Internalized homophobia, alcohol use, and risky sexual behaviors: the buffering role of DBT coping skills

Matthew J. Worhach

University at Albany, State University of New York, mjworhach@gmail.com

The University at Albany community has made this article openly available. Please share how this access benefits you.

Follow this and additional works at: https://scholarsarchive.library.albany.edu/legacy-etal

Part of the Counseling Psychology Commons

Recommended Citation
https://scholarsarchive.library.albany.edu/legacy-etal/1752

This Dissertation is brought to you for free and open access by the The Graduate School at Scholars Archive. It has been accepted for inclusion in Legacy Theses & Dissertations (2009 - 2024) by an authorized administrator of Scholars Archive. Please see Terms of Use. For more information, please contact scholarsarchive@albany.edu.
INTERNALIZED HOMOPHOBIA, ALCOHOL USE, AND RISKY SEXUAL BEHAVIORS:

THE BUFFERING ROLE OF DBT COPING SKILLS

by

Matthew Worhach

A Dissertation Submitted to the
University at Albany, State University of New York
in Partial Fulfillment of the
Requirements of the Degree of
Doctor of Philosophy

School of Education
Department of Educational & Counseling Psychology

2016
Acknowledgements

This research would not have been possible without the mentorship and support of a countless number of people. It is the culmination of my professional training, academic coursework, and personal interests. I would like to express my deep appreciation and gratitude to all of those who have helped me to stay focused, persist, learn, and grow.

I would like to thank Dr. Jessica Martin, my research mentor and dissertation chairperson. Without her commitment this research would not have been possible. I am deeply grateful not only for the countless hours she spent proofreading my writing, but for the patience, kindness, and faith she placed in me to complete this milestone. I am grateful to my co-chairperson Dr. Alex Pieterse and committee member Dr. Frank Dillon who provided thoughtful feedback and valuable insight throughout the process of completing this project. I must also thank Dr. Mike Ellis, Kristin McLaughlin, Julien Almonte, Shantel Powell, Marianne Ball, Patty Sanchez, and Lindsay Martel Buckner for their direction and feedback in the early stages of this research during ECPY 820.

Thank you to my cohort (Snehal, Michelle, Grace, Andi, Katie, and Mike) for being some of the most grounded and genuine people I have ever met. Thank you for always making me laugh and for showing me true friendship. I have learned so much from all of you and there are pieces of you that I will carry with me for the rest of my life. My friends outside of graduate school deserve a thank you for enriching my life and helping me to become the person I am today.

A special thank you to my family for raising me to be myself throughout the endurance challenge of graduate school and for providing me with unwavering support. Their humor gave
me relief during the most trying times. My mom, Maureen, was always available to listen and reminded me of the bigger picture. Thank you to my brothers, Tom and Jim, who continuously reminded me of all the learning that takes place outside of the classroom. Thank you to Olive, who has shown me how to say yes to life. I must thank my father, John, who was a model of the kind of person I strive to be more like every day. Finally, to my boyfriend Matt, I cannot thank you enough for believing in me, inspiring me, and supporting me. You have done so much to help me love and laugh every day.

This dissertation is dedicated to my grandmother, Jean Worhach.
# Table of Contents

Acknowledgements ........................................................................................................... ii

List of Tables .................................................................................................................. vi

Abstract .......................................................................................................................... vii

Chapter 1. Introduction .................................................................................................... 1

  Internalized homophobia, Minority Stress ................................................................. 1

  Coping and Minority Stress ......................................................................................... 3

  Internalized homophobia and Risky Sexual Behaviors ............................................. 5

  Internalized Homophobia and Hazardous and Harmful Alcohol Consumption ......... 7

  Coping as a Moderator between IH and Risky Behaviors, Theories of Coping ............ 9

  Adaptive Coping ......................................................................................................... 11

  Statement of Purpose ................................................................................................. 12

Chapter 2. Method .......................................................................................................... 15

  Participants .................................................................................................................. 15

  Measures ..................................................................................................................... 15

    Internalized Homophobia ......................................................................................... 15

    DBT Coping Skills .................................................................................................. 16

    Risky Sexual Behavior .......................................................................................... 17

    Hazardous and harmful alcohol consumption .................................................... 19

  Procedure ................................................................................................................... 20

  Analysis ....................................................................................................................... 21

Chapter 3. Results .......................................................................................................... 22

  Missing Data .............................................................................................................. 22
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Screening</td>
<td>22</td>
</tr>
<tr>
<td>Descriptive Statistics</td>
<td>23</td>
</tr>
<tr>
<td>Correlations</td>
<td>24</td>
</tr>
<tr>
<td>Hierarchical Regression Analysis</td>
<td>25</td>
</tr>
<tr>
<td>Chapter 4. Discussion</td>
<td>26</td>
</tr>
<tr>
<td>Limitations</td>
<td>33</td>
</tr>
<tr>
<td>Future Directions</td>
<td>33</td>
</tr>
<tr>
<td>References</td>
<td>36</td>
</tr>
<tr>
<td>Appendix A. Nungesser Homosexual Attitudes Inventory – Revised</td>
<td>58</td>
</tr>
<tr>
<td>Appendix B. DBT Skills Subscale of the DBT Ways of Coping Checklist</td>
<td>61</td>
</tr>
<tr>
<td>Appendix C. Sexual Risk Survey</td>
<td>64</td>
</tr>
<tr>
<td>Appendix D. AUDIT</td>
<td>67</td>
</tr>
<tr>
<td>Appendix E. Demographics Questionnaire</td>
<td>69</td>
</tr>
<tr>
<td>Appendix F. Informed Consent</td>
<td>73</td>
</tr>
</tbody>
</table>
List of Tables and Figures

Table 1. Demographic Information………………………………………………………………………………52
Table 2. Pearson Correlations for Demographics and Internalized Homophobia………………55
Table 3. Summary of Hierarchical Multiple Regression Analysis……………………………………56
 of Internalized Homophobia and DBT Coping Skills Predicting Hazardous and Harmful
 Alcohol Consumption
Table 4. Summary of Hierarchical Multiple Regression Analysis……………………………………57
 of Internalized Homophobia and DBT Coping Skills Predicting Hazardous and Risky
 Sexual Behavior
Abstract

Compared to their heterosexual counterparts, gay men suffer from more mental health problems including substance use disorders and risky sexual behavior (Dew & Chaney, 2005; Gilman et al., 2001; Sandfort, de Graaf, Bijl, & Schnabel, 2001; Patton, Su, Nelson, & Weinstock, 2014). Meyer’s (2003) model of minority stress proposes that internalized homophobia leads to negative health outcomes. Meyer proposed coping acts as a moderator of the relation between internalized homophobia and mental health outcomes. The present study extended Meyer’s model by examining the potential moderating effect of a specific type of coping, Dialectical Behavior Therapy coping skills, on the relationships between internalized homophobia and risky sexual behavior and hazardous and harmful alcohol consumption among a sample of 305 gay and bisexual men. An interaction effect was found for internalized homophobia and DBT coping skills on risky sexual behavior. Main effects were not found for internalized homophobia and DBT coping skills on hazardous and harmful alcohol consumption or risky sexual behavior. Findings illustrate the importance of continued research to determine ways to prevent individuals with high rates of internalized homophobia from engaging in risky sexual behaviors and hazardous and harmful alcohol consumption.
Chapter I

Introduction

Homosexuality was removed from the list of mental disorders in the United States in the early 1970s (American Psychiatric Association [APA], 2013). Nevertheless, punitive, discriminatory, and derogatory acts directed at gay individuals are still common and have been linked to negative mental health outcomes (Hatzenbuehler, McLaughlin, Keyes, & Hasin, 2010). Within the past two decades, researchers have increasingly focused on the mental health concerns of gay men. This research has found that compared to their heterosexual counterparts, gay men suffer from more mental health problems including substance use disorders, risky sexual behavior, affective disorders, and suicide (Cochran, 2001; Dew & Chaney, 2005; Gilman et al., 2001; Sandfort, de Graaf, Bijl, & Schnabel, 2001). If gay men are indeed at disproportionate risk for mental distress and psychological disorders, it is important to understand factors that contribute to this risk as well as those that enhance positive mental health outcomes. To that end, this study examined internalized homophobia as a risk factor for hazardous and harmful alcohol consumption and risky sexual behavior, and DBT coping skills as a buffer of those relationships within a sample of gay men.

Internalized Homophobia

Minority Stress. The main explanation offered for higher rates of health risk behaviors within the gay male population is minority stress (Meyer, 1995). Minority stress builds upon the foundation of stress theory, which suggests events and conditions cause change that require an individual to adapt to a new situation or life circumstance (Meyer, 2003). The minority stress model posits that individuals from stigmatized social categories experience excess stress as a result of their social position. This stress partially results from the contrast between minority and
dominant values, as this contrast can lead individuals from stigmatized social groups to experience a sense of alienation from social structures, norms, and institutions (Meyer, 2003).

Meyer (2003) proposed a comprehensive model of minority stress specifically for LGB populations. This model was informed by several sociological and social psychological theories, including Durkheim’s (1951) study of “normlessness” as a cause of suicide and Merton’s (1968) work on stress theory. The model is comprised of three main processes relevant to gay men. From the most distal to the most proximal they are (a) external, objective stressful events and conditions (chronic and acute), (b) expectations of such events and the vigilance this expectation requires, and (c) the internalization of negative societal attitudes. Distal minority stressors do not depend on an individual’s perceptions or appraisals and thus, can be defined as objective stressors, though their recognition by an individual depends on perception and attribution (Operario & Fiske, 2001). Proximal stress processes are more subjective and are heavily influenced by the personal meanings attached to a gay identity (Meyer, 2003).

One component of minority stress with LGB populations is internalized homophobia (IH). Meyer and Dean (1998) defined internalized homophobia as the adoption of negative societal attitudes toward the self, leading to a devaluation of the self, internal conflicts, and poor self-regard. In the absence of overt homophobic and heterosexist events, and even if one’s minority status is successfully masked, lesbians and gay men may be harmed by directing negative social values toward the self (Meyer, 2003).

According to Meyer (1995), the effects of IH will likely be most intensely felt early in the coming out process, which can be defined as disclosing one’s lesbian, gay, or bisexual identity to others (Legate, Ryan, & Weinstein, 2012). However, due to the long-lasting effects of early socialization experiences and the persisting experience of minority stress, IH is viewed as a
potentially lifelong phenomenon (Meyer, 2003). Rates of internalized homophobia appear to be higher in samples of poor, urban men of color when compared to samples of white, middle class men (Shoptaw et al., 2009). Shoptaw and colleagues theorize this finding could be due to disapproval these individuals experience from both minority and dominant cultures.

While much of the literature on internalized homophobia uses samples of men who have sex with men (MSM), a gay male sample was used for this study. In The trouble with MSM, Khan and Khan (2006) argue the term MSM is a reductionist title that is often used to overgeneralize research findings to the broader gay community. The difficulty with using MSM lies within the distinction between identities versus practices, which the term potentially obfuscates if used incorrectly. Meyer’s (2003) model of minority stress was created as a method of encapsulating the experiences of those who claim a lesbian, gay, or bisexual identity. For these reasons, the term gay will be used in inclusion criteria as opposed to MSM.

Coping and Minority Stress. Meyer’s (2003) comprehensive model proposed coping acts as a moderator of the relation between internalized homophobia and mental health outcomes. Meyer (2003) posits that adaptive coping is common and beneficial to gay men. Meyer explains that minority stress is associated not only with stress, but also with important resources, such as adaptive forms of coping that act as resilience to negative mental health outcomes. Meyer further argues that scientists should pay more attention to the capacity for human adaptation in the face of adversity. Indeed, adversity can provide an opportunity for growth and the development of positive coping skills. Meyer suggested gay men with higher rates of internalized homophobia and lower rates of utilizing adaptive coping resources will have higher rates of negative mental health outcomes (including risky health behaviors) when compared to those with high rates of internalized homophobia and high rates of utilizing adaptive
Coping resources. The findings of Szymanski, Kashubeck-West, and Meyer (2008) lend some support to the model in that these authors found that coping with homophobia via internalization was linked to psychological distress in a sample of LGB individuals.

A study on gay and bisexual men found that individuals who utilized maladaptive coping strategies (such as avoidance) engaged in more unprotected anal intercourse than individuals who utilized more adaptive coping strategies, such as emotional distress regulating processes (Martin, Pryce, & Leeper, 2005). The authors cite stigmatization of a gay identity as a possible explanation for utilization of maladaptive coping resources. This study suggests a link between coping strategies and health behaviors of minority individuals. Alan Downs, author of The Velvet Rage: Overcoming the pain of growing up gay in a Straight Man’s World (2012) argues that gay men in particular could benefit from learning to cope with feelings of shame, guilt, and quiet rage through the use of Dialectical Behavior Therapy skills. Hence, this study examines DBT coping skills as a potential moderator of IH and several health-related behaviors.

Internalized homophobia appears to be associated with a range of negative psychological and physical health outcomes, including shame, greater relationship problems, delays in gay identity development, body dissatisfaction, depression and anxiety symptoms, suicidal ideation (DiPlacido, 1998; Frost & Meyer, 2009; Hequembourg & Dearing, 2013; Kimmel & Mahalik, 2005; Meyer & Dean, 1998; Rowen & Malcolm, 2002; Williamson, 2000) and various forms of self-harm, including risky sexual behaviors (Meyers & Dean, 1998). This study examined the relationship between internalized homophobia and hazardous and harmful alcohol consumption, and risky sex behaviors. These particular outcome variables were chosen because of their association with several areas targeted by Dialectical Behavior Therapy coping skills, such as impulsiveness, mindfulness, and emotion regulation.
Internalized Homophobia and Risky Sexual Behaviors

Recent research indicates that gay men are increasingly reporting higher rates of risky sexual behavior in the last several years (Patton, Su, Nelson, & Weinstock, 2014). Risky sexual behaviors can be defined as using drugs or alcohol prior to sex, having multiple partners, engaging in casual sex, and using condoms inconsistently during anal sex (Turchik & Garske, 2010). The Center for Disease Control reported that in 2013, there were 16,663 cases of syphilis reported in the United States, the most elevated rate seen in the country since syphilis was practically eliminated at the beginning of this century. More than 90 percent of reported cases were among either bisexual or gay men (Patton et al., 2014). The increase in syphilis among gay men is a major public health concern, particularly as the manner of transmission also increases the likelihood of acquiring and transmitting human immunodeficiency virus (HIV) (Patton et al., 2014). MacKellar et al. (2005) found that in five of the six U.S. studies sampled, approximately three-quarters of HIV infected MSM\(^1\) who attend MSM venues are unaware of their infection and unknowingly engage in risky sexual behaviors that can transmit HIV to their male partners. Given these high rates of sexually transmitted diseases, it is clear that more research is needed to identify the predictors of sexual risk behaviors among gay men in order to curb infection rates by preventing the acquisition and transmission of the diseases.

Research on the relationship between IH and risky sexual behavior has been decidedly mixed. Some research supports this association in a variety of subgroups and contexts, such that higher levels of IH are associated with increased sexual risk taking (Dew & Chaney, 2005;)

---

\(^1\) The MSM literature will be used to inform the discussion of IH. Shoptaw and Colleagues (2009) found that IH was indeed correlated with low self-esteem and risky sexual behaviors in MSM.
Huebner, Davis, Nemeroff, & Aiken, 2002; Meyer & Dean, 1998; Ratti, Bakeman, & Peterson, 2000; Rosario, Hunter, Maguen, Gwadz, & Smith, 2001. For example, Meyer and Dean (1998) found evidence for a relationship between IH and risky sexual behavior in a sample of young MSM, such that higher levels of IH were related to higher rates of risky sexual behaviors. Evidence suggests that a similar relationship exists between these two variables in adult gay and bisexual men. Specifically, in a sample of Canadian gay and bisexual men of Caucasian and South Asian descent, Ratti et al. (2000) found that IH was inversely related to condom self-efficacy (i.e., the individual’s confidence in the ability to use a condom consistently and correctly) and incidence of unprotected anal and oral sex in both ethnic groups. Huebner et al. (2002) found similar results in a sample of gay and bisexual men, such that IH was inversely related to self-efficacy in the ability to practice safer sex. Alternatively, Kashubeck-West and Symanski (2008) did not find a significant relationship between IH and risky sexual behavior in a well-educated, predominantly Caucasian sample of gay and bisexual men. The authors indicate these results could differ in a sample with higher rates of both risky sexual behavior (RSB) and IH, as rates of both were observed to be low in their sample. These mixed findings call for further study in the area of factors that influence the likelihood of gay men engaging in risky sexual behavior, in order to develop interventions to reduce this behavior. Regardless, it has been noted that there may be one or more moderating variables that affect the relationship between IH and risky sexual behavior, such as manner of coping (Newcomb & Mustanski, 2011).

An important consideration in reviewing the literature on the relation between IH and risky sexual behavior is the fact that there has been a significant increase in acceptance and visibility of the LGB community between the time the first studies of IH were published approximately 30 years ago (Savin-Williams, 2008). For example, the number of Gay/straight
alliances (student-led organizations that are intended to provide a safe and supportive environment for lesbian, gay, bisexual, transgender, and queer/questioning youth and their straight allies) in United States secondary schools rose from 100 in 1995 to more than 3,000 in 2007, and 75% of high school seniors graduating in 2006 favored legalizing same-sex marriage or civil unions (Savin-Williams, 2008). Given this widespread and rapid change to more affirming attitudes towards homosexuality, one may speculate that levels of IH may differ considerably between age cohorts of lesbians and gay men. Still, researchers suggest it is plausible that the increase in visibility of the LGB community has caused homophobic behaviors (i.e., harmful behavior directed at individuals who are believed to be gay or lesbian, or at groups that support such individuals) to become subtler in nature, thus changing the individual’s outward expression of internalized homophobia, while its detrimental effects remain unchanged (Newcomb & Mustanski, 2011). Gay men may attempt to manage these detrimental effects through means of maladaptive coping, including the use of alcohol and other substances (Meyer, 2003).

**Internalized Homophobia and Hazardous and Harmful Alcohol Consumption**

Estimates of alcohol consumption and substance abuse in the lesbian, gay, and bisexual (LGB) community reveal prevalence rates that are about three times higher than in the heterosexual community (Cabaj, 2000). Researchers suggest that lesbians and gay men may also be more susceptible to problems related to their alcohol use (Cochran, Keenan, Schober, & Mays, 2000), including symptoms associated with alcohol dependency. Kus (1988) conducted a series of interviews with 20 gay men in treatment for alcoholism. The results indicated that none of the participants viewed being gay as a positive aspect of himself prior to sobriety.
Furthermore, the participants indicated that maintaining sobriety required acceptance of their sexual orientation. These studies suggest gay identity may affect rates of alcohol use.

Gay men are believed to be at greater risk for hazardous and harmful alcohol consumption because of rejection, stigmatization, and social isolation they may experience due to their sexual identity (Wong, Kipke, & Weiss, 2008). Gay men may use alcohol to cope with stress, which can stem from being part of a socially stigmatized group (Meyer, 1995). This stigmatization is often experienced during childhood for gay men, when a feeling of being the “other” can instill an unconscious sense of shame in the individual (Cabaj, 2000). As children who experience this shame, gay males learn to disconnect from their authentic selves and present a false self, utilizing dissociation and denial as their main defenses (Anderson, 2009). This sense of shame becomes a significant factor in the development of self, which can result in substance use (Anderson, 2009). Theorists have suggested that gay men face a stressful social environment and they likely have internalized (to varying degrees) negative societal attitudes (Meyer, 2003). Means of coping with such stress and IH may involve adaptive coping responses as well as maladaptive responses, such as substance abuse (Kashubeck-West & Szymanski, 2008). Cabaj (2000) suggested substance use and abuse disconnects gay men from feelings of shame and anxiety, provides acceptance, fosters social comfort in bars or unfamiliar settings, facilitates acting on feelings long suppressed or denied, and allows for denial and even blackouts about sexual behavior.

Internalized homophobia is the most often cited factor that may place gay men at greater risk for heavy alcohol consumption (Cochran & Cauce, 2006). While IH has been noted as a potential underlying reason for higher rates of alcohol use, research investigating the link between these two constructs has been insufficient and findings have been inconsistent. To
illustrate, an early study by McKirnan and Peterson (1989) revealed no relation between conflict due to homosexuality and alcohol use among gay men. Amadio (2006) found a significant positive correlation between internalized homophobia and alcohol use for lesbians, but not for gay men. However, Hammelman (1993) found that over 50% of a sample of young gay men and lesbians with a substance abuse problem identified coping with sexual identity as the main reason for this problem. Similarly, Weber (2008) found a significant positive correlation between internalized homophobia and alcohol and/or drug use disorder diagnoses in a sample of lesbians and gay men. A study of poor, urban men of color who have sex with men found a positive relationship between substance use and internalized homophobia (Shoptaw et al., 2009). Span (2009) suggested that inconsistent findings linking IH and alcohol use indicates that other variables may moderate this relation. Hence, this study focused on DBT coping as a moderator between IH and hazardous and harmful alcohol consumption.

Coping as a Moderator between IH and Risky Behaviors

Theories of Coping. Scholars have posited several third variable explanations between internalized homophobia and health behaviors, including hazardous and harmful alcohol consumption and risky sexual behaviors (Meyer, 2003; Meyer & Dean, 1998; Williamson, 2000). When the strength of the relationship between two variables is dependent on a third variable, moderation is said to be occurring (Preacher, Rucker, & Hayes, 2007). Cooper (2006) suggests a person might both drink and engage in risky sexual behaviors because of poor impulse control or coping skills, or in an effort to cope with negative emotions. Cooper, Wood, Orcutt, and Albino (2003) reported that those with low levels of impulse control and high levels of avoidance coping style were more likely to engage in high risk behaviors such as heavy alcohol
consumption and unsafe sex. Thus, it seems that coping may impact alcohol use and risky sexual behaviors.

Minority status is associated not only with stress but also with important resources such as group solidarity and cohesiveness that protect minority members from the adverse mental health effects of minority stress (Postmes & Branscombe, 2002). Previous research has found that adaptive coping is common and beneficial to members of minority groups (Clark, Anderson, Clark, & Williams, 1999). Research by Lazarus and Folkman provides the theoretical framework of stress and coping that guides the way in which these processes are studied today (Folkman et al., 1986; Lazarus & Folkman, 1984). Lazarus (1984) defined adaptation as the psychological process employed to manage environmental demands. Coping may protect individuals by eliminating or modifying the settings that produce stress or by holding the emotional consequences within manageable limits (Zeidner & Hammer, 1990). This framework includes appraisal of stress (internalized homophobia), potential moderators between appraisal and outcomes (coping styles), and consequences of stress (risky health behaviors). Mental health outcomes among gay men have been found to be impacted by negative appraisals of stigma-related stressors (Meyer, 1995). This study will examine DBT skills as a positive coping resource to buffer negative mental health outcomes in order to guard against the stigmatization of sexual minorities.

Adaptive Coping. Defining effective coping is largely influenced by the theoretical model that guides the research. DBT treatment focuses on emotion dysregulation, which stems from deficits in interpersonal, emotion-regulation (including regulation of mood dependent behaviors), and distress tolerance skills (Neacsu, Rizvi, & Linehan, 2010). Linehan (1993) suggested that variation exists in the frequency with which individuals utilize these skills to
regulate emotions. DBT posits one form of adaptive coping that is defined as the ability to inhibit maladaptive mood-dependent behaviors or to initiate behaviors that are independent of current mood and necessary to meet long-term goals (Linehan, 1993). DBT is based on the assumption that skills deficits and insufficient motivation contribute to the failure of individuals to use skillful means in daily life situations, particularly in response to stressful events. Hence, DBT coping skills target emotion dysregulation and its after effects by enhancing motivation and teaching skills aimed at areas of deficit (Neacsiu, Rizvi, Vitaliano, Lynch, & Linehan, 2010). Specific DBT coping skills include mindfulness skills, emotion regulation skills, interpersonal effectiveness skills, and distress tolerance skills (Neacsiu, Rizvi, Vitaliano, Lynch, & Linehan, 2010). Stress and resilience interact in predicting mental disorder, meaning both adaptive coping (presence of DBT skills) and forms of maladaptive coping (alcohol use), can be utilized by individuals experiencing minority stress.

Downs (2012) suggests gay men struggle to compensate for shame with external reinforcements, such as alcohol and risky sexual behaviors, as opposed to utilizing their own self-soothing and distress tolerance skills. Thus, this study will use a measure of coping that specifically taps into DBT skills. Given that the rates of emotional dysregulation in the gay population are higher than heterosexual samples (Hatzenbuehler, McLaughlin, & Nolen-Hoeksema, 2008) studying DBT coping in a sample of gay men will assist in determining if DBT interventions could be used to curb risky health behaviors in this population.

Several studies highlight the importance of DBT skills in the recovery of those suffering from substance abuse, dependence, and those who engage in risky sexual behavior. Fox, Hong, and Sinha (2008) found alcohol-dependent patients struggled with both emotional regulation and impulse control during early alcohol abstinence. Bowen and colleagues (2009) found a
mindfulness-based skills intervention successfully lowered rates of substance use and decreased cravings in a sample of adults with substance use disorders. Additionally, Messman-Moore, Walsh, and DiLillo (2010) found emotion dysregulation was positively correlated to frequency of risky sex with strangers in a sample of college students.

It is likely that individuals who utilize DBT skills at higher rates will have short-term strategies to control impulsive actions (such as engaging in risky sexual behavior while intoxicated), to change emotions (such as shame) quickly, and to change the tendency to respond emotionally in everyday situations (Neacsiu et al., 2010). These individuals will also have higher rates of mindfulness, allowing them to be more fully present when making decisions regarding sexual behavior. Finally, these individuals will generally be more assertive (Neacsiu et al., 2010), permitting them to have a more frank discussion with potential sexual partners about topics which may be considered uncomfortable, such as condom usage, sexual transmitted infections, and HIV status.

**Statement of purpose**

Studies demonstrating the connection between IH and negative health outcomes highlight the need for researchers to address the high rates of these harmful health behaviors among gay men. The connections between IH and hazardous and harmful alcohol consumption and IH and risky sexual behavior have been demonstrated (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Nicely, 2001; Ratti, Bakeman, & Peterson, 2000). It has been suggested that coping serves as a moderator between IH and health risk behaviors (Meyer, 2003). However, no study has tested the moderating effect of DBT coping skills on the relationship between IH and the mental health outcomes of substance abuse and risky sexual behavior. Therefore, the purpose of this study was to examine the relationships between both IH and hazardous and harmful alcohol
consumption and RSB and DBT coping skills as a moderator of those relationships. The focus on adaptive coping as a moderator utilized a strengths-based approach to understanding health compromising behaviors to prevent the stigmatization of a sexual minority group.

With a focus on distress tolerance, mindfulness, emotion regulation, and interpersonal effectiveness, DBT coping skills could potentially act as a protective factor against the impact of IH on both hazardous and harmful alcohol consumption and RSB among a population that can experience a great deal of emotion dysregulation. It was expected that the relationship between IH and hazardous and harmful alcohol use, and risky sexual behavior will be weaker among participants who report using healthier coping skills. That is, those with high rates of internalized homophobia and lower rates of DBT skills may have higher rates of both hazardous and harmful alcohol consumption and RSB, as compared to those with high rates of internalized homophobia and high rates of DBT skills. If DBT skills act as a moderator between both IH and RSB and IH and hazardous and harmful alcohol consumption, those who utilize these coping skills at higher rates will be less likely to report risky sexual behavior and hazardous and harmful alcohol consumption, even if they indicate higher levels of IH.

Two demographic variables were considered as potential covariates. It has been found that young adults are particularly vulnerable to STIs due to higher prevalence of engaging in risky sexual behavior (Weinstock, Berman, & Cates, 2004). Research has also identified college students as a group that typically engages in higher-risk sexual behaviors (Cooper, 2002) and alcohol use (Ham & Hope, 2003). Hence, student status and age were proposed as potential covariates in this study due to the findings in previous literature that found meaningful relationships between these variables and the main outcome variables (i.e., risky sexual behavior and hazardous and harmful alcohol consumption).
This study examined the following hypotheses: (a) a significant positive association will be found between IH and hazardous and harmful alcohol consumption; (b) a significant positive association will be found between IH and risky sexual behavior; (c) DBT coping skills will moderate the relation between IH and risky sexual behavior such that the positive association between IH and risky sexual behavior will be strongest for participants who score lower on DBT coping skills and comparatively weaker for those who score higher on DBT skills; (d) DBT coping skills will moderate the relation between IH and hazardous and harmful alcohol consumption such that the positive association between IH and hazardous and harmful alcohol consumption will be strongest for participants who score lower on DBT coping skills and comparatively weaker for those who score higher on DBT skills.
Chapter II

Method

Participants

The sample initially consisted of 459 total participants. Seventy-one participants provided no data past the demographics questions, and were deleted. Eight cases were dropped for not meeting inclusion criteria, leaving 380 cases. Participants missing data for 20% or more of any particular measure ($N = 75$) were also deleted, leaving 305 cases. In this sample, 94.1% of participants identified as gay, while 5.9% identified as bisexual. With regard to relationship status, 36.4% of participants are currently single, 22.3% are in a relationship, 25.6% are married or in a domestic partnership, 5.2% are divorced, 9.5% are widowed, and 1% listed other as a relationship status. With regard to gender identity, 98.7% of participants identified as men, while 1.3% identified as female-to-male trans men. With regard to race participants identified as White (86.9%), Latino but not black or white (5.2%), Multiracial (3.3%), East Asian/Pacific Islander (1.6%), American Indian (1.6%), Black/African American (.3%), Middle Eastern/West Indian (.3%), and Other (.7%). Participants ranged in age from 18 to 86 years old ($M = 52.74, SD = 19.72$). Additional descriptive statistics can be found in the Table 1.

Measures

**Internalized homophobia.** Shidlo’s (1994) Nungesser Homosexuality Attitudes Inventory-Revised (NHAI- Revised) is a 36- item self-report questionnaire designed to assess internalized homophobia in gay men along three dimensions: Attitudes toward one’s own homosexuality (self), attitudes toward homosexuality in general and toward other gay persons (other), and reaction toward others’ knowing about one’s homosexuality (disclosure) (see Appendix A). Example items include “I wish I were heterosexual” and “If it were made public
that I am homosexual, I would be extremely unhappy.” Each statement is rated on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). Higher scores indicate more IH, with raw scores ranging from 36 to 157. Summed scores are divided by the number of items to create the total score for this measure. While it is possible to create subscale scores, most studies assessing IH using this measure utilize the total score (Cohen, 2014). For this reason, the total score was used to assess IH in the present study.

The NHAI-Revised has been considered one of the most comprehensive, empirically validated, psychometrically sound, and widely used measures of internalized homophobia in gay men with primarily European-American samples (Mayfield, 2001; Szymanski, Kashubeck-West, & Meyer, 2008). The NHAI Revised has been used with racial and ethnic minority populations (Rosario, Schrimshaw, & Hunter, 2004). The instrument has demonstrated adequate convergent validity and has been correlated with various psychosocial variables, such as psychological distress, self-esteem, and social support (Cohen, 2014; DeLonga et al., 2011; Shidlo, 1994). The NHAI-Revised has also demonstrated internal consistency reliability, typically ranging from .9 to .92 (Cohen, 2014; DeLonga et al., 2011; Shidlo, 1994). In this study, the NHAI-Revised demonstrated good internal consistency reliability (Chronbach’s α = .89).

**DBT coping skills.** Neacsiu, Rizvi, Vitaliano, Lynch, and Linehan (2010) created the DBT Ways of Coping Checklist (DBT-WCCL), which contains the 38-item DBT Skills Subscale (DSS) (see Appendix B). Scores on the DSS subscale range from 0 to 114 with higher scores indicating higher levels of DBT coping skills. For each item, participants are asked to check the appropriate number on a four-point Likert scale if the thought or behavior in question is 0 (never used) to 3 (regularly used) (i.e., at least four-five times per week). The total score was used to assess DBT Coping skills among participants.
The DSS has demonstrated content validity through agreement between raters in items assessing for measurement of various DBT-related skills, such as reality acceptance, mindfulness, emotion regulation, interpersonal effectiveness, and crisis survival. Agreement between raters on items representing specific DBT skills modules was high and the DSS was found to have good temporal stability in test-retest analyses after four months (Neacsiu et al., 2010). The DSS subscale was found to have excellent internal consistency, with alphas ranging from .92 to a .96 in a sample of men and women with a borderline diagnosis (Neacsiu et al., 2010). Linehan et al. (2002) found DSS internal consistency reliability estimates to be .96 for a sample of individuals with a borderline diagnosis and comorbid drug dependence and .92 for a sample of individuals with a borderline diagnosis (Linehan et al., 2006). In this study, the DSS demonstrated adequate reliability (Chronbach’s α = .90). Individuals who received DBT skills training had significantly higher scores after four months of treatment than individuals who did not receive skills training, supporting the criterion validity of the measure (Neacsiu et al., 2010). No studies were found that have used this measure on LGBT samples, but the measure has been used on adult samples, including those who abuse substances (Linehan et al., 2002).

**Risky sexual behaviors.** The 23-item Sexual Risk Survey (SRS) (Turchik, 2007) was used to assess the frequency with which participants engaged in a broad range of sexual risk behaviors in the past six months (see Appendix C). Each item describes a different sexual behavior. The SRS asks participants to write the number of times they had “‘hooked up’ but not had sex with someone you didn’t know or didn’t know well,” “gone out to bars, parties, social events with the intent of ‘hooking up’ and having sex with someone,” and “had anal sex without a condom” (Turchik et al., 2007). Raw item responses are then recoded from zero to four using a key Turchik et al. (2014) developed (1 = 40% of responses, 2 = 30% of responses, 3 = 20% of
responses, and 4 = 10% of responses in a multiuniversity sample) with a possible total score ranging from 0 to 92, where higher scores represent greater sexual risk taking. All items may be summed in order to obtain a reliable global score representing sexual risk taking (Turchik, 2007), which was used in the present study.

The SRS demonstrated evidence of convergent and concurrent validity by its relationship with a number of other measures predicted to be related to sexual risk behaviors based on past literature, including the Sexual Excitation Scale, the Sexual Inhibition Scale, health consequences within the past 6 months, and lifetime health consequences (Turchik et al., 2008). In undergraduate male students, the same pattern emerged with sexual risk taking being positively related to health consequences for the past 6 months and lifetime (Turchik, 2007). Turchik (2007) found that sexual risk taking over the past 6 months was positively related to lifetime number of vaginal sex partners, lifetime number of oral sex partners, lifetime number of anal sex partners, weekly alcohol use, problem drinking, drug use, impulsive sensation seeking, and sexual excitation for men in a sample of undergraduate men and women. These findings demonstrate adequate convergent validity for the sexual risk survey and support the measure’s concurrent validity.

The Sexual Risk Survey has demonstrated adequate reliability. The 2-week test–retest reliability for the total for male and female undergraduate students was .93 (Turchik, 2007). The internal consistency of the total score on the Sexual Risk Survey with all 23 items in a sample of male and female undergraduate students was α = .88 (Turchick & Garske, 2008). Other studies with male and female college students have found internal consistency values to range from α = .82 to .90 (Fulton, Marcus, & Payne, 2010; Marcus, Fulton, & Turchik, 2011; Turchik, 2012).
In this study, the SRS demonstrated adequate reliability (Chronbach’s α = .91). To this author’s knowledge, this measure has not been used exclusively on a sample of gay and bisexual men.

**Hazardous and harmful alcohol consumption.** The Alcohol Use Disorders Identification Test (AUDIT) was developed from a World Health Organization project as a brief screening instrument for hazardous and harmful alcohol consumption, drinking behavior, and alcohol related problems (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993) (see Appendix D). This instrument was intended for the early identification of hazardous and harmful drinking as well as alcohol dependence. It was created to distinguish low-risk drinkers from those with harmful drinking. The measure contains three domains: hazardous use (frequency of drinking, quantity of drinks), dependence symptoms (impaired control over drinking), and harmful use (guilt after drinking, blackouts, alcohol-related injuries) (Berner, Kriston, & Bentele, 2007).

The measure contains 10 questions and responses to each question are scored from 0 to 4, giving a maximum possible total score of 40. The anchors for each question differ based on content, with question 1 (“How often do you have a drink containing alcohol?”) ranging from 0 (*never*) to 4 (*4 or more times a week*). Question 2 (“How many drinks containing alcohol do you have on a typical day when you are drinking?”) ranges from 0 (*1 or 2*) to 4 (*10 or more*). For questions 3 to 8, the anchors range from 0 (*never*) to 4 (*daily or almost daily*). The anchors of questions 9 and 10 range from 0 (*no*) to 4 (*yes, during the last year*). Total scores for all items ranging from 0 to 7 indicate a low level of hazardous and harmful alcohol use, scores ranging between 8 to 15 indicate medium severity of hazardous and harmful alcohol use, and scores of 16 or above indicate a high level of hazardous and harmful alcohol use. Given that the proposed
study is interested in each participant’s hazardous and harmful alcohol use, total scores were used.

In comparison to other alcohol disorder screening tests, the AUDIT has been found to perform equally well or at a higher degree of accuracy, has been used in an array of studies with diverse populations, and has consistently been shown to be psychometrically sound (Allen, Litten, Fertig, & Babor, 1997). The AUDIT has also been used in samples of lesbians, gay men, and bisexual older adults and has been found to have adequate internal consistency reliability (α values ranging from .77 to .8) and test-retest reliability (.84) (D’Augelli & Grossman, 2001; Hamilton & Mahalik, 2009; Selin, 2003). In this study, the AUDIT demonstrated adequate reliability (Chronbach’s α = .79).

Procedure

Participants were recruited from a variety of sources to obtain sample that represents gay men of various socioeconomic levels and racial/ethnic backgrounds. Participants were recruited from gay organizations (e.g., college campus LGB groups, LGB professional mixers, gay rights political advocacy groups, LGB senior citizen groups, gay sports teams, LGB writers groups) via email to complete an online survey on Psychdata.com. Participants were also recruited via face-to-face interactions in popular LGB bars. Recruitment in these venues required contacting individual locations and requesting permission for recruitment and then going to each venue with a small team of gay male research assistants to hand out small slips of paper with the study link. Individuals interested in participating could simply type the link into their browser to access the online survey. Requests to participate were also posted on the Facebook page of the first author and were sent to Facebook contacts who met inclusion criteria.

The survey consisted of items from each of the aforementioned measures, and a
demographic questionnaire (see Appendix E). Before beginning the survey, participants were presented with an informed consent page that detailed the purpose of the study, relevant IRB approval information, and their rights as participants. After completing the online questionnaires, participants were given the opportunity to link to a database separate from their survey responses where they could provide their contact information if they were interested in entering a raffle to receive one of 15 $10 gift cards to amazon.com as compensation for their time.

Analysis

Two separate hierarchical multiple regressions were used to test the interaction between IH and DBT coping skills in predicting RSB and hazardous and harmful alcohol consumption. To formulate the regression equation, the predictor (IH) and moderator (DBT skills) variables were centered to reduce problems associated with multicollinearity among variables in the regression equation (Frazier, Tix, & Baron, 2004). This was done by putting variables into deviation units by subtracting their sample means to produce revised sample means of zero. Product terms were then created by multiplying the predictor and moderator variables to represent the interaction between the predictor and moderator. Variables were entered into the regression equation through a series of steps, with covariates entered on the first step, followed by the predictor variable and moderator variable on the second step, and the product terms (i.e., interaction) on the third step (Frazier et al., 2004).
Chapter III

Results

Missing Data

Four hundred and fifty-nine participants logged on to the survey. Seventy-one participants provided no data past the demographics questions, and were deleted. Seven cases were removed because the respondents did not identify as bi-sexual or gay and one case was dropped because the respondent was not male, leaving 380 cases. Participants missing data for 20% or more of the specific scales ($N = 75$) were also deleted, leaving 305 cases. Finally, data were imputed at the scale level with SPSS software using the median point for each item response for participants who were missing less than or equal to 20% of the values on any particular scale (i.e. NHAI, SRS, DSS, and AUDIT). Wilkinson and the American Psychological Association Task Force on Statistical Inference (1999) stated that in most occasions, the minimally sufficient analysis should be used in research to impute values for missing cases. Parent (2013) found no major difference between traditional methods of handling item level missing-data (i.e. replacement using median values of each item) and more complex methods of missing data replacement in terms of mean values, variability, correlations, or Cronbach's alpha internal reliability coefficients. Median values, as opposed to mean value were used for missing-case imputation, as the mean value of the SRS scale was skewed by a small number of outliers. No additional participants were excluded.

Data Screening

Data were screened for the assumptions of regression (i.e. normality, linearity, and homoscedasticity). In order to assess normality, frequency histograms were created and z-scores were calculated for each variable. While the SRS does not include a Likert-type scale for
responses, all given values are recoded into a 0-4 rating scale. Thus, all measures included in the study have upper bounds defined by Likert-type scales or recoded scales. For this reason, it was deemed inappropriate to delete univariate outliers as $z$-scores in excess of 3.38 simply identified participants who selected the highest Likert-value on a particular scale. Choosing the highest Likert-value on any of the scales included in the present study does not suggest inaccurate or inflated responses, but simply indicates a high level of a particular behavior or quality. Scores for AUDIT demonstrate a significant positive skew (1.64), as it is greater than three times the standard error of skewness (.14). Scores for the AUDIT reach the significance threshold for kurtosis (3.89), as they are greater than three times the standard error for kurtosis (SE = .28). Scores for the NHAI-revised were also positively skewed (1.02, SE = .14) and reached significance threshold for kurtosis. Scores for the SRS were significantly positively skewed, with skewness of .868 (SE = .14), but did not reach significance threshold of kurtosis, with kurtosis of .258 (SE = .28). Scores of the DSS were normally distributed, with skewness of -.18 (SE = .14) and kurtosis of .70 (SE = .280. Data were screened for the assumption homoscedasticity by examining residual scatterplots. There was some evidence for heteroscedasticity, such that as the variance of $Y$ increased, the mean of $Y$ increased. This is a common form of heteroscedasticity and when the degree of this type of heteroscedasticity is not severe, multiple regression analysis is robust to this violation (Tabachnick & Fidell, 2007). Given the significant positive skew of both the AUDIT and NHAI-revised, these variables were transformed using log base 10 transformations to correct the positive skew. After the data transformation, the AUDIT scores were normally distributed, with skew of -.13 (SE = .15) and kurtosis of -.73 (SE = .30). A log base 10 transformation did not correct the skew of the NHAI-revised, so a reciprocal transformation was used. After the reciprocal transformation, the NHAI-
revised scores were normally distributed, with skew of -.05 (SE = .14) and kurtosis of -.64 (SE = .28). Given that the SRS included zero values, a natural logarithm transformation with addition of a constant was performed. After this transformation, the SRS scores were normally distributed, with skew of -.40 (SE = .14) and kurtosis of -.84 (SE = .28).

Descriptive Statistics

The mean score on the AUDIT before transformation was 4.33 ($SD = 4.0$), which falls into the low risk level of harmful or hazardous drinking. Scores on the AUDIT ranged from 0 to 24. The mean raw score on the DSS was 109.6 ($SD = 14.76$), while the mean response score was 2.89 ($SD = .39$). These scores indicate the level of DBT coping skills in this sample is high in comparison to rates of DBT coping skills measured in samples of individuals with a borderline diagnosis (Neacsiu, Rizvi, Vitaliano, Lynch, & Linehan, 2010; Neacsiu, Rizvi, & Linehan, 2010). The mean raw score on the NHAI before transformation was 56.03 ($SD = 12.06$) and the mean response score was 1.56 ($SD = .35$), which is similar to that of other adult gay male samples using this measure (Biss & Horne, 2005; Nicely, 2005; Shidlo, 1994). The mean score on the SRS before transformation was 19.28 ($SD = 16.35$). While cut-offs do not exist for “low” to “high” scores for the SRS, the mean score in this sample was similar to or less than the mean for other samples of men in the general population (Turchik & Garske, 2009; Turchik et al., 2010). A series of t-tests were conducted to compare differences between demographic variables and main study variables. There was a significant effect for sexual orientation and DBT coping skills scores, $t (305) = 2.10, p = .04$, with gay men receiving higher scores ($M = 109.85, SD = 15.07$) than bisexual men ($M = 105.61, SD = 7.5$). Levene’s test for equality of variances was violated, $F (1,303) = 5.55, p = .02$. Owing to this violated assumption, the $t$ statistic not assuming homogeneity of variance was used. There was a significant effect for sexual orientation and
internalized homosexuality, $t(303) = 5.61, p < .01$, with bisexual men receiving higher scores ($M = .02, SD = .00$) than gay men ($M = .01, SD = .00$). Levene’s test for equality of variances was not violated for this analysis, $F(1,303) = 1.31, p = .25$. There was a significant effect for sexual orientation and risky sexual behavior, $t(305) = .02, p < .01$, with bisexual men receiving higher scores ($M = 3.49, SD = .53$) than gay men ($M = 2.77, SD = .85$). Levene’s test for equality of variances was violated for this analysis, $F(1,303) = 6.66, p < .01$, so the $t$ statistic not assuming homogeneity of variance was used.

**Correlations**

Bivariate correlations were calculated between demographic variables and the main study variables to test for differences between demographic variables (see Table 2). There were significant correlations between hazardous and harmful alcohol use (i.e., total scores on the AUDIT) and age, student status, location, and relationship status ($r = -.36, -.15, -.23$ and $.18$ respectively). There were significant correlations between risky sexual behavior (i.e., scores on the SRS) and age, sexual orientation, and harmful alcohol consumption ($r = -.20, .21, .15$ respectively). Additionally, there were significant effects for IH and DBT coping skills, sexual orientation, and education ($-.15, -.26$, and $.15$ respectively).
Hierarchical Regression Analysis

Harmful alcohol consumption. A hierarchical multiple regression analysis was used to test if DBT coping skills moderated the relationship between IH and harmful alcohol consumption. Age was entered on step 1 as a covariate. Despite the significant correlation between student status and hazardous and harmful alcohol use, student status was not entered as a covariate, as the variable of age overlaps greatly with student status ($r = .49$) and was controlled for in the analysis. IH and DBT skills were entered on Step 2 to account for main effects on harmful drinking. The interaction between IH and DBT skills was entered on Step 3. The interaction effect was not significant and did not account for a significant increase in the explained variance of hazardous and harmful alcohol consumption $\Delta F(1, 237) = 1.93, p = .17$ $\Delta R^2 = .01$. Step 2 did not account for a significant increase in the explained variance of hazardous and harmful alcohol consumption $\Delta F(2, 238) = .12, p = .88, \Delta R^2 = .00$ (see Table 2). There were no significant main effects for internalized homophobia ($b = -.02, p = .59$) or DBT coping skills ($b = -.03, p = .77$).

Risky sexual behavior. A second hierarchical multiple regression analysis was used to test if DBT coping skills moderated the relationship between IH and risky sexual behavior. Age was again entered on step 1 as a covariate. IH and DBT skills were entered on Step 2 to account for main effects on risky sexual behavior. The interaction between IH and DBT skills was entered on Step 3. The interaction effect was significant but explained only 1.4% of the variance in risky sexual behavior $\Delta F(1, 273) = 4.00, p = .047$ $\Delta R^2 = .01$. Given the marginal variance explained by the interaction effect, the interaction effect was not interpreted further and a simple slopes analysis was not conducted.
Chapter IV

Discussion

The present study examined an extension of Meyer’s (2003) comprehensive model of minority stress that proposed coping acts as a moderator of the relationship between internalized homophobia and mental health outcomes. Specifically, DBT coping skills were examined as a potential moderator between internalized homophobia and two outcome variables: risky sexual behavior and harmful alcohol consumption. While the literature examining the relationship between alcohol and internalized homophobia has been mixed (Amadio, 2006; Cochran & Cauce, 2006; Shoptaw et al., 2009; Weber, 2008), Span (2009) suggested that inconsistent findings linking IH and alcohol use indicates that other variables may moderate the relationship. Literature examining risky sexual behavior and internalized homophobia has also reported mixed results (Dew & Chaney, 2005; Huebner, Davis, Nemeroff, & Aiken, 2002; Meyer & Dean, 1998). DBT coping skills was chosen as a potential moderator due to previous literature suggesting this particular form of coping may alleviate rates of internalize homophobia in gay men (Downs, 2012). It has been previously suggested that gay men may benefit from learning DBT skills as a means of coping with internalized homophobia. This study is the first to examine the potential moderating effects of participants’ existing DBT skills on the relationship between internalized homophobia and health outcomes.

The present study improved upon recruitment efforts of previous studies by recruiting participants from a wide variety of sources (e.g., social media platforms, gay bars, college campuses, LGBT senior citizen groups) to improve generalizability of findings. The sampling methods resulted in a relatively large sample which was in some ways homogenous (e.g. racially, skewed toward a higher income bracket) but diverse relative to other studies in regards to the
Inclusion of both gay and bisexual men, students and non-students, and a wide range of ages (18-86). While studies have examined the relationship of IH to risky sexual behavior and hazardous and harmful alcohol consumption, little research has been conducted in the area of coping strategies for managing IH (Szymanski, Kashubeck-West, & Meyer, 2008). This study attempted to use the strengths-based paradigm to do more than simply point out problematic health behaviors of a minority population. Examining the buffering effect of coping skills upon the relationship of IH to health behaviors can help to identify a method to alleviate the negative outcomes of these health behaviors. More importantly, a strengths-based approach that focuses on a potential solution to the negative outcome of these behaviors avoids pathologizing the behaviors of a minority community. Meyer (2003) noted that inhabiting a ‘deviant status’ does not necessarily infringe upon gay men’s day-to-day functioning and urged scientists to examine the human capacity for adaptation, as opposed to the ‘negative’ aspects of being a minority.

An interaction effect was found for IH and DBT skills on RSB, such that high levels of both IH and DBT skills was associated with lower rates of RSB. While the interaction effect was significant, the low level of variance accounted for by the interaction effect indicates the moderating effect should be interpreted with caution. A larger sample size would have increased power for the analyses and may have accounted for a greater level of variance in RSB. Main effects were not found for internalized homophobia and DBT coping skills on hazardous and harmful alcohol consumption or on risky sexual behavior. The present findings challenge theory in the sense that Meyer’s (2003) proposed model of minority stress was not fully supported. This could be due to limitations of the present study, uniqueness of the sample, or because the proposed moderating effects of coping between IH and mental health outcomes do not appear as theorized.
There are several potential reasons for why both DBT coping skills did not moderate the relationship between IH and hazardous harmful consumption and why the level of variance accounted for by the interaction effect for IH and DBT skills on RSB was so low. Research on coping mechanisms among LGB populations and their buffering effect on negative mental health outcomes has conceptualized and measured coping in different ways than the present study (Martin et al. 2005; Nicholson, & Long, 1990; Szymanski et al., 2008). Previous literature has examined both adaptive and maladaptive coping in relation to internalize homophobia, while the present study focused entirely on adaptive coping. It is quite possible that maladaptive coping would moderate the relationships between IH and alcohol use. Alternatively, this measure of DBT coping skills may be too specific a measure of adaptive coping to find support for the moderating effect for alcohol use. Perhaps a broader measure of adaptive coping would buffer the proposed main effects for alcohol use and accounted for a larger amount of variance in RSB in the study. Additionally, a larger sample size would have increased power and may have yielded a stronger effect for the interaction of DBT skills and IH on RSB. While DBT coping skills have been found to be effective for curbing impulse-related behaviors, such as the outcome variables for this study, these studies are often focused on individuals with more severe psychopathology, specifically borderline personality disorder (Linehan, 1993; Neacsiu, et al., 2010). The present study included a sample of men who reported relatively high levels of DBT coping skills. While psychopathology was not assessed within the present sample, it is reasonable to assume that there would be lower levels of Borderline Personality Disorder (BPD) traits in this sample, compared to the studies of Linehan et al. (2002, 2006) with clinical samples of clients in treatment for BPD. It is possible that an interaction between levels of IH and DBT coping skills may have yielded a stronger interaction effect for RSB in a sample with higher rates
of psychopathology and lower rates of utilizing adaptive coping skills, as this would be a sample that more closely fits those widely studied within a DBT framework (Linehan, 1993; Neacsiu, et al., 2010). The restricted range of scores in DBT coping skills is problematic for observing potential correlations, as a variable must be allowed to vary widely in order to accurately observe its relation to another variable.

In the Velvet Rage, Alan Downs (2012) suggests that active change will only occur for individuals with high levels of internalized homophobia when coping skills are actively practiced. This suggests a pre-post experimental design in which coping skills are actively taught and enforced would lend itself well to examine the moderating effect of DBT coping skills on examined relationships. As this study examined current coping skills with no control group or educational component, there was no way to determine how focused practice of these skills would have affected the moderating effect. Indeed, Downs suggests gay men meeting with other weekly to discuss struggles with shame and how to practice positive-coping can hold individuals accountable and encourage a vigilant attitude towards managing IH.

Another unique aspect of this sample that potentially could explain lack of low level of variance accounted for by the interaction effect is participants’ age. Participants in this sample were older ($M = 52.74$) than participants included in other research on IH and harmful alcohol consumption or risky sexual behavior (McKirnan and Peterson, 1989; Amadio, 2006; Hammelman, 1993; Weber, 2008; Dew & Chaney, 2005; Huebner, et al., 2002; Meyer & Dean, 1998; Ratti et al., 2000; Rosario, et al., 2001). Using the SRS as a measurement of risky sexual behavior among this older sample could have influenced the results. The SRS is a measure that is largely used in college-settings (Turchik et al., 2010) and may have been ill-fitted for use with an older population. Age was also the only consistent predictor of both outcomes variables in the
present study. Age had a modest negative correlation with both risky sexual behavior and harmful alcohol consumption (-.37, -.19 respectively), indicating that older participants were less likely to engage in these risky health behaviors. A younger sample may have shown higher rates of the outcome variables.

Other than age, the sample is unique in several ways. The sample consisted of 18.1% of people who earn over $150,000 per year, which is higher than other samples of related studies (Huebner et al., 2002; Dew et al., 2005; Herrick, et al., 2013, Rosario et al., 2001; Meyer et al., 1998). This may have impacted the rates of harmful alcohol consumption in the present sample, as previous research has found lower to average socio-economic status groups are at greater risk of drinking heavier quantities (Huckle, Quan You, & Casswell, 2010). The present sample also appears to have a much higher representation of those with advanced degrees than other samples in related literature (Meyer et al., 1998; Herrick et al., 2013, Rosario et al., 2001; Dew et al., 2005; Huebner et al., 2002) and had a larger representation of White participants than related samples (Meyer et al., 1998; Dew et al., 2005; Ratti et al., 2000; Herrick, 2013). This may have created a meaningful difference in rates of harmful alcohol consumption in the sample, as both those without college degrees and white individuals been found to be at higher risk of developing alcohol dependence (Grant et al., 2004). This sample also had an underrepresentation of those living in urban areas and had a larger percentage of individuals from suburban areas, compared to other samples (Dew et al., 2005). This may have influenced the rates of harmful alcohol consumption, as individuals living in rural areas have been found to be at a higher risk of developing alcohol dependence (Borders & Booth, 2007).

While the moderating effect of DBT coping skills on IH and RSB should be interpreted with caution, the results included several important findings. A modest negative correlation was
found between internalized homophobia and DBT coping skills. Additionally, it is possible that main effects were not found for hazardous and harmful alcohol consumption due to the relatively low rates of this health behavior in the present sample. A sample with more variability in rates of harmful alcohol consumption may yield different findings. It is also possible that while previous studies have found support for the relation between harmful alcohol consumption and IH, this effect may now be weakened due to lower levels of societal stigma towards homosexuality as compared to studies that examined these relationships more than several years ago (Hammelman, 1993; Gus, 1988).

Finally, the present study found that bisexual individuals demonstrated higher levels of internalized homophobia. This is a striking finding, given that the NHAIR-revised used language that specifically targets lesbian and gay individuals. It is possible there were some bisexual participants who felt more comfortable adopting the label of bisexual as opposed to gay due to potential perceived stigma of adopting a gay identity. It is also possible that bisexual individuals felt they may be “at the margins” of both gay and straight communities, thus leading to feelings of isolation and less opportunity to integrate into either community. Indeed, research has found that bisexual individuals may face stigma and isolation from both straight and gay individuals (Balsam & Mohr, 2007).

Limitations

The present study was not without limitations. One limitation to this study is self-selection bias, as individuals’ willingness to participate in a study about internalized homophobia may represent a cohort of individuals who are perhaps more motivated to alleviate the impact of oppression on mental health. Social desirability may have affected participants’ responses, given
that some participants may feel uncomfortable disclosing high rates of alcohol use, risky sexual behavior, or endorsing items that suggest internalized homophobia. Many of the items were highly personal in nature, including asking questions about prior suicidality. While participants completed the study online at their leisure in an attempt to reduce social desirability, many individuals may have chosen not to participate due to the delicate nature of the questions and the social discomfort that may have arisen upon seeing some of the questions. The timelines included in each measure were also incongruent, as the DSS assessed for current behaviors, while the SRS and AUDIT assessed for behaviors in the past six months. Mono-method bias was a limitation of this study due to the reliance upon self-report data as the only form of assessing the proposed models (Kerlinger & Lee, 2000). As described in the general discussion, this study was also limited in its generalizability by the uniqueness of the sample. The present sample was largely white and older, which likely influenced the rates of RSB, hazardous alcohol consumption, and levels of IH found in the study. Previous literature has indicated men of color are more likely to report higher levels of IH and higher rates of risky sexual behavior (Malebranche, Fields, Bryant, & Harper, 2007; Mizuno et al., 2012; Shoptaw et al., 2009).

**Future Directions**

While the present study found an interaction effect that should be interpreted with caution, the results do shed light on how future studies can improve upon the present study. One interesting finding of the study was the higher levels of internalized homophobia seen within bisexual male participants. Given that internalized homophobia was only conceptualized as a phenomenon affecting lesbian and gay individuals (Meyer, 2003) this finding challenges traditional conceptualizations of internalized homophobia, and calls for further research on how internalized oppression may affect a population potentially at greater risk for developing
maladaptive coping due to minority stress. These findings suggest any interventions designed to mitigate levels of IH in sexual minorities may benefit from targeting bisexual men. Additionally, a future study with a larger sample size may demonstrate an interaction effect accounting for a larger amount of variance in RSB.

Future research in this area could improve upon the present study by making efforts to make the sample more representative of the U.S. population of gay men. Specifically, recruiting more participants of color, participants of various socio-economic backgrounds, participants from different parts of the country, and participants of a broader range of ages would increase the generalizability of the findings. Future studies could use various measures of coping to detect if other forms of coping would buffer the impact of internalized homophobia on harmful alcohol consumption. Additionally, the measure of DBT coping utilized in this study may be better applied to a cohort of lower-functioning gay men or gay men with more severe psychopathology, given that the measure of DBT as a form of treatment was designed for lower-functioning individuals (Neacsiu et al., 2010). Future studies could create a measure designed specifically for use with sexual minority communities. Such a measure could include language more focused on venues and means of sexual behavior in gay and bisexual men (i.e. traditionally bathhouses, restrooms, and public parks, but more recently bars, clubs, and use of dating and hook-up mobile applications and websites). The measure could also use targeted language to focus on sexual acts more specific to gay and bisexual men (i.e. barebacking, bottoming, double penetration). Researchers may also wish to examine other mental health outcomes while still using the proposed model, such as examining how coping may moderate the relationships between IH and depression and anxiety. Additionally, an experimental pre/post design could be used in which some participants are taught DBT coping skills and others are not. This design could be used to
determine if teaching DBT coping skills better mitigate risky alcohol use and risky sexual behavior. These variables may include other forms of adaptive coping the present study did not include, such as utilizing social support.
References


Neacsiu, A. D., Rizvi, S. L., & Linehan, M. M. (2010). Dialectical behavior therapy skills use as a mediator and outcome of treatment for borderline personality disorder. *Behavior Research and Therapy, 48*, 832-839. doi.org/10.1016/j.brat.2010.05.017


doi: 10.1177/0146167201275004


doi.org/10.1037/0012-1649.44.1.135


Results from a study based in England and Wales. *British Journal of Psychiatry*, 185, 479-485. doi.org/10.1192/bjp.185.6.479


Table 1

Demographic Information

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highest Level of Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>90</td>
<td>29.5%</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>84</td>
<td>27.5%</td>
</tr>
<tr>
<td>Some College/No Degree</td>
<td>50</td>
<td>16.4%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>29</td>
<td>9.6%</td>
</tr>
<tr>
<td>Associate’s Degree</td>
<td>20</td>
<td>6.6%</td>
</tr>
<tr>
<td>Professional Degree</td>
<td>11</td>
<td>3.6%</td>
</tr>
<tr>
<td>Trade/Technical/Vocational School</td>
<td>10</td>
<td>3.3%</td>
</tr>
<tr>
<td>High School Graduate/Diploma</td>
<td>9</td>
<td>3%</td>
</tr>
<tr>
<td>Student Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Student</td>
<td>268</td>
<td>87.9%</td>
</tr>
<tr>
<td>Full-time</td>
<td>26</td>
<td>8.6%</td>
</tr>
<tr>
<td>Part-time</td>
<td>10</td>
<td>3.3%</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$25,000-$50,000</td>
<td>93</td>
<td>31.2%</td>
</tr>
<tr>
<td>Over $150,000</td>
<td>54</td>
<td>17.7%</td>
</tr>
<tr>
<td>$50,000-$75,000</td>
<td>48</td>
<td>16.1%</td>
</tr>
<tr>
<td>$75,000-$100,000</td>
<td>47</td>
<td>15.8%</td>
</tr>
<tr>
<td>$100,000-$150,000</td>
<td>32</td>
<td>10.7%</td>
</tr>
<tr>
<td>Less than $25,000</td>
<td>24</td>
<td>8.1%</td>
</tr>
<tr>
<td>Location Type</td>
<td>Count</td>
<td>Percentage</td>
</tr>
<tr>
<td>----------------</td>
<td>-------</td>
<td>------------</td>
</tr>
<tr>
<td>Urban</td>
<td>178</td>
<td>58.4%</td>
</tr>
<tr>
<td>Suburban</td>
<td>109</td>
<td>35.7%</td>
</tr>
<tr>
<td>Rural</td>
<td>17</td>
<td>5.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geographic Location</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>99</td>
<td>32.6%</td>
</tr>
<tr>
<td>South</td>
<td>94</td>
<td>30.9%</td>
</tr>
<tr>
<td>West</td>
<td>65</td>
<td>21.4%</td>
</tr>
<tr>
<td>Midwest</td>
<td>39</td>
<td>12.8%</td>
</tr>
<tr>
<td>Not in U.S.</td>
<td>7</td>
<td>2.3%</td>
</tr>
</tbody>
</table>
Table 2

**Pearson Correlations for Demographics and Internalized Homophobia**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. IH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. DBT</td>
<td>.15**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Age</td>
<td>.04</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sexual</td>
<td>-.26**</td>
<td>-.09</td>
<td>.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Ethnicity</td>
<td>.08</td>
<td>-.03</td>
<td>.28**</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Education</td>
<td>.15*</td>
<td>-.03</td>
<td>.08</td>
<td>-.07</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Student</td>
<td>.09</td>
<td>.06</td>
<td>.49**</td>
<td>.05</td>
<td>.24**</td>
<td>.14*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Income</td>
<td>.03</td>
<td>.01</td>
<td>.11</td>
<td>.00</td>
<td>-.06</td>
<td>.25**</td>
<td>.18**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Location</td>
<td>-.08</td>
<td>.03</td>
<td>.01</td>
<td>.03</td>
<td>.06</td>
<td>-.07</td>
<td>.03</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Geo</td>
<td>.09</td>
<td>.08</td>
<td>.31**</td>
<td>-.09</td>
<td>-.03</td>
<td>-.09</td>
<td>.09</td>
<td>.14*</td>
<td>.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Relation</td>
<td>.08</td>
<td>.09</td>
<td>.37**</td>
<td>.05</td>
<td>.12*</td>
<td>.05</td>
<td>.20**</td>
<td>.09</td>
<td>.08</td>
<td>.21*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Alcohol</td>
<td>-.02</td>
<td>-.04</td>
<td>-.36**</td>
<td>-.01</td>
<td>-.08</td>
<td>.00</td>
<td>-.15*</td>
<td>-.08</td>
<td>-.23**</td>
<td>-.09</td>
<td>-.18**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Sexual R</td>
<td>-.07</td>
<td>.00</td>
<td>-.20**</td>
<td>.21**</td>
<td>-.10</td>
<td>-.04</td>
<td>-.08</td>
<td>.04</td>
<td>-.06</td>
<td>-.03</td>
<td>-.06</td>
<td>.15*</td>
<td></td>
</tr>
</tbody>
</table>
Note. **p < .01; *p < .05. IH = level of internalized homophobia; DBT = level of DBT coping skills; Education = highest level of education attained; Student = student status; Sexual = sexual orientation; Location = type of residence (i.e. urban, suburban, or rural); Geo = geographic location; Relation = relationship status; Alcohol = hazardous and harmful alcohol consumption; Sexual R = risky sexual behaviors. For age, positive values indicate that older participants are scoring higher than younger participants. For gender identity, positive values indicate that cisgendered men are scoring higher than those who are female to male transgendered. For sexual orientation, positive values indicate that gay participants are scoring higher than bisexual participants. For Ethnicity, American Indian was coded as 1, Black/African American was coded as 2, East Asian was coded as 3, Hispanic/Latino was coded as 4, Middle Eastern was coded as 5, South Asian was coded as 6, Multi-racial was coded as 7, White/Caucasian was coded as 8, and 9 was coded as other. For education, higher values indicate a higher level of education attained. For student status, full-time was coded as 1, part-time was coded as 2, and non-student was coded as 3. For income, higher values indicate a higher income. For location, urban was coded as 1, suburban was coded as 2, and rural was coded as 3. For geographic location, Northeast was coded as 1, Midwest was coded as 2, South was coded as 3, West was coded as 4, and non-U.S. was coded as 5. For relationship status, single was coded as 1, in a relationship was coded as 2, married/domestic partnership was coded as 3, divorced was coded as 4, widowed was coded as 5, separated was coded as 6, and other was coded as 7.
### Table 3

**Summary of Hierarchical Multiple Regression Analysis of Internalized Homophobia and DBT Coping Skills Predicting Hazardous and Harmful Alcohol Consumption**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>sr</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.14</td>
</tr>
<tr>
<td>Age</td>
<td>.00</td>
<td>.00</td>
<td>-.35</td>
<td>.00</td>
<td>-.35</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>IH</td>
<td>-1.60</td>
<td>5.50</td>
<td>-.02</td>
<td>.77</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>DBT</td>
<td>.00</td>
<td>.00</td>
<td>-.03</td>
<td>.59</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>IH_DBT</td>
<td>.50</td>
<td>.36</td>
<td>.09</td>
<td>.17</td>
<td>.08</td>
<td></td>
</tr>
</tbody>
</table>

*Note. sr = semi-partial correlation. IH = internalized homophobia; DBT = DBT coping skills; IH_DBT = interaction between internalized homophobia and DBT coping skills. \( R^2 \) = change in \( R^2 \). All individual values for variables are those from Step 3. \( \Delta R^2 \) for Step 3 = .01.*
Table 4

**Summary of Hierarchical Multiple Regression Analysis of Internalized Homophobia and DBT Coping Skills Predicting Risky Sexual Behavior**

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>p</th>
<th>sr</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.05</td>
</tr>
<tr>
<td>Age</td>
<td>-.01</td>
<td>.00</td>
<td>-.22</td>
<td>.00</td>
<td>-.22</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
</tr>
<tr>
<td>IH</td>
<td>-15.50</td>
<td>13.34</td>
<td>-.07</td>
<td>.25</td>
<td>-.07</td>
<td></td>
</tr>
<tr>
<td>DBT</td>
<td>.00</td>
<td>.00</td>
<td>.03</td>
<td>.68</td>
<td>.02</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
</tr>
<tr>
<td>IH_DBT</td>
<td>1.74</td>
<td>.87</td>
<td>.12</td>
<td>.05</td>
<td>.12</td>
<td></td>
</tr>
</tbody>
</table>

*Note. sr = semi-partial correlation. IH = internalized homophobia; DBT = DBT coping skills; IH_DBT = interaction between internalized homophobia and DBT coping skills. R² = change in R². All individual values for variables are those from Step 3. ∆R² for Step 3 = .01.*
Appendix A. Nungesser Homosexual Attitudes Inventory – Revised

On the following pages you will find a number of attitude statements that are personal and intimate in nature. These statements pertain to sexual behavior and sexuality. Specifically, the statements fall into three categories: (1) attitudes toward the fact of one’s own sexuality, (2) attitudes toward homosexual men and homosexuality in general, an (3) attitudes toward other people’s knowing of your own sexual/affectional preference.

No two statements are exactly alike, so consider each statement carefully before responding. We would like to use these statements in order to describe your own beliefs and attitudes. That is, we would like you to indicate, on a scale from “strongly disagree” to “strongly agree,” how much you personally endorse each statement. Please do not leave any statement unmarked. Some statements may depict situations that you have not experienced; please imagine yourself in those situations when answering those statements.

1  2  3  4
Strongly Disagree  Mainly Disagree  Mainly Agree  Strongly Agree

1. When I am in a conversation with a gay man and he touches me, it does not make me uncomfortable.

2. Whenever I think a lot about being gay, I feel depressed.

3. I am glad to be gay.

4. When I am sexually attracted to another gay man, I feel uncomfortable.

5. I am proud to be part of the gay community.

6. My homosexuality does not make me unhappy.

7. Whenever I think a lot about being gay, I feel critical of myself.

8. I wish I were heterosexual.

9. I have been in counseling because I wanted to stop having sexual feelings for other men.

10. I have tried killing myself because I couldn’t accept my homosexuality.

11. There have been times when I’ve felt so rotten about being gay that I wanted to be dead.

12. I have tried killing myself because it seemed that my life as a gay person was miserable to bear.

13. I find it important that I read gay books or newspapers.

59
14. It is important to me to feel part of the gay community.

15. Homosexuality is not as satisfying as heterosexuality.

16. Homosexuality is a natural expression of sexuality in humans.

17. Gay men do not dislike women any more than heterosexual men dislike women.

18. Marriage between gay people should be legalized.

19. Gay men are overly promiscuous.

20. Most problems that gay persons have come from their status as an oppressed minority, not their homosexuality per se.

21. Gay persons’ lives are not as fulfilling as heterosexuals’ lives.

22. Children should be taught that being gay is a normal and healthy way for people to be.

23. Homosexuality is a sexual perversion.

24. I wouldn’t mind if my boss knew that I was gay.

25. When I tell my straight friends about my homosexuality, I do not worry that they will try to remember things about me that would make me appear to fit the stereotype of a homosexual.

26. When I am sexually attracted to another gay man, I do not mind if someone else knows how I feel.

27. When women know about my homosexuality, I am afraid that they will not relate to me as a man.

28. I would not mind if my neighbors knew that I am gay.

29. It is important to conceal the fact that I am gay from most people.

30. If my straight friends knew of my homosexuality, I would feel uncomfortable.

31. If men knew about my homosexuality, I am afraid they would begin to avoid me.
32. If it were made public that I am gay, I would be extremely unhappy.

33. If my peers knew of my homosexuality, I am afraid that not many would want to be friends with me.

34. If others knew of my homosexuality, I wouldn’t worry particularly that they would think of me as effeminate.

35. When I think about coming out to peers, I am afraid that they will pay more attention to my body movements and voice inflections.

36. I am afraid that people will harass me if I come out more publicly.
Appendix B. DBT Skills Subscale of the DBT Ways of Coping Checklist

The items below represent ways you may have coped with stressful events in your life. We are interested in the degree to which you have used each of the following thoughts or behaviors to deal with problems and stresses.

Think back on the **LAST ONE MONTH** in your life. Then check the appropriate number if the thought/behavior is: never used, rarely used, sometimes used, or regularly use (i.e., at least 4-5 times per week). Don’t answer on the basis of whether it seems to work to reduce stress or solve problems—just whether or not you use the coping behavior. Use these response choices. Try to rate each item separately in your mind from the others. Make your answers as true FOR YOU as you can.

Never Used   Rarely Used   Sometimes Used   Regularly Used

1. Bargained or compromised to get something positive from the situation.
2. Counted my blessings.
3. Concentrated on something good that could come out of the whole thing.
4. Made sure I’m responding the in a way that doesn’t alienate others.
5. Tried to get centered before taking any action.
6. Talked to someone about how I’ve been feeling.
7. Stood my ground and fought for what I wanted.
8. Treated myself to something really tasty.
9. Came up with a couple different solutions to my problem.
10. Accepted my strong feelings, but not let them interfere with other feelings too much.
11. Focused on the good things in my life.
12. Found something beautiful to look at to make me feel better.
13. Changed something about myself so that I could deal with the situation better.
14. Focused on the good aspects of my life and gave less attention to negative thoughts or feelings.

15. Tried to distract myself by getting active.

16. Been aware of what has to be done, so I’ve been doubling my efforts and trying harder to make things work.

17. Soothed myself by surrounding myself with a nice fragrance of some kind.

18. Listened to or played music that I found relaxing.

19. Accepted the next best thing to what I wanted.

20. Told myself things could be worse.

21. Occupied my mind with something else.

22. Talked to someone who could do something concrete about the problem.

23. Tried not to act too hastily or follow my own hunch.

24. Changed some things so things would turn out right.

25. Pampered myself with something that felt good to the touch (e.g., a bubble bath or a hug).

26. Thought how much better off I was than others.

27. Just took things one step at a time.

28. Did something to feel a totally different emotion (like gone to a funny movie).

29. Focused my energy on helping others.

30. Made sure to take care of my body and stay healthy so that I was less emotionally sensitive.

31. Told myself how much I had already accomplished.

32. Made sure I respond in a way so that I could still respect myself afterwards.

33. Made a plan of action and followed it.
34. Talked to someone to find out about the situation.

35. Stepped back and tried to see things as they really are.

36. Compared myself to others who are less fortunate.

37. Increased the number of pleasant things in my life so that I had a more positive outlook.

38. Tried not to burn bridges behind me, but leave things open somewhat.
Appendix C. Sexual Risk Survey

Please read the following statements and record the number that is true for you over the past 6 months for each question on the blank. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can. Thinking about the average number of times the behavior happened per week or per month might make it easier to estimate an accurate number, especially if the behavior happened fairly regularly. If you’ve had multiple partners, try to think about how long you were with each partner, the number of sexual encounters you had with each, and try to get an accurate estimate of the total number of each behavior. If the question does not apply to you or you have never engaged in the behavior in the question, put a “0” on the blank. Please do not leave items blank. Remember that in the following questions “sex” includes oral, anal, and vaginal sex and that “sexual behavior” includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand-to-genital stimulation. Refer to the Glossary for any words you are not sure about. Please consider only the last 6 months when answering and please be honest.

In the past six months:

1. How many partners have you engaged in sexual behavior with but not had sex with?
2. How many times have you left a social event with someone you just met?
3. How many times have you “hooked up” but not had sex with someone you didn’t know or didn’t know well?
4. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and engaging in sexual behavior but not having sex with someone?
5. How many times have you gone out to bars/parties/social events with the intent of “hooking up” and having sex with someone?
6. How many times have you had an unexpected and unanticipated sexual experience?
7. How many times have you had a sexual encounter you engaged in willingly but later regretted?

For the next set of questions, follow the same direction as before. However, for questions 8–23, if you have never had sex (oral, anal or vaginal), please put a “0” on each blank.

8. How many partners have you had sex with?
9. How many times have you had vaginal intercourse without a latex or polyurethane condom? (Note: Include times when you have used a lambskin or membrane condom)

10. How many times have you had vaginal intercourse without protection against pregnancy?

11. How many times have you given or received fellatio (oral sex on a man) without a condom?

12. How many times have you given or received cunnilingus (oral sex on a woman) without a dental dam or "adequate protection" (please see definition of dental dam for what is considered adequate protection)?

13. How many times have you had anal sex without a condom?

14. How many times have you or your partner engaged in anal penetration by a hand ("fisting") or other object without a latex glove or condom followed by unprotected anal sex?

15. How many times have you given or received analingus (oral stimulation of the anal region, "rimming") without a dental dam or "adequate protection" (please see definition of dental dam for what is considered adequate protection)?

16. How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., "friends with benefits", "fuck buddies")?

17. How many times have you had sex with someone you don’t know well or just met?

18. How many times have you or your partner used alcohol or drugs before or during sex?

19. How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?

20. How many times (that you know of) have you had sex with someone who has had many sexual partners?
21. How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been tested for STIs/HIV?

22. How many partners have you had sex with that you didn’t trust?

23. How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?
Appendix D. AUDIT

1. How often do you have a drink containing alcohol?
   (0) Never
   (1) Monthly or less
   (2) 2 to 4 times a month
   (3) 2 to 3 times a week
   (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?
   (0) 1 or 2
   (1) 3 or 4
   (2) 5 or 6
   (3) 7, 8, or 9
   (4) 10 or more

3. How often do you have six or more drinks on one occasion?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

4. How often during the last year have you found that you were not able to stop drinking once you had started?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
   (0) Never
   (1) Less than monthly
   (2) Monthly
   (3) Weekly
   (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?
   (0) No
   (2) Yes, but not in the last year
   (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?
    (0) No
    (2) Yes, but not in the last year
    (4) Yes, during the last year
Appendix E. Demographics Questionnaire

1. What is your age? ___________

2. What is your gender?
   a. Man
   b. Woman
   c. MTF Trans woman
   d. FTM Trans man
   e. Other: ______________

3. What is your sexual orientation?
   a. Gay
   b. Bisexual
   c. Straight
   d. Other: ______________

4. What is your ethnic background?
   a. American-Indian/Alaskan Native
   b. Black/African-American
   c. East Asian/Pacific Islander
   d. Hispanic or Latino/a
   e. Middle Eastern/ West Asian
   f. Multiracial
   g. South Asian
   h. White/Caucasian
   i. Other ______________
5. What is your highest level of education completed?
   a. Some high school, no diploma
   b. High school graduate, diploma or the equivalent
   c. Some college, no degree
   d. Trade/Technical/Vocational training
   e. Associate degree
   f. Bachelor’s degree
   g. Master’s degree
   h. Professional degree
   i. Doctorate degree

6. Are you currently enrolled as a student full-time?
   a. Yes
   b. No, I am enrolled part-time
   c. No, I am not a student

7. Which of these categories best describes your total combined family income for your household for the past 12 months? This should include income (before taxes) from all sources, wages, rent from properties, social security, disability and/or veteran’s benefits, unemployment benefits, workman’s compensation, help from relatives, and so on.
   a. Less than $25,000
   b. $25,000 - $50,000
   c. $50,000-$75,000
   d. $75,000 - $100,000
   e. $100,000 - $150,000
   f. Over $150,000

8. Which of these best describes where you live?
   a. Urban setting
b. Suburban setting

c. Rural setting

9. In which of these locations in the United States do you currently reside?

a. Northeast (New England and Mid-Atlantic)

b. Midwest (East North Central and West North Central)

c. South (South Atlantic, East South Central, West South Central)

d. West (Mountain and Pacific)

10. What is your current relationship status?

a. Single, never married

b. In a relationship

c. Married or Domestic Partnership

d. Divorced

e. Widowed

f. Separated

g. Other: ____________________

11. How did you find out about this study?

a. Online (please specify which site): ______________________

b. Email listserv

c. Through a group I belong to (please specify): ______________________

d. In a bar/club

e. From a friend
Appendix F. Informed Consent

**Investigator Identification:** This research study, *Health-related Behaviors among Gay Men*, is being conducted by Matthew Worhach in the division of Counseling Psychology at the University at Albany, State University of New York. This project is under the supervision of Dr. Jessica Martin, who serving as dissertation chair.

**Study Description:** The purpose of this research is to assess risk and protective factors influencing various health-related behaviors among gay men. As part of this study you will be expected to complete several questionnaires that ask for demographic information and information on these factors. Completing the questionnaires should take approximately 15 minutes.

**Compensation:** After completing the questionnaires you will be re-directed to another database where you can choose to provide your contact information in order to enter a raffle to win one of fifteen $10 Amazon gift cards as compensation for your time. Your contact information will not be linked to your data, will be destroyed at the end of the study.

**Possible Risks and Benefits:** A possible risk for this study involves experiencing discomfort when filling out the questionnaires since some questions inquire about sensitive or personal information. A possible personal benefit of this study is that by filling out the questionnaires you will gain more insight into your own health-related behaviors. This questionnaire will ask sensitive questions, including questions about your sexual history. If at any point the questions make you feel overwhelmed or in need of immediate support, please contact the GLBT national hotline at 1-888-843-4564.

**Participant Information:** Your participation in this research is completely voluntary. You may discontinue your participation in the study at any time without penalty. You may also choose to not answer any question(s) that you do not wish to, for any reason. The information that you provide will be anonymous. Your name will not appear anywhere on the questionnaires. If you provide any demographic information that could be identifying (e.g., the only member of a particular ethnic group), then this information will be combined with other participants.

**On-Line Data Collection:** This project has been approved by the University at Albany Institutional Review Board. Approval of this project only signifies that the procedures adequately protect the rights and welfare of the participants. Please note that absolute confidentiality cannot be guaranteed due to the limited protections of internet access. All information obtained in this study is strictly confidential unless disclosure is required by law. In addition, the Institutional Review Board and University or government officials responsible for monitoring this study may inspect these records.
Contact Information: If you have any questions about this study or problems completing the questionnaires, please contact Matthew Worhach at mworhach@albany.edu, or Dr. Jessica Martin at jlmartin@albany.edu if you would like a copy of this consent form, you should print it before clicking “Continue” below.

IRB contact about your rights in the study or to report a complaint:

Research at the University Albany involving human participants is carried out under the oversight of the Institutional Review Board (IRB). This research has been reviewed and approved by the IRB. If you have any questions concerning your rights as a research subject or if you wish to report any concerns about the study, you may contact University at Albany Office of Regulatory & Research Compliance at 1-866-857-54591-866-857-5459 or hsconcerns@albany.edu.

By clicking ”Continue” below, you will be taken to the survey questionnaires and you are stating: “I have read the information about this study. I hereby consent to participate in the study.”

Matthew Worhach,
Doctoral Student
Division of Counseling Psychology, University at Albany
mworhach@albany.edu