EFA and should also assess the role of specific coping styles and their impact on the heterosexism-mental health-suicidality relationship.

Fifth, the cross-sectional nature of the study design limits the ability to make causal inferences from the results. Future research can more directly test the impact of heterosexist events on symptoms of anxiety/depression and suicidality by assessing these variables longitudinally to provide more causal evidence. Additionally, demographics were not controlled for in the analyses such as age or education. It is possible that both factors might influence how SMM experience heterosexism and thus its effect on symptoms of anxiety and depression, and future studies should take demographic variable into consideration.

Sixth, predicting lifetime suicide attempts from past year discrimination, as well as from past week mental health identifies an underlying issue of temporality. Given that the outcome is assessed over the lifetime, it is unclear when these attempts occurred making it difficult to accurately indicate that mental health or discrimination occurred before the attempts and thus is “predicting” a future event. Future studies should make sure to identify the temporality of predictors and outcomes and that the time frame of the outcome variables occurs after and does not overlap with the time frame of the predictor variables.

## **Conclusion**

The current study examined a series of associations among experiences of heterosexism, symptoms of anxiety/depression, and suicidality in a nationwide sample of SMM. Heterosexist experiences were associated with symptoms of anxiety/depression, suicidal ideation, and suicide attempts, with harassment/rejection exhibiting a unique association with symptoms of anxiety/depression, as well as with suicidal ideation. Symptoms of anxiety/depression were also significantly related to suicidal ideation and suicide attempts, with symptoms of depression independently associated with suicidal ideation. Symptoms of depression fully mediated the relationship between harassment/rejection and suicidal ideation. Disengaged and active coping did not moderate the mediational path. However, in exploratory analyses, disengaged coping moderated the relationship between harassment/rejection and symptoms of anxiety/depression such that experiences of harassment/rejection were associated with greater symptoms of depression in SMM who used high versus low levels of disengaged coping. The current findings suggest that research should examine whether treating depression in future interventions is a way to reduce suicidal ideation. Additionally, clinicians may benefit from focusing on reducing maladaptive coping as a way to reduce symptoms of depression in SMM.

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## Appendix A

### Heterosexism Harassment, Rejection, and Discrimination Scale (HHRDS)

Please think carefully about your life as you answer the questions below. Read each question and then indicate the number that best describes events in the PAST YEAR, using these rules.

Circle 1—If the event has NEVER happened to you

Circle 2—If the event happened ONCE IN A WHILE (less than 10% of the time)

Circle 3—If the event happened SOMETIMES (10–25% of the time)

Circle 4—If the event happened A LOT (26–49% of the time)

Circle 5—If the event happened MOST OF THE TIME (50–70% of the time)

Circle 6—If the event happened ALMOST ALL OF THE TIME (more than 70% of the time)

1. How many times have you been rejected by friends because you are an LGBTQ individual?  
1            2            3            4            5            6
2. How many times have you been verbally insulted because you are an LGBTQ individual?  
1            2            3            4            5            6
3. How many times have you been made fun of, picked on, pushed, shoved, hit, or threatened with harm because you are an LGBTQ individual?  
1            2            3            4            5            6
4. How many times have you heard ANTI-LGBTQ remarks from family members?  
1            2            3            4            5            6
5. How many times have you been rejected by family members because you are an LGBTQ individual?  
1            2            3            4            5            6
6. How many times have you been called heterosexist/transphobic names like dyke, lezzie, or other names?  
1            2            3            4            5            6
7. How many times have you been treated unfairly by your family because you are an LGBTQ individual?  
1            2            3            4            5            6



8. How many times have you been treated unfairly by your employer, boss, or supervisors because you are an LGBTQ individual?  
 1            2            3            4            5            6
9. How many times were you denied a raise, a promotion, tenure, a good assignment, a job, or other such things at work that you deserved because you are an LGBTQ individual?  
 1            2            3            4            5            6
10. How many times have you been treated unfairly by teachers or professors because you are an LGBTQ individual?  
 1            2            3            4            5            6
11. How many times have you been treated unfairly by your co-workers, fellow students, or colleagues because you are an LGBTQ individual?  
 1            2            3            4            5            6
12. How many times have you been treated unfairly by people in service jobs (e.g., store clerks, waiters, bartenders, waitresses, bank tellers, mechanics, and others) because you are an LGBTQ individual?  
 1            2            3            4            5            6
13. How many times have you been treated unfairly by strangers because you are an LGBTQ individual?  
 1            2            3            4            5            6
14. How many times have you been treated unfairly by people in helping jobs (by doctors, nurses, psychiatrists, caseworkers, dentists, school counselors, therapists, pediatricians, school principals, gynecologists, and others) because you are an LGBTQ individual?  
 1            2            3            4            5            6

## Appendix B

### Hopkins Symptoms Checklist (HSCL-25)

Listed below are some symptoms or problems that people sometimes have. Please read each one carefully and decide how much each symptoms bothered your or distressed you in the last week, including today. Place a check in the appropriate column.

	<b>Not at all</b>	<b>A bit</b>	<b>Quite a bit</b>	<b>Extremely</b>
Suddenly scared for no reason				
Feeling fearful				
Faintness, dizziness, or weakness				
Nervousness or shakiness inside				
Heart pounding or racing				
Trembling				
Feeling tense or keyed up				
Headaches				
Spells of terror or panic				
Feeling restless, can't sit still				
Feeling low in energy, slowed down				
Blaming yourself for things				
Crying easily				
Loss of sexual interest or pleasure				
Poor appetite				
Difficulty falling asleep, staying				

asleep				
Feeling hopeless about the future				
Feeling blue				
Feeling lonely				
Thoughts of ending your life				
Feeling of being trapped or caught				
Worrying too much about things				
Feeling no interest in things				
Feeling everything is an effort				
Feelings of worthlessness				

## Appendix C

### Suicidal Behaviors Questionnaire (SBQ-14)

Please answer EVERY item with the number that applies to you. Please put only one number per space. DO NOT leave any empty spaces.

1 \_\_\_\_ Have you thought about or attempted to kill yourself in your lifetime?

0 = No

1 = It was just a passing thought

2 = I briefly considered it, but not seriously

3 = I thought about it and was somewhat serious

4 = I had a plan for killing myself which I thought would work and seriously considered it

5 = I attempted to kill myself, but I do not think I really meant to die.

6 = I attempted to kill myself, and I think I really hoped to die.

#### ***How often have you thought about killing yourself?***

0 = Not at all

1 = Rarely

2 = Sometimes

3 = Often

4 = Very often

2. \_\_\_\_ in your lifetime?

3. \_\_\_\_ in the last year?

4. \_\_\_\_ within the last 4 months?

5. \_\_\_\_ within the last month?

6. \_\_\_\_ in the last several days, including today?

#### ***Have you ever told someone that you were going to commit suicide, or that you might do it?***

0 = No    1 = Yes, during one short period of time    2 = Yes, more than one period of time.

2. \_\_\_\_ in your lifetime?

3. \_\_\_\_ in the last year?

4. \_\_\_\_ within the last 4 months?

5. \_\_\_\_ within the last month?

6. \_\_\_\_ in the last several days, including today?

## Appendix D

### Suicide Attempts Items

Please answer the following questions by typing a number into the textboxes. If you did not do something, write a zero (0) in the space.

**In the past year, how many times have you attempted suicide? \_\_\_\_\_**

**Over the course of your life, how many times have you attempted suicide? \_\_\_\_\_**

## Appendix E

### Brief COPE

*Please think of the most stressful thing you are currently experiencing. This can be anything ranging from a medical issue, to a financial problem, to work-related stress, to a recent painful life event, among many other examples. The following items deal with ways you've been coping with this stressor. There are many ways to try to deal with problems. These items ask what you've been doing to cope with this one. Obviously, different people deal with things in different ways, but I'm interested in how you've tried to deal with it. Each item says something about a particular way of coping. I want to know to what extent you've been doing what the item says. How much, or how frequently. Don't answer on the basis of whether it seems to be working or not--just whether or not you're doing it. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.*

	<b>I haven't been doing this at all</b>	<b>I've been doing this a little bit</b>	<b>I've been doing this a medium amount</b>	<b>I've been doing this a lot</b>
I've been turning to work or other activities to take my mind off things.				
I've been concentrating my efforts on doing something about the situation I'm in.				
I've been saying to myself "this isn't real."				
I've been using alcohol or other drugs to make myself feel better.				
I've been getting emotional support from others.				
I've been giving up trying to deal with it.				
I've been taking action to try to make the situation better.				
I've been refusing to believe that it has happened.				
I've been saying things to let my				

unpleasant feelings escape.				
I've been getting help and advice from other people.				
I've been using alcohol or other drugs to help me get through it.				
I've been trying to see it in a different light, to make it seem more positive.				
I've been criticizing myself.				
I've been trying to come up with a strategy about what to do.				
I've been getting comfort and understanding from someone.				
I've been giving up the attempt to cope.				
I've been looking for something good in what is happening.				
I've been making jokes about it.				
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.				
I've been accepting the reality of the fact that it has happened.				
I've been expressing my negative feelings.				
I've been trying to find comfort in my religion or spiritual beliefs.				
I've been trying to get advice or help from other people about what to do.				
I've been learning to live with it.				
I've been thinking hard about what steps to take.				
I've been blaming myself for things that happened.				
I've been praying or meditating.				
I've been making fun of the situation.				

## Vita

Michael Anthony Trujillo was born on May 23, 1985 in East Los Angeles, California and is a United States citizen. He graduated from Granite Hills High School and obtained his high school diploma in 2003. He attended California State University, Long Beach where he graduated *summa cum laude* with a Bachelor of Arts in Psychology in May of 2008. He is a member of Phi Beta Kappa, Phi Kappa Phi, and is a proud Ronald E. McNair Scholar. He is the proud recipient of a Graduate Research Fellowship from the National Science Foundation. He has published numerous manuscripts while he was affiliated with the Health, Emotion, and Addiction Laboratory at the University of Southern California and continues to publish and remain engaged in research while at Virginia Commonwealth University faculty.