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Differences In Mental Health Outcomes Between Heterosexual And Sexual Minority Victims of Emotional And Physical Intimate Partner Violence

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DIFFERENCES IN MENTAL HEALTH OUTCOMES BETWEEN HETEROSEXUAL AND SEXUAL MINORITY VICTIMS OF EMOTIONAL AND PHYSICAL INTIMATE PARTNER VIOLENCE

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ABSTRACT

Intimate partner violence (IPV) has been shown to be associated with numerous negative mental health outcomes, including depression (Spencer et al., 2019), anxiety disorders (Fonseca-Machado et al., 2015), and substance use disorders (Cafferky et al., 2018). However, while studies on IPV have become more prevalent in recent years, a significant deficit exists in psychological literature in the study of IPV within sexual minority populations. Sexual minority individuals of both genders are noted to experience IPV at rates similar to those typically seen in heterosexual female populations (Finneran & Stephenson, 2014). In addition, these individuals may experience significant minority stress, specifically in the form of internalized homophobia, that may impact outcomes from experiencing IPV (Lewis et al., 2017). The present study sought to examine differences in the manifestation of negative mental health outcomes between heterosexual and sexual minority individuals who experience physical and emotional IPV victimization. It was speculated that after experiencing IPV victimization, sexual minority individuals would endorse more severe depression, anxiety, and drug and alcohol abuse than heterosexual individuals, and that internalized homophobia would moderate this relationship. Ultimately, sexual minority individuals did not endorse more severe negative mental health outcomes as a result of IPV victimization, and internalized

homophobia was only found to moderate the relationship between emotional victimization and alcohol and drug abuse, and physical victimization and alcohol abuse.

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CHAPTER I

INTRODUCTION

Intimate partner violence (IPV), sometimes referred to as dating violence or dating abuse, is a known public health issue that has gained significant attention in the world's social, political, and academic consciousness (LeLaurain et al., 2017). IPV can be defined as any physical, sexual, economic, or psychological or emotional harm perpetrated by a current or former romantic partner or spouse (Centers for Disease Control and Prevention [CDC], 2018). IPV has been a topic of much recent discussion and research and given the pervasive nature of IPV in the general population, these studies are of great importance. This increased prominence has helped to facilitate new ideas about prevention of and education about IPV. Further, understanding the underlying constructs and common issues related to or seen in victims of IPV is of equal importance to both the field and the general public.

Although research on IPV and mental health has increased significantly over the past approximately 30 years, there are several aspects lacking in IPV research. Specifically, IPV research tends to focus on traditional partner roles, wherein females are seen as submissive to their more dominant male partners. As a result, studies often specifically focus on the experiences of heterosexual women as victims and heterosexual

males as perpetrators. There is far less research on IPV among populations that do not conform to typical partner roles, specifically regarding individuals who identify as a sexual minority (Finneran & Stephenson, 2017). This gap in current IPV research may be discounting the possible unique experiences and unique stressors that sexual minority individuals may have related to IPV. This study will seek to reconcile this gap by examining the experiences and stressors specific to sexual minority individuals. In doing so, more specific treatment and psychoeducational considerations for sexual minority individuals may be gleaned, and result in more effective, more culturally competent treatment.

CHAPTER II

LITERATURE REVIEW

Intimate Partner Violence

Intimate partner violence (IPV) is defined as any physical, sexual, economic, or psychological or emotional harm or violence perpetrated by a current or former romantic partner or spouse (Centers for Disease Control and Prevention [CDC], 2019). Each of these forms of violence is distinct in their methods of perpetration. Physical IPV includes any use of physical force to hurt a romantic partner, including, but not limited to, hitting, kicking, scratching, or punching. Sexual IPV refers to any forced sexual contact or actions perpetrated against a partner without their consent, including non-physical sexual acts such as "sexting." Economic IPV refers to an attempt to make a romantic partner financially dependent on the other by controlling or withholding access to money, as well as refusing to allow a romantic partner to take steps toward financial independence through work or academic pursuits. Psychological or emotional IPV is defined as the deliberate undermining of a partner's sense of self-worth by means of criticism, put-downs, or name-calling. Also included in this definition are manipulating behaviors such as causing tension in a partner's relationship with their friends and family, threatening physical harm towards their partner or themselves, or causing property damage (CDC,

2019). Much of the current research on IPV focuses on two different aspects, victimization and perpetration. IPV victimization refers to individuals who have experienced any harm or violence committed by a romantic partner, while IPV perpetration refers to individuals who commit the harm or violence. While perpetration is a matter of significant concern in psychological literature, this study is primarily focused on the experiences of victims of IPV.

Intimate Partner Violence Prevalence

Research on IPV has gleaned occasionally contradictory results. This is most commonly seen in research regarding prevalence, which has produced a number of different estimates. For example, in a national IPV and sexual violence survey conducted by the CDC, the National Center for Injury Prevention and Control, and the Division of Violence Prevention, Smith et al. (2015) reported that 1 in 3 individuals will be or have been victims of IPV at some point in their lives, specifically in the forms of sexual violence, physical violence, and stalking behavior. In a study conducted with young adult subjects, Renner & Whitney (2012) found that 47% of respondents experienced some form of IPV in their lifetime. Other studies have produced similarly disparate prevalence estimates, ranging between 10% and 70% among adult populations (LeLaurain et al., 2017). Research on prevalence has also gleaned contradictory results with respect to gender differences. Although studies generally show that females are more likely to experience IPV victimization (e.g. Smith et al., 2015; Cho & Wilke, 2010)—a distinction often tied to societal gender roles which place men in a position of authority or power (Caldwell et al., 2012)—others have noted no significant differences between genders in terms of IPV victimization experiences (Capaldi & Owen, 2001; Cho & Huang, 2016),

suggesting that further research is necessary to better understand the impact of gender. Further, prevalence figures may be impacted by underreporting, which could imply that IPV is a more pervasive and universal issue than previously suggested (Chan, 2011). Irrespective of its occasional contradictions, it is clear that the prevalence of IPV is indicative of a significant public health issue that warrants further investigation and research.

IPV is also noted to be a significant issue within the LGBTQ+ community (Lesbian, Gay, Bisexual, Transgender, Queer/Questioning, and other sexual orientations and gender identities under the queer umbrella). Among this large and incredibly diverse population, this project will focus specifically on sexual minority individuals, defined as individuals who do not identify as a sexual orientation other than heterosexual. Prevalence statistics regarding sexual minority individuals suggest that the experience of IPV these individuals have may be different from individuals of the same gender who identify as heterosexual. Studies have shown that rates of IPV victimization among men who have sex with men (MSM) may be roughly equivalent to rates experienced by heterosexual women, and certainly more than those experienced by heterosexual men (Finneran & Stephenson, 2014). Additionally, gay men have been noted to experience more negative impacts from IPV (such as being fearful later in life or experiencing a physical injury as a result of IPV) than heterosexual men (Chen et al., 2020). Rates of victimization among lesbian women are also noted to be roughly similar to those of heterosexual women, with one meta-analysis showing a lifetime prevalence among lesbian women of approximately 48% (Badenes-Ribera et al., 2015). This is notable

given that IPV perpetration is commonly considered (and misrepresented) as being primarily instigated by males (Walters, Chen, & Breiding, 2013).

IPV & Mental Health Outcomes

IPV research has focused heavily on the effects of IPV related to various mental health outcomes. In general, IPV has been noted to be associated with negative mental health. In a systematic review of 58 IPV-related articles, Lagdon and colleagues (2014) found that individuals who experienced IPV victimization experienced more severe negative mental health outcomes than those who did not experience victimization. A study of 570 university students gleaned similar findings, specifically that reporting a higher number of mental health symptoms was significantly related to experiencing higher reported levels of IPV victimization (Próspero, 2007). This study looks specifically at IPV related to four specific mental health outcomes. These are: depressive disorders (e.g., Major Depressive Disorder), Generalized Anxiety Disorder (GAD), and Drug and Alcohol Use Disorders.

IPV and Depression

IPV has been shown to be associated with numerous negative mental health outcomes, one of the most prominent being depression. Depression is a psychological disorder marked by persistent feelings of sadness and hopelessness. Symptoms include such as depressed mood, diminished pleasure in activities of daily life, unintentional weight loss, fatigue, anhedonia, and suicidal ideation (American Psychological Association [APA], 2013). Depression affects approximately 7.1% of adults in the United States, with 17.3 million individuals experiencing a major depressive episode within the last year (National Institute of Mental Health [NIMH], 2019). Sexual minority

individuals are at a higher risk for negative mental health disorders, depression being among them (NIMH, 2019). Sexual minority individuals are up to five times more likely to attempt suicide than heterosexual individuals, and suicide is currently the third leading cause of death among sexual minority individuals (CDC, 2016).

Studies have shown that IPV victimization independently contributes to overall poor mental health, and specifically to depression (Ouellet-Morin et al., 2015). In a recent meta-analysis of 207 studies examining IPV and various mental health outcomes, Spencer & colleagues (2019) found that depression and IPV were significantly and positively correlated with one another, both for victimization and perpetration. Individual studies have shown similar results. In a sample of longitudinal data captured from over 1000 adolescents and young adults, Johnson and colleagues (2014) found that depressive symptoms increased following exposure to IPV. Further, it was noted that victims and perpetrators of IPV both appear to show increased depressive symptoms irrespective of whether IPV took place during adolescence or young adulthood. Another longitudinal study examining mental health outcomes related to IPV exposure over a three-year period further bolster the connection between IPV and depressive symptoms. Simmons et al. (2015) found that IPV was linked to increased depressive symptoms in male (though interestingly, not female) victims of IPV, even when prior history of depression is considered. In a survey conducted with a nationally representative sample of over 10,000 high school students, sexual dating violence was shown to have a significant effect on suicide attempts (particularly for male respondents), and that depression mediated the relationship between IPV victimization, specifically sexual dating violence, and suicide attempts. This evidence further strengthens the association between IPV victimization

and negative symptoms associated with depression (Kim et al., 2018). Though this is likely one piece of a much larger puzzle, it is clear that depression should be a consideration when treating victims of IPV.

IPV and Anxiety

IPV victimization has also been shown to be associated with greater anxiety, such as Generalized Anxiety Disorder (GAD). GAD is defined as excessive worry and anxiety about several typical activities or topics occurring more often than not for a period of six months, with the worrying being seen as excessive and difficult to control. Symptoms of GAD may include edginess or restlessness, fatigue, sleep difficulties, and inattention (APA, 2013). GAD affects approximately 5.7% of the U.S. population in their lifetime, with 2.7% experiencing symptoms within the last year (Kessler et al., 2003). According to data compiled by the American Psychiatric Association ([APA], 2018), these prevalence rates more than double for sexual minority individuals. Other studies have shown that gay men specifically may suffer from GAD at a nearly three times higher lifetime prevalence rate (Bostwick et al., 2010). GAD has been associated with negative problem orientation, defined as the feeling of helplessness or of being threatened by one's problems (Beck et al., 2014). These conclusions suggest that victimization may be linked to later issues with problem-solving and rumination, the genesis of which is the victims' feelings of helplessness.

IPV is also associated with symptoms of GAD. In a cross-sectional survey study conducted with 358 pregnant women, linear regression analysis demonstrated that IPV victimization was related to symptoms of GAD, specifically the inability to concentrate on daily tasks and irritability and edginess (Fonseca-Machado et al., 2015). The study

also found that IPV victims had higher overall symptoms scores for both trait anxiety (anxiety across many situations) and state anxiety (anxiety at a specific moment), suggesting that IPV victimization leads to increased anxiety-symptoms both in the moment and over time. Other studies related to anxiety symptoms and IPV have gleaned similar results. In their meta-analysis, Spencer & colleagues (2019) found that symptoms related to anxiety were more strongly more strongly associated with victimization than with perpetration, while the opposite was true for disorders related to personality such as Borderline Personality Disorder and Antisocial Personality Disorder. This suggests that individuals suffering from IPV may be at greater risk for anxiety-related disorders such as GAD, and that screening and treatment considerations for such disorders must be considered as possible clinical implications.

Research on IPV and anxiety-related disorders has also speculated that specific types of victimization may be more prone to trigger anxiety-related symptoms. Specifically, in a study conducted with 284 IPV-exposed women, Pickover & others (2017) found that victims of dominance/isolation IPV (being isolated from friends/family by a partner) most strongly exhibited symptoms of GAD, an association the authors felt possibly related to a victim's likelihood to withdraw from an abusive partner's demands or conflicts. This leads to speculation that specific types of victimization, in this case physical and psychological, may do more to trigger GAD-related symptoms. However, Pickover & colleagues (2017) also found that emotional/verbal victimization was also strongly associated with GAD symptoms, suggesting that many forms of victimization are linked to GAD.

IPV and Substance Use Disorders

The Diagnostic and Statistical Manual of Mental Disorders- Fifth Edition ([DSM-V] APA, 2013) defines a Substance Use Disorder as the use of a substance in a way or quantity that is not intended, resulting in an inability to stop using the substance (i.e., addiction), the development of cravings and urges to use the substance, and the manifestation of symptoms of dependency and withdrawal. Also necessary in the diagnosis of a Substance Use Disorder is a disturbance in the ability to complete typical occupational, social, or educational duties. In the United States, approximately 20 million individuals have or have had a Substance Use Disorder, while approximately 8 million of those individuals also have a comorbid mental illness (NIMH, 2016). Alcohol, tobacco, marijuana, opioids, and stimulants (i.e., cocaine, amphetamines, caffeine) are among the most common substances for which this disorder is diagnosed (National Institute on Drug Abuse [NIDA], 2018). Among sexual minority individuals, these prevalence rates may be even higher. According to the data compiled by NIDA (Medley et al., 2016), sexual minority individuals are more than twice as likely to have tried illicit drugs within the last year, are more than twice as likely to abuse prescription medication, and are more likely to have used marijuana or engaged in binge drinking behavior within the last year (McCabe et al., 2013).

IPV victimization and substance use and abuse has been researched extensively, with results consistent with those of other mental health outcomes. In a meta-analysis of 285 studies and a combined sample of over 600,000, Cafferky & colleagues (2018) found that substance use and abuse are significantly related to IPV victimization and perpetration, regardless of drug-type and irrespective of whether the drug use is

considered clinically problematic. Specifically, problematic drug use more strongly correlated with IPV victimization than alcohol use, and that measures of alcohol abuse were more strongly correlated than alcohol consumption alone, though both were significantly correlated with victimization (Cafferky et al., 2018). Additionally, IPV victimization has been linked to increased substance use issues, with studies estimating that female victims of IPV have substance use-related problems up to five times the rate of non-victims (Logan et al., 2002). Studies examining the effects of specific drugs on IPV have shown similar results. In a study of 105 women attending court ordered IPV perpetration intervention programs and meeting criteria for hazardous drinking behavior, Stuart & colleagues (2013) found that IPV was significantly associated with alcohol use and abuse, with victimization and perpetration both being more likely on days when alcohol is consumed. More specifically, participants were more likely to experience physical violence on days when drinking occurred compared to non-drinking days, and more likely to experience sexual victimization on days where they consumed cocaine.

Marijuana, which is among the more commonly used illicit drugs in the U.S., has also been shown to be associated with both perpetration and victimization, despite its perception as a "low-risk" illicit drug (Reingle et al., 2012). In a longitudinal survey study of 9421 adolescents and young adults, Reingle & colleagues (2012) found that marijuana use during adolescence and early adulthood was associated with increased likelihood of IPV victimization and perpetration. The authors also posited that marijuana use may be directly related to "victim-offender" overlap, or individuals engaging in both IPV victimization and IPV perpetration. This suggests that marijuana specifically may have distinct effects on both sides of IPV. Studies have also shown that IPV victimization

as a minor may be linked to increased marijuana usage later in life (Simmons et al., 2015). It is worth noting that these trends are generally consistent across different populations, and that the risks for IPV victimization or perpetration associated with substance use and abuse are not mitigated by demographic factors (Goodrum et al., 2004).

Minority Stress Among Sexual Minorities

A recent polling estimate by Gallup speculated that sexual minority individuals comprise approximately 4.5% of the U.S. population (Newport, 2018). This percentage includes lesbian, gay, bisexual, transgender, queer, and other individuals who identify as LGBTQ+. This establishes that LGBTQ+ individuals, which includes sexual minority individuals as well as gender minority individuals (which refers to transgender and gender non-conforming individuals [TGNC]), are a minority population in the United States. Evidence exists that minority populations may experience greater stressors than the general population. Meyer (2003) suggests that sexual minority individuals experience multiple forms of minority stress, which is defined as the unique stressors experienced by members of a stigmatized minority population. This minority stress can manifest both externally (e.g., acts of violence, discrimination, harassment) and internally (e.g., perceived discrimination, concealment, or disclosure of sexual orientation) (Carvalho et al., 2011). Meyer's model, specific to sexual minority individuals, theorizes that positive and negative mental health outcomes are influenced by these external and internal stress processes, the latter of which is influenced by the specific characteristics of an individual's minority identity (e.g., the level of integration of one's minority status into their overall identity, as well as their perceived level of "outness"). These

characteristics include how prominent one's sexual orientation is as part of their identity, how that individual evaluates their sexual orientation as part of their identity, and an individual's ability to integrate their minority identity into their overall identity. External processes of minority stress are generally more closely related to how an individual minority identity is perceived by others (both in their respective minority community and by others in general), while internal processes are related to an individual's minority identity (as determined by the aforementioned identity characteristics). Manifestations of both internal and external processes of minority stress have been associated with negative mental health outcomes, specifically depression, general anxiety, and alcohol and drug use disorders (Bissonette & Szymanski, 2019; Lewis et al., 2017; Meyer, 2003).

Perhaps most notable among the internalized minority stressors unique to a sexual minority population is the concept of internalized homophobia (IH). IH as a form of minority stress is defined as negative self-stigma and prejudice stemming from same-sex attraction which an individual directs toward themselves (Herek et al., 1998). IH has been associated with many negative mental health outcomes. In a meta-analysis of 31 studies with continuous measures of IH and measures of either global internalizing mental health problems or specific measures of depression or anxiety-based symptomology, Newcomb & Mustanski (2010) found that IH was moderately correlated with symptoms of depression and anxiety. This association was not found to be moderated by gender, despite the authors' hypotheses that the relationship between IH and depression and anxiety symptoms would be higher in men. Other studies show that IH may have other negative impacts such as lower self-esteem and suicidal ideation (Herek et al., 2009), delayed identity development (Rowen & Malcolm, 2002), and risky sexual behavior

(Newcomb & Mustanski, 2011). IH was also found to be negatively associated with relationship satisfaction in same-sex couples (Pepping et al., 2018), suggesting that relationship stability may be affected by minority stress, and IH specifically. Finally, and perhaps most notably, IH has been shown to be associated with increased risk-taking behavior and substance abuse. In a large sample of HIV-negative gay and bisexual men, Moody & colleagues (2018) found that IH was directly and positively associated with drug-related problems, defined as high scores on a drug abuse screening measure. The study also found that depression mediated a relationship between IH and recent drug use, with IH being positively associated with depression and depression positively associated with recent drug use. Other studies have found similar results. In a study with 450 young MSM (average age of 18.9 years), Puckett & colleagues (2017) found that the association between IH and risky behaviors, such as a binge drinking and receptive condomless anal sex, was moderated by negative and positive urgency (the tendency to act impulsively in response to negative or positive emotional experiences). Although this study did not find a direct effect between IH and risky behaviors, it does establish that there are circumstances under which IH may moderately impact the initiation of these behaviors. As multiple studies have found that sexual minority individuals are at a higher risk for problematic drug use (Newcomb & Mustanski, 2010), research has shifted mental health victims of IPV, as this may be a treatment consideration not otherwise considered (Reisner et al., 2013).

Internalized Homophobia & Intimate Partner Violence

IH has also been negatively associated with multiple aspects of IPV. Studies have shown that IH may be linked to increased anger and substance use issues, which themselves were linked to IPV victimization and perpetration (Lewis et al., 2017). Among men who have sex with men (MSM), IH is noted to be significantly associated with all forms of IPV victimization, as well as physical, emotional, controlling, and HIV-related perpetration (Stephenson & Finneran, 2017). IH is also noted to be associated with negative and unwanted sexual experiences, which includes both risky sexual behavior and sexual assault, the latter of which is a type of IPV (Murchison et al., 2017). IPV victims also noted increased expectations of discrimination and prejudice, both internally and externally (Carvalho et al., 2011). The association between IPV and IH in sexual minority individuals is a potentially important factor in determining how best to cater education and mental health services to those individuals.

Whereas research on IH and other minority stress factors has increased in recent years, it is speculated that demand for such research, and corresponding empirically supported treatment options, will only increase in the coming years. According to Gallup polls, 8.2% of Millennials (individuals born between 1980 and 1999) identify as LGBTQ+, a greater population share than the three prior generations (Generation X [1965-1979], Baby Boomers [1946-1964] and Traditionalists [1913-1945]) combined (Newport, 2018). As society in the U.S. has shifted toward increased acceptance of those who identify openly as a sexual minority in general, it is likely that these internalized and externalized minority stress issues will also be more openly discussed in the future. As such, it is important to consider these concepts when determining how best to educate

and treat problems related to specific mental health disorders and particularly for sexual minority populations.

Current Study

In creating the premise for this study, multiple aspects were considered to ensure that the ensuing study was both novel and within a specific scope. Primary among these considerations were the decisions made regarding the study's population. For starters, sexual minority populations have not been widely studied within the field and specifically in IPV studies. Therefore, studying a sexual minority population would be beneficial to bolstering the current literature on IPV. However, although (or perhaps, because) sexual minority populations are understudied compared to other populations, there is significant confusion over how to conceptualize (or even name) different sub-populations under the umbrella of "sexual minorities." This study uses the admittedly broad approach of referring to all individuals who do not identify as heterosexual as a "sexual minority," in the hope that taking a broad approach to data collection will improve later refinement. Additionally, it allows fewer restrictions with data collection, as attempting to obtain an exclusively gay or lesbian population with the limited and finite resources available would not be tenable.

A related consideration was the decision to not include transgender and gender non-conforming (TGNC) individuals in data collection. This study seeks to examine how sexual minority individuals experience more severe mental health outcomes when exposed to IPV. Inclusion of a TGNC population would conflate their experiences with the experiences of cisgender sexual minority individuals. TGNC individuals likely experience related but distinct (and likely more severe) minority stress compared to

cisgender sexual minority individuals. It is critical to be sensitive to this distinction. Thus, sexual minority cisgender individuals in this study are defined as individuals who identify as both non-heterosexual and non-TGNC.

Another important consideration was the decision to focus solely on victimization, rather than on perpetration or a combined focus. Prevailing research has shown that individuals who experience negative mental health outcomes may be more likely to experience violence victimization, both in relationships (Khalifeh et al., 2015), and the community as a whole (Desmarais et al., 2014). This suggests that focusing on treatment implications for victims of IPV is a matter of more pressing concern. In addition, this project will focus on only physical and emotional victimization, largely because the literature suggests these types of IPV are most prevalent and related to negative mental health outcomes.

Purpose

IPV is a known issue of public health interest. Research has shown that IPV affects approximately one in every three individuals, and that both men and women, regardless of the gender of their partner, are at risk for victimization (CDC, 2019). IPV has been linked to multiple negative mental health outcomes, specifically depression, GAD, and drug and alcohol use disorders (e.g., Cafferky et al., 2018, Fonseca-Machado et al., 2015., Johnson et al., 2014). However, the current literature on IPV is deficient in examining victimization within the context of a same-sex relationship. Sexual minority individuals are susceptible to minority stress, which is related to both external processes of stress (such as violence toward sexual minority individuals) and internal processes

(internalized homophobia) (Meyer, 2003). This minority stress, specifically the manifestation of internalized homophobia, may play a role in IPV victimization.

Therefore, the purpose of this study is to examine the outcomes and implications of IPV victimization among separate populations, specifically heterosexual and sexual minority populations. **Hypothesis 1:** Heterosexual and sexual minority victims of IPV will differ in the manifestation of four mental health-related outcomes: depression, anxiety, and drug and alcohol abuse, such that sexual minority individuals, compared to heterosexual individuals, endorse a greater severity in the manifestation of symptoms following IPV victimization. **Hypothesis 2:** Among sexual minority individuals, internalized homophobia will moderate the relationship between IPV and the aforementioned mental health outcomes, such that individuals who endorse more internalized homophobia and IPV victimization will experience greater manifestation of negative mental health symptoms.

CHAPTER III

METHOD

Procedure

Participants were recruited through both Amazon's MTurk and social media posts. Upon accessing the survey URL, participants were directed to the complete survey on Qualtrics. Participants were first given informed consent documentation and were required to acknowledge and approve informed consent before proceeding. Participants were then asked a series of questions regarding their age, their current relationship status (i.e., single, married, dating), and sexual orientation. These questions were placed here to function as exclusion questions, thereby removing non-qualifying participants from completing the remainder of the survey. Participants who passed through these questions were then asked demographic questions, covering race/ethnicity, education and employment status, and questions regarding the length of their current romantic relationship and their current cohabitation status with said partner. Following this, measures of internalized homophobia, IPV, depression, alcohol abuse, drug abuse, and anxiety were given. The measure of internalized homophobia was only given to individuals identifying as a sexual minority. Finally, participants were directed to the debriefing, where they were given national resources to access should they become upset

during questioning. These resources were also included as part of informed consent. Participants recruited through MTurk received a five-digit code at the bottom of the debriefing page, which allowed the MTurk worker to be linked to a specific set of responses for the purposes of payment only (MTurk only displays a series of numbers and letters as a "worker ID," which does not provide any identifying information about the worker).

Measures

Internalized Homophobia

The Revised Internalized Homophobia Scale, developed by Herek and colleagues (1998), is a 9-item questionnaire designed to measure self-stigma related to one's gay or lesbian status. This scale includes questions regarding an individual's negative feelings about their sexual orientation (e.g., I feel that being lesbian or gay is a personal shortcoming for me), as well as their desire to change their sexual orientation (e.g., I would like to get professional help to change my sexual orientation from lesbian/gay to straight/heterosexual). Some questions were revised to correspond with the gender of the participant (e.g., I often feel it best to avoid personal or social involvement with other gay men would only be asked to gay men, while lesbian women would see gay men replaced with lesbian women). These questions were simplified to gay/lesbian where appropriate for the sake of brevity. Responses were recorded on a five-point Likert scale (1-5) with 1 being *strongly agree* and 5 being *strongly disagree*. These scale values were later reverse coded for data analysis purposes. The overall scale score was calculated by summing the reverse coded responses, after which these sums were converted to means, with higher mean-scores indicating a more negative self-attitude (i.e., internalized homophobia). This

9-item has been shown to be statistically reliable, with the original study offering a Cronbach's α of 0.85 (Herek et al., 1998). This measure is also noted to have solid construct validity, as scores among gay and lesbian individuals were noted to be highly correlated with each other (Herek et al., 1998).

Intimate Partner Violence

The Conflict in Adolescent Dating Relationships Inventory (CADRI, Wolfe et al., 2001) was used to measure IPV victimization. The CADRI is a 35-item questionnaire which includes six subscales that measure different types of abuse: physical abuse, threatening behavior, sexual abuse, emotional and verbal abuse, threatening behavior, and positive conflict resolution. For this study, only the physical and emotional subscales were used for analysis, which equaled a total of 14 items. All questions were answered using a 4-point Likert scale (1-4) with one (1) representing *never*, two (2) representing *happening 1-2 times during an argument with a significant other in the last year*, three (3) representing *happening 3-5 times during an argument with a significant other in the last year*, and four (4) representing *happening six or more times during an argument with a significant other in the last year*. This survey also asks questions that switch perpetrator roles, such that the participant is answering questions about their own actions toward their partner. However, as the construct of perpetration is beyond the scope of this study, only victimization was examined during data analysis. Wolfe et al. (2001) examined the statistical validity and reliability of the scale and its subscales, with notably high Cronbach's α-levels for physical victimization (0.76) and emotional victimization (0.80), all at or above the threshold for statistical reliability. Final factor loadings for these two

subscales were consistent with those from previous confirmatory factor analysis, suggesting that the scales are also statistically valid (Wolfe et al., 2001).

Depression

The Center for Epidemiologic Study Depression Scale (CESD), developed by Radloff (1977), is a self-report measure of depressive symptoms. This 20-item scale has the participant indicate their level of agreement to a number of statements about emotional symptoms of depression (e.g., I thought my life had been a failure; I felt lonely; I felt sad) as well as somatic or physical symptoms associated with depression (e.g., I did not feel like eating; My sleep was restless). The CES-D has a low score of 20 and a high score of 80, with questions being answered on a four-point Likert scale (1-4) where 1 represents *rarely or none of the time (<1 day in the last week)*, 2 represents *some or a little of the time (1-2 days in the last week),* 3 represents *occasionally or a moderate amount of time (3-4 days in the last week)*, and 4 represents *most or all of the time (5-7 days in the last week)*. High scores for this scale indicate a larger presence of depressive symptomology.

In developing this scale, Radloff (1977) conducted a series of reliability and validity trials to test the scale's applicability and utility. In these, Radloff found that the scale showed relatively high Cronbach's α coefficients (.85 for the general population and .90 for a patient sample), suggesting good reliability. Radloff also noted that this scale was significantly correlated with other contemporary scales used for depression (namely the Hamilton Clinician's Rating scale and the Raskin Rating scale; r=.69 and .75, respectively), particularly when administered after treatment. These findings indicate that this measure functions as a valid scale for depression.

Alcohol Use Disorders

The Alcohol Use Disorders Identification Test (AUDIT), developed by Saunders et al. (1993), is a self-report measure of alcohol consumption, drinking behavior, and alcohol-related problems. This measure is designed to screen individuals for hazardous or harmful drinking habits. This 10-item scale has individuals indicate the frequency of their alcohol consumption (e.g., How often do you have a drink containing alcohol), their behavior while consuming alcohol (e.g., How often during the last year have you needed a drink first thing in the morning to get yourself going after a heavy drinking session?), frequency of adverse reactions to drinking (e.g., How often during the last year have you been unable to remember what happened the night before because you had been drinking?) and endorsement of alcohol-related problems (e.g., Has a relative or friend, or a doctor or another health worker been concerned about your drinking or suggested you cut down?). Eight of the scale's ten items are scored on a five point scale, where 1 represents *never*, 2 represents *monthly or less*, 3 represents *2-4 times a month,* 4 represents *2-3 times a week*, and 5 represents *4 or more times a week.* For the item "How many drinks containing alcohol do you have on a typical day when drinking?" these 1-5 values represent 1-2, 3-4, 5-6, 7-9, and 10 or more respectively. For the items pertaining to alcohol-related problems, items are scored on a three point scale, where 0 represents *no*, 1 represents *yes, but not in the last year*, and 2 represents *yes, in the last year*. In total, scores for this scale range from 0-36, which high scores indicating potential alcohol-related issues.

This measure was created by analyses of a 150-item assessment schedule, which was given to 1888 individuals in a collaborative six-country study with the World Health

Organization (WHO; Saunders et al., 1993). In development, the test was noted to have high intrascale reliability when used on patients with known alcohol abuse problems, with high Cronbach's alpha coefficients (with values for drinking behavior, adverse reactions, and alcohol related problems of α=.93, α=.81, and α=.69 respectively). Items related to drinking consumption were selected as simple, face valid questions to capture information about frequency. Among groups of drinkers and non-drinkers, the measure was noted to accurately identify alcoholic patients, with 98% of diagnosed alcoholics having high scores on the AUDIT. This suggests that the measure has good criterion validity.

Drug Use Disorders

The Drug Use Disorders Identification Test (DUDIT), developed by Berman, Bergman, Palmstierna, & Schlyter (2005), is a self-report measure of drug use designed to screen for drug-related problems. Similar to the AUDIT, this measure includes 10-items regarding frequency of drug use, behavior while consuming drugs, adverse reactions to drug use, and endorsement of drug-related problems. In addition, another item asking which drugs a participant has used is also included. Scoring is identical to that of the AUDIT, with a high score of 36 and high scores again indicating drug-related issues. A later post-development study by Voluse et al. (2012) sought to examine the DUDIT's applicability to individuals in the United States, as the test was developed in Sweden and evaluated using Swedish patients with known drug problems. Voluse et al. (2012) found that this measure is an accurate measure to screen for drug abuse, noting high internal consistency (α=.94), as well as a high correlation with the Drug Abuse Screening Test (r=.85), another widely used measure for drug use disorders. Further, the

measure was found to have good discriminant validity, as the measure was able to differentiate between alcohol abuse and other drug abuse (Voluse et al., 2012).

Anxiety

The Pennsylvania State Worry Questionnaire (PSWQ), developed by Meyer et al. (1990), is a self-report measure of worry, a common behavior in patients with Generalized Anxiety Disorder (GAD). This 16-item measure asked questions regarding situations where an individual might worry about something (e.g., I worry about projects until they are done), and their thoughts about their worry behavior (e.g., I know I should not worry about things, but I just cannot help it). Items are scored on a five-point scale, where 1 represents *Not typical of me* and 5 represents *Very typical of me.* Options 2-4 are not given descriptors and can be considered to be generally between the two extremes. Five items on this scale are asked in the reverse, with higher scores being indicated of less anxiety, and were thus reverse coded for analyses. Meyer et al. (1990) developed this measure using principle components factor analysis, narrowing a 161-item pool down to 16-items with excellent split-half reliability and internal consistency coefficients (r=.97 and α=.93, respectively). The measure is also noted to be correlated with other measures of general anxiety, most notably the State-Trait Anxiety Inventory (Meyer et al., 1990). Finally, the measure was noted to discriminate between college students with and without GAD, as well as between individuals with GAD and PTSD (Meyer et al., 1990).

Participants

Individuals recruited for this study were required to satisfy several inclusion conditions. They were required to: be between the ages of 18 and 40, be in a current romantic relationship lasting longer than three months, be a current U.S. citizen or

resident, and identify as both cisgender and either heterosexual or a sexual minority with a cisgender partner. These last criteria were in place to specifically narrow the focus of this project, as it is possible that transgender or gender non-conforming (TGNC) individuals likely experience different but related forms of minority stress. In addition, participants were required to respond correctly to attention check questions included at the end of the CADRI, CESD, and DUDIT.

Participants were recruited using two methods. First, participants were recruited using Amazon Mechanical Turk (MTurk), with each participant solicited in this way receiving $0.50 into their MTurk account for fully completing the survey. Additionally, participants were recruited through various forms of social media (Facebook, Reddit, Tumblr, Instagram etc.), with advertisements placed on my personal pages as well as on the Healthy Relationships Lab (HeartLab) Facebook page to allow the survey to reach a larger audience.

Analysis Plan

For this thesis, there are two primary hypotheses. Specifically, Hypothesis 1 is that heterosexual and sexual minority individuals who are victims of IPV will differ in various mental health outcomes (specifically depression, anxiety, and drug and alcohol use). Hypothesis 2 is that internalized homophobia (in sexual minority individuals only) will moderate the relationships between IPV and these mental health outcomes, such that individuals who endorse higher levels IH will also endorse more negative mental health outcomes. For hypothesis 1, path analysis via the statistical program Mplus was used. For hypothesis 2, multivariate generalized linear modeling was used via the statistical program SPSS.

Preliminary Analyses

Prior to performing hypothesis testing, the data for this study was screened for significant issues with skew, kurtosis, and outliers. Further, correlations between the scores of the measures used in the survey were examined.

Hypothesis 1

To examine differences between the two groups, a multiple-group structural model was run, with the groups being heterosexual and sexual minority individuals. Within this model, the β-values for each of the four mental health outcomes were compared for heterosexual and sexual minority individuals using a multiple group model. A model constraint analyses determined whether these estimates were statistically equivalent among the two groups. Both physical victimization and emotional victimization were included as predictors with all four mental health outcomes included as dependent variables in a multivariate model (See Figure 1 for a visual of these statistical model).

Hypothesis 2

To examine a possible moderation interaction between IPV victimization and internalized homophobia, an interaction term between the observed IPV scale (i.e., physical, emotional) and the IH scale was created using standardized values (z-scores) for both scales. Multivariate generalized linear modeling (GLM) was used for this analysis. Within this model, all mental health outcome variables were included as dependent variables, and the IH, IPV, and interaction term were included as predictors. Statistically significant multivariate test statistics would indicate that a given predictor has a statistically significant relationship with the joint distribution of the four mental health

outcome variables. Statistically significant β-values for the predictor variables would indicate a significant association, with significance for the interaction term indicating an interaction effect between IH and IPV victimization for a given mental health outcome.

Power Analysis

The basic rule-of-thumb assumptions, described by Bentler & Chou (1987) for structural equation modeling, were used for determining the number of participants for Hypothesis 1. The survey, not including demographic questions, screening questions, consent, debriefing, and CADRI-perpetration questions, was 69 questions in total. Assuming, using rule-of-thumb, that a minimum of 5 participants for each question in a scale was necessary, a minimum of 345 participants was required. Ideally, the sample will include an equal number of heterosexual and sexual minority individuals; therefore power analyses indicates a minimum of 173 individuals for each group. For Hypothesis 2, the statistical program G*Power was used to determine the required sample size. For this analysis, an effect size of 0.15 with an α-error probability of 0.05 and a power (1-β) value of 0.80 were used. Each model was also assumed to include three tested predictor variables (IH, IPV victimization, and the interaction term. G*Power suggested a minimum sample size of 77, well below the established goal of 173 for Hypothesis 1.

CHAPTER IV

RESULTS

Demographics

Over 2000 (n=2041) individuals recorded responses to the survey. Among these, 137 (6.71%) were recruited through social media recruitment, and all others were recruited through Amazon MTurk. This initial sample was screened for the following: affirmative responses to informed consent, responses to exclusion criteria, correct answers to included attention check questions, and missing data on survey questions. After screening, a final sample of 1110 was used for data analysis. This sample included 73 (6.58%) individuals recruited through social media.

The final sample included 919 heterosexual individuals and 191 sexual minority individuals. The heterosexual sample included 519 cisgender women (56.5%) and 400 cisgender men (43.5%). This sample had a mean age of 30.60 years (*SD*=5.84). The heterosexual sample was predominantly Caucasian (70.0%), college-educated (72.6% having completed at least an Associate degree), employed full-time (67.1%) and not currently students (57.8%). This sample had an average current romantic relationship length of 5.61 years (*SD*=4.85), and the majority endorsed currently living with their partner (79.1%). Finally, 27% of participants endorsed having been diagnosed with a

depressive disorder, 34.2% endorsed being diagnosed with an anxiety disorder, and 9% endorsed being diagnosed with a substance use disorder, with alcohol being the most common (27.7%). (Please see Tables 1-5 for more complete heterosexual demographic information).

The sexual minority sample included 99 cisgender women (51.8%) and 92 cisgender men (48.2%). This sample had a mean age of 28.42 years (*SD*=5.39). The sexual minority sample was predominantly bisexual with 125 identifying as such (65.4%), 40 (20.9%) identifying as gay, 17 (8.9%) identifying as lesbian, and 9 (4.7%) identifying as other. The sample was also predominantly Caucasian (71.7%), college educated (73.2% having completed at least an Associate degree) and employed full-time (66.0%). However, the majority were found to be current students (51.8%). This sample had an average current romantic relationship length of 4.21 years (*SD*=4.19), and 73.3% endorsed currently living with their partner. Finally, 56% endorsed having been diagnosed with a depressive disorder, 56% endorsed having been diagnosed with an anxiety disorder, and 19.4% endorsed being diagnosed with a substance use disorder, with alcohol again being most common. (See Tables 6-10for more complete demographic information for the sexual minority sample).

Preliminary Analyses

In its initial examination, data were screened for outliers, skewness, and kurtosis. Of the 191 sexual minority individuals, four did not provide data for all internalized homophobia questions, representing 2.1% of the sexual minority sample and 0.36% of participants overall. Regarding outliers, measures of both anxiety and internalized homophobia had no participant score above the standardized cutoff of three (with

maximum Z-scores of Z=2.95 and *Z*=-2.39 respectively). All other scales and measures included data that was above a standardized score of three, with emotional victimization and depression scales including two outliers (with maximum Z-scores of *Z*=3.12 and *Z*=3.28 respectively), the alcohol use scales including seven (maximum *Z*=4.19), the drug use scale including 11 (maximum *Z*=4.03), and the depression scale including 16 (maximum *Z*=3.28). Among these individuals, three were found to be outliers on two scales, and two had outlier scores on more than two scales. Ultimately, as the combined outlier total was approximately 3% of the total sample, all were retained for analysis.

Skew and kurtosis were analyzed for each scale (see Table 11). For the internalized homophobia scale, the scale average was 2.23 (*SD*=1.16) with skewness and kurtosis of 0.71 (*SE*=.178) and -0.567 (*SE*=.354) respectively, implying that internalized homophobia was also normally distributed. For scales completed by all participants, emotional victimization, depression, and anxiety were normally distributed as well. For the CADRI emotional victimization scale, the average was 20.73 (*SD*=6.17) with skewness and kurtosis values of 0.256 (*SE*=0.073) and -0.50 (*SE*=0.147) respectively. The scale average for the CESD was 42.32 (*SD*=9.36) with skewness and kurtosis values of 0.395 (*SE*=0.073) and -0.160 (*SE*=0.147) respectively. The scale average for the PSWQ was 47.94 (*SD*=10.87) with a skewness value of -0.251 (*SE*=0.073) and a kurtosis value of -0.015 (*SE*=0.147). The three remaining scales had issues with skewness, with two also having higher kurtosis values. The scale average for the AUDIT was 14.66 (*SD*=6.83) and the scale was positively skewed (1.24, *SE*=0.073), though still generally mesokurtic (.831, *SE*=0.147). For the physical victimization scale, the average was 5.71 (*SD*=2.74) and was positively skewed (1.58, *SE*=0.073) and leptokurtic (1.45, *SE*=0.147).

The scale average for the DUDIT was 14.62 (*SD*=7.04) and was also positively skewed (1.57, *SE*=0.073) and leptokurtic (1.56, *SE*=0.147).

Prior to hypothesis testing, bivariate correlations were examined for all scales (see Tables 12 and 13). All scales were noted to be significantly correlated with each other, with all correlations being significant at or below the 0.01-level for both heterosexual and sexual minority individuals, except that of the RIHS and the CESD, r (187)=-.186, p=.011). For correlations between all scales, all r-values were noted to be positive. Preliminary t-test analyses were also computed to compare scores between scales among heterosexual and sexual minority individuals (see Table 14). For all scales except the emotional victimization scale of the CADRI, t (280.0) = -.747, p=.46, sexual minority individuals had significantly higher average scale scores than heterosexual individuals, lowest t (268) = -2.823, p = .005.

Hypothesis 1

Hypothesis 1 stated that heterosexual and sexual minority individuals would differ in the manifestation of mental health outcomes due to IPV victimization, such that sexual minority individuals would endorse more severe manifestation. Path analysis by way of the statistical program Mplus was used to test this hypothesis.

Standardized path analysis values were compared for heterosexual and sexual minority populations to examine the above hypothesis. The results showed that depression was significantly associated with emotional victimization for both heterosexual (β=0.357, p<.001) and sexual minority individuals (β=0.450, p<.001), but these results were not statistically different (p = .494). Physical victimization was associated with depression for heterosexual individuals (β=0.866, p<.001), though not for

sexual minority individuals (β=0.260, p=0.268). Based on the model constraint analysis, this difference was statistically significant (p = .022). Anxiety was significantly associated with emotional victimization for heterosexual individuals (β=0.375, p<.001), though this again was not the case for sexual minority individuals (β=0.073, p=.601). Difference tests indicated these parameters were statistically different (p = .05). Physical victimization significantly associated with anxiety for both heterosexual (β=0.757, p<.001) and sexual minority individuals (β=0.993, p<.001), but these were not statistically different (p = .435). Alcohol abuse yielded near-identical results to anxiety, with emotional and physical victimization significantly relating to alcohol abuse for heterosexual individuals (β=0.077, p=.026; β=1.309, p<.001, respectively), but physical victimization (β=1.394, p<0.001) and not emotional victimization (β=0.113, p=.138) related to alcohol abuse for sexual minority individuals; however these were not statistically different in comparing heterosexual and sexual minority individuals for either emotional victimization (p = .665) or physical victimization (p = .698). Finally, for drug abuse, emotional victimization was found to be significantly associated for heterosexual (β=0.097, p=.004) and sexual minority individuals (β=0.231, p=.016), as well as for physical victimization (β=1.309, p<.001, and β=1.248, p<.001 respectively). These estimates did not differ between the groups (p = .188 and .757). Results are presented in Tables 15 and 16.

Hypothesis 2

Hypothesis 2 stated that internalized homophobia among sexual minority individuals would moderate the relationship between IPV and negative mental health outcomes, such that individuals who endorsed more severe internalized homophobia and

more severe IPV victimization would endorse more severe negative mental health outcomes. This analysis was conducted using multivariate generalized linear modeling in SPSS. For both models generated, the four mental health outcome variables were listed as dependent variables, and IH, IPV victimization (either physical or emotional), and the IH*IPV interaction term were included as predictors (with all predictors mean-centered).

Moderation analyses using emotional IPV victimization as the dependent variable gleaned disparate results. To begin, Wilks' Lambda testing demonstrated that, internalized homophobia, emotional victimization, and the interaction term were all significantly associated with the joint distribution of the four mental health outcomes (Lowest F=3.40, p=.010). Depression was shown to be significantly related to emotional victimization (β=2.972, p=<.001) though not to internalized homophobia (β=0.282, p=.687). There was no significant interaction between emotional victimization and internalized homophobia for depression (β=0.117, p=.85). Neither emotional victimization (β=1.234, p=0.285) nor internalized homophobia was (β=-1.081, p=.350) were significantly related to anxiety, and no significant interaction was found (β=-1.654, p=.105). For alcohol abuse, both emotional victimization (β=1.515, p<.001) and internalized homophobia (β=3.675, p<0.001) were significantly related, and a significant interaction was found (β=1.203, p=.001, see Figure 2). This indicates that increased exposure to emotional victimization accompanied by greater severity of internalized homophobia is associated with increased alcohol abuse. Finally, both emotional victimization (β=2.231, p<.001) and internalized homophobia (β=-3.133, p<.001) were significantly related to drug abuse, and a significant interaction was found (β=1.042, p=.029, see Figure 3). Similar to findings related to alcohol abuse, this result indicates

that more severe emotional victimization accompanied by more severe internalized homophobia is associated with more severe drug abuse.

Analyses using physical victimization as the independent variable yielded similarly disparate results. Wilks' Lambda testing demonstrated that both physical victimization (F=9.395, p<.001) and internalized homophobia (F=6.243, p<.001) were related to the joint distribution of the four mental health outcomes, though internalized homophobia did not (F=1.173, p=.324). Physical victimization was significantly related to depression (β=2.007, p=.013), though internalized homophobia was not (β=0.244, p=.789). Predictably, there was also no interaction effect for depression (β=-0.262, p=.663). Neither physical victimization (β=-1.229, p=.342) nor internalized homophobia (β=0.556, p=.705) were significantly related to anxiety, and there was no significant interaction (β=-0.674, p=.486). For alcohol abuse, both physical victimization (β=2.208, p<.001) and internalized homophobia (β=2.333, p<.001) were significantly related, and a significant interaction effect was found (β=0.672, p=.042, see Figure 4). Again, the significant interaction indicates that more severe physical victimization accompanied by more severe internalized homophobia is associated with more severe alcohol abuse. Finally, both physical victimization (β=2.715, p<.001) and internalized homophobia (β=2.020, p=.003) were significantly related to drug abuse, though with no significant interaction (β=0.251, p=.573).

CHAPTER V

DISCUSSION

The purpose of this study was to examine differences between heterosexual and sexual minority populations in the manifestation of four specific mental health outcomes that may result from IPV. This study sought to add to the still relatively limited research on IPV in sexual minority individuals. It was hoped that the results of this study could help better tailor clinical intervention specifically for sexual minority individuals experiencing IPV victimization. Ultimately, hypothesis 1 was not confirmed. Sexual minority individuals were not shown to significantly differ from heterosexual individuals in the manifestation of mental health outcomes with two exceptions, and in both cases, heterosexual individuals endorsed greater severity. Additionally, the results only showed partial support for hypothesis 2, specifically showing that internalized homophobia does moderate the relationship between IPV victimization and alcohol abuse, and drug abuse and emotional victimization only, but not depression or anxiety.

Preliminary analyses corroborated much of the existing literature on the prevalence of depression, anxiety, and drug and alcohol abuse in sexual minority individuals. For scales measuring these mental health outcomes, sexual minority individuals had higher average scores when compared to heterosexual individuals. In

addition, approximately 56% of sexual minority individuals endorsed being diagnosed with a depressive disorder, approximately 56% endorsed diagnosis of an anxiety disorder, and approximately 19% endorsed diagnosis of a substance use disorder, compared to 27%, 34%, and 9% respectively for heterosexual individuals. As sexual minority individuals are generally seen as being at greater risk for negative mental health outcomes (NIMH, 2019), these results were expected. Particularly noteworthy was the more than two-fold prevalence rate increase in substance use disorders between heterosexual and sexual minority populations, as this corroborates the notion that substance abuse is a significant issue in sexual minority communities (Medley et al., 2016), and thus warrants a greater emphasis on treatment and awareness.

Though we were able to establish that sexual minority individuals generally endorsed greater severity of negative mental health outcomes, statistical testing did not support hypothesis 1. Sexual minority individuals differed in the manifestations of depression resulting from emotional victimization, and anxiety resulting from physical depression. However, these differences were in the opposite of the expected direction, with heterosexual individuals endorsing more severe manifestation of depression and anxiety resulting from emotional and physical victimization, respectively. For all other comparisons between groups, no significant differences were found.

As previously stated, estimates of IPV prevalence are variable, with the CDC positing a prevalence rate of 1 in 3 and other sources indicating that IPV victimization may be as high as 70% (Lelaurain, Graziani, & Lo Monaco, 2017). The above results may speak to the universality of IPV, or that IPV is such a common and prevalent issue that differences between sexual orientations may not exist in relation to mental health.

Though sexual minority individuals of both genders have been noted to experience IPV at rates typically endorsed by heterosexual women and typically greater than those endorsed by heterosexual men (Badenas-Ribera et al., 2015; Finneran & Stephenson, 2017), these results could indicate that IPV victimization may result in similar negative mental health experiences regardless of sexual orientation. Given the presence of women who have sex with women in this sample, these results may also support growing concerns that IPV perpetration is not an exclusively male phenomenon (Walters et al., 2013), though further analysis to confirm this theory is warranted.

Results demonstrated partial support for hypothesis 2. Specifically, the interaction between internalized homophobia and both physical and emotional IPV victimization were found to be statistically significant for alcohol abuse. Additionally, the interaction between internalized homophobia and emotional IPV victimization was statistically significant for drug abuse. These results support the notion that internalized homophobia may be related to problematic substance use (Puckett et al., 2017). No other mental health outcomes were found to be significantly predicted by the interaction between IH and physical or emotional IPV victimization. However, internalized homophobia itself was found to significantly predict drug abuse when moderated with physical victimization, despite there being no significance in the interaction term. These results corroborate previous findings that indicated a relationship between internalized homophobia and anxiety (Newcomb & Mustanski, 2010) and further corroborate previous findings associating internalized homophobia with problematic drug use (Moody et al., 2018). Counter to hypothesis 2 and to current psychological literature, internalized homophobia was not found to significantly predict depression when moderated with either physical or

emotional victimization. Internalized homophobia has been previously associated with depression symptoms (Newcomb & Mustanski, 2010), lower self-esteem, and suicidal ideation (Herek et al., 2009), so the results of the present study can be seen as counter to previous findings.

The findings as they relate to hypothesis 2 also provide some interesting insight into the relationship between internalized homophobia and IPV. IPV has been previously found to be associated with all forms of IPV (Stephenson & Finneran, 2016), a finding that was corroborated by preliminary correlation analysis in the present study. However, many studies have linked internalized homophobia to negative mental health outcomes also associated with IPV (Lewis et al., 2016; Murchison et al., 2017), though not to IPV directly. As this study found a significant interaction between internalized homophobia and IPV when predicting alcohol abuse and drug abuse, it is possible that for other non-substance-abuse-related mental health outcomes, there is no direct interaction between IPV and internalized homophobia.

Clinical Implications

This study brings about several potential clinical implications. The most prominent may be related to the interaction between internalized homophobia and IPV as they relate to alcohol abuse. Previous studies have indicated that problematic substance abuse may be common in sexual minority individuals who experience IPV, and that this should result in greater emphasis on substance related issues when screening patients following victimization (Resiner et al., 2013). The interaction between internalized homophobia and IPV established in this study provides support for this increased emphasis, and the increased consideration for alcohol abuse-related treatment in sexual

minority individuals experiencing IPV should be further studied. This may also have implications when treating non-alcohol substance-related issues during treatment following IPV victimization, as both internalized homophobia and IPV predicted such issues in cases of emotional abuse.

Additionally, while internalized homophobia did not significantly predict depression, both measured types of IPV did. In previous studies, depression has consistently been shown to be significantly related to IPV victimization, and as such, should continue to be a prominent consideration when treating and screening individuals who endorse IPV victimization. Length of exposure to victimization should also be a consideration, as depressive symptoms have been shown to increase over time as a result of IPV victimization (Simmons et al., 2015), as well as in the immediate aftermath of victimization (Johnson et al., 2014).

Finally, though results did not show conclusive differences between heterosexual and sexual minority individuals, it is possible that other factors not examined by this study could also uniquely contribute to IPV experiences and negative mental health in sexual minority individuals specifically. For example, this study's explicit focus on internalized homophobia does not consider homophobic experiences in the community. According to a 2017 study from the Harvard Research Center, 57% of individuals surveyed endorsed experiencing discrimination related to their sexual orientation or gender identity.Approximately a quarter of LGBTQ+ individuals also endorsed institutional discrimination in the context of employment, treatment by safety officials, and treatment in legal settings such as court. These and other factors may uniquely contribute to negative mental health, and potential to IPV victimization experience

(particularly regarding negative treatment by police and other safety forces) in sexual minority individuals specifically. These factors are certainly worthy of further research and should be considered in a clinical treatment context.

Limitations

There were several limitations to this study that may account for the unanticipated results of this study. To begin, the overall sample consisted of only 17.2% sexual minority individuals. Amazon MTurk was the primary source of data for this study, and while this significantly bolstered the overall population, MTurk did not provide the ability to filter its workers by sexual orientation. As such, most individuals recruited in this manner were heterosexual. Similar issues were faced with only forms of online recruitment. Despite posting to primarily LGBTQ+-related pages and forums, social media recruitment did not proceed at the rate or quantity expected. It is possible that this difficulty may have contributed to the unanticipated findings of this study.

Notably, results as they relate to the Revised Internalized Homophobia Scale (RIHS) may to be somewhat different from previous studies due to mean differences. Among a national online sample of 568 sexual minority individuals, Bissonette & Syzmanski (2019) found a scale mean value of 1.80 (SD=0.87) for the RIHS. Other studies have gleaned similar results, generally showing mean values between 1.6 and 2 (e.g., Straub et al., 2018; Thies et al., 2016; Trub et al., 2017). Using the Bissonette & Syzmanski (2019) study as a basis for comparison, means difference testing showed that the mean of 2.23 gleaned from this study was significantly larger than the comparison study (t=6.013, p<0.001). Though it could be argued that both means correspond to an the overall sample reporting *somewhat disagree* (2) as their "average" response, a

significant difference in the mean scores between these (and assumedly other) studies indicates that the sexual minority population of this study may not represent the general sexual minority population.Additionally, though bisexual individuals were permitted to complete this study to bolster the sexual minority population, this sample consisted of a bisexual majority (approximately 65%). This bisexual sample was noted to endorse more severe internalized homophobia than individuals who identified as gay or lesbian. It is therefore possible that internalized homophobia may not manifest in the same way, or may manifest with greater severity, as individuals who identify as exclusively homosexual. Interestingly, although only 20.8% of the bisexual sample endorsed dating a same-gender partner, this increased average was present irrespective of whether that person's romantic partner was same-gender or opposite-gender. This could indicate that bisexual individuals experience internalized homophobia even when they are dating a partner of the opposite-gender. Further research specifically focused on bisexual individuals may provide some clarity on how internalized homophobia manifests in bisexual individuals.

The overall mental health of the sample may also be a limitation for this study. Approximately 32% of the overall sample claimed to have been previously diagnosed with a depressive disorder, approximately 38% claimed to have been previously diagnosed with an anxiety disorder, and approximately 11% endorsed a previous diagnosis of a substance use related disorder, with the most common being alcohol-related. While these values are all above the lifetime prevalence rates for each of these disorders in the United States, it implies that the many participants may not consider any clinical intervention necessary in their lives. Evaluating only those individuals who are

currently undergoing mental health treatment could help to shed more light on that population's specific needs. It is important to note, however, that prevalence of IPV largely outstrips that of any of the studied mental health outcomes, according to prevalence statistics. As such, though research on depression, anxiety, and drug and alcohol abuse may be better tailored to clinical settings, IPV research should continue to focus on the population at-large.

Finally, it is important to note the potential limitations of utilizing self-report measures. Though the average time of completion was approximately 28 minutes (just slightly short of the anticipated 30 minutes) the distribution of completion times was noted to be significantly positively skewed (11.94), suggesting that a majority of individuals completed the survey in a shorter than expected amount of time. Further, attention check questions were included to substantiate responses, with specific questions placed at the conclusion of the CADRI, CESD, and DUDIT, and individuals who failed to answer these questions correctly were excluded from analyses. However, this did not guarantee adequate attention from all participants and did not prevent participants from responding randomly or from entering the same response for all other questions. As such, and as with all studies using self-report measures, results should be analyzed with some caution.

Future Research Directions

The present study brings about several potential opportunities for further research. As it relates to hypotheses 1 and 2, a replication of this study using a sample of exclusively lesbian and gay individuals without the inclusion of other orientations could bring about unique findings. Along these lines, future research could also focus on

internalized discrimination and minority stress in other sexual and gender minority populations, including bisexuals, transgender and gender non-conforming individuals, and other sexual and gender orientations under the LGBTQ+ umbrella. As stated in this study's limitations, most of the bisexual population used in study was found to be a romantic relationship with a partner of the opposite gender. Based on this finding, a study comparing the manifestations of internalized homophobia in bisexual individuals with same-gender and opposite-gender partners could be considered. Finally, as a direct interaction between internalized homophobia and IPV was not found for any mental health outcomes other than alcohol abuse, further studies could examine the indirect association between internalized homophobia and IPV, specifically considering any intermediate factors or actions such as risky sexual behavior (Murchison et al., 2017) or exposure to homophobic discrimination (Carvalho et al., 2011) that may be directly associated with both internalized homophobia and IPV.

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Appendix A: Tables

Table 1

Demographic Variable Means, Standard Deviations, Skewness, and Kurtosis for Heterosexual Individuals

Variable	N	*M* (Years)	*SD*	Skew	Kurtosis
Age	919	30.60	5.84	-0.079	-0.98
Average Relationship Length	919	5.61	4.85	1.41	1.90

Table 2

Ethnicity Information for Heterosexual Individuals (n = 919)

Race/Ethnicity	Quantity	Percentage (%)
Caucasian	643	70.0
African American	71	7.72
Asian/Pacific Islander	91	9.90
Latino/Latina/LatinX	52	5.65
Middle Eastern	2	0.21
American Indian/Native Alaskan	14	1.52
Other	4	0.43
Mixed Race	42	4.57
Total	919	100.0

Table 3

Education-Level Information for Heterosexual Sample (n = 919)

Education Level	Quantity	Percentage (%)
Some High School, But No Diploma	9	1.0
High School Diploma or Equivalent (GED)	64	7.0
Some College, But No Degree	175	19.0
2-Year College Degree (Associate's)	108	11.8
4-Year College Degree (Bachelor's)	419	45.6
Graduate-Level Degree (Master's/Doctorate)	140	15.2
Other	4	.4
Total	919	100.0

Table 4

Employment Status for Heterosexual Individuals (n = 919)

Employment Status	Quantity	Percentage (%)
Employed, Working Full-Time	617	67.1
Employed, Working Part-Time	134	14.6
Not Employed, Looking for Work	96	10.5
Not Employed, Not Looking for Work	64	7.0
Retired	1	0.1
Disabled, Not Able to Work	3	0.3
Other/Missing	4	0.4
Total	919	100.0

Table 5

Current Education Status for Heterosexual Individuals (n = 919)

Current Education Status	Quantity	Percentage (%)
Current Student Pursing 2-Year College Degree	46	5.0
Current Student Pursuing 4-Year College Degree	199	21.7
Current Student Pursuing Graduate-Level Education (Master's/Doctorate)	122	13.2
Current Student Pursuing a High School Diploma or Equivalent	7	0.8
Current Student with Undefined Pursuits	14	1.5
Not a Current Student	531	57.8
Total	919	100.0

Table 6

Demographic Variable Means, Standard Deviations, Skewness, and Kurtosis for Sexual Minority Individuals

Variable	N	*M* (Years)	*SD*	Skew	Kurtosis
Age	191	28.42	5.39	0.21	-0.66
Average Relationship Length	191	4.21	4.19	2.13	5.59

Table 7

Ethnicity Information for Sexual Minority Individuals (N = 191)

Race/Ethnicity	Quantity	Percentage (%)
Caucasian	137	71.72
African American	20	10.48
Asian/Pacific Islander	9	4.71
Latino/Latina/LatinX	7	3.67
American Indian/Native Alaskan	1	0.52
Mixed Race	17	8.90
Total	191	100.0

Table 8

Education-Level Information for Sexual Minority Individuals (N = 191)

Education Level	Quantity	Percentage (%)
Some High School, But No Diploma	2	1.0
High School Diploma or Equivalent (GED)	11	5.8
Some College, But No Degree	38	19.9
2-Year College Degree (Associate's)	14	7.3
4-Year College Degree (Bachelor's)	87	45.5
Graduate-Level Degree (Master's/Doctorate)	39	20.4
Total	191	100.0

Table 9

Employment Status for Sexual Minority Individuals (n = 191)

Employment Status	Quantity	Percentage (%)
Employed, Working Full-Time	126	66.0
Employed, Working Part-Time	29	15.2
Not Employed, Looking for Work	24	12.5
Not Employed, Not Looking for Work	9	4.7
Disabled, Not Able to Work	3	1.6
Total	191	100.0

Table 10

Current Education Status for Sexual Minority Individuals (n = 191)

Current Education Status	Quantity	Percentage (%)
Current Student Pursing 2-Year College Degree	8	4.2
Current Student Pursuing 4-Year College Degree	49	25.6
Current Student Pursuing Graduate-Level Education (Master's/Doctorate)	39	20.4
Current Student with Undefined Pursuits	3	1.6
Not a Current Student	92	48.2
Total	191	100.0

Table 11

Scale Variable Means, Standard Deviations, Skew, & Kurtosis

Scale	N	*M*	*SD*	Skew	Kurtosis
CADRI Emotional Victimization	1110	20.73	6.17	0.256	-0.50
CADRI Physical Victimization	1110	5.71	2.74	1.58	1.45
CESD (Depression)	1110	42.32	9.36	0.395	-0.160
PSWQ (Anxiety)	1110	47.94	10.87	-0.251	-0.015
AUDIT (Alcohol Abuse)	1110	14.66	6.83	1.24	0.831
DUDIT (Drug Abuse)	1110	14.62	7.04	1.57	1.56
RIHS (Internalized Homophobia)	191	2.23	1.16	0.71	-0.567

Table 12

Bivariate Correlations for Heterosexual Sample (n = 919)

Scale	1	2	3	4	5	6
(1) CADRI Emotional Victimization		.493**	.358**	.323**	.343**	.303**
(2) CADRI Physical Victimization			.361**	.548**	.556**	.287**
(3) CESD (Depression)				.351**	.337**	.507**
(4) AUDIT (Alcohol Abuse)					.571**	.232**
(5) DUDIT (Drug Abuse)						.280**
(6) PSWQ (Anxiety)						-

**Correlation is significant at the 0.01 level (2-tailed)

Note. CADRI = Conflict in Adolescent Dating Relationship Inventory; CESD = Center for Epidemiologic Study Depression Scale; AUDIT = Alcohol Use Disorders Identification Test; DUDIT = Drug Use Disorders Identification Test; PSWQ = Penn State Worry Questionnaire

Table 13

Bivariate Correlations for Sexual Minority Sample

Scale	1	2	3	4	5	6	7
(1) CADRI Emotional Victimization		.614**	.363**	.489**	.480**	.224**	.453**
(2) CADRI Physical Victimization			.282**	.698**	.606**	.352**	.691**
(3) CESD (Depression)				.286**	.340**	.362**	.186*
(4) AUDIT (Alcohol Abuse)					.665**	.306**	.675**
(5) DUDIT (Drug Abuse)						.318**	.551**
(6) PSWQ (Anxiety)							.353**
(7) RIHS (Internalized Homophobia)							

**Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

N=191

Note. CADRI = Conflict in Adolescent Dating Relationship Inventory; CESD = Center for Epidemiologic Study Depression Scale; AUDIT = Alcohol Use Disorders Identification Test; DUDIT = Drug Use Disorders Identification Test; PSWQ = Penn State Worry Questionnaire; RIHS = Revised Internalized Homophobia Scale

Table 14

T-Test Mental Health Outcome Means Comparisons Between Heterosexual and Sexual Minority Individuals

Scale	*t*	*Degrees of Freedom*	*Significance (p)*
Emotional victimization	-.747	280.03	.455
Physical victimization	-3.28	244.37	.001
Depression	-6.00	283.04	<.001
Anxiety	-6.05	294.71	<.001
Alcohol Abuse	-2.82	267.98	.005
Drug Abuse	-5.35	247.08	<.001

*Means comparison was conducted where heterosexual individuals were the 0 group and sexual minority individuals were the 1 group. As such, negative values indicate that group 0 (heterosexual mean) had a higher mean than group 1 (sexual minority). Equal variances were not assumed.

Table 15

β-Value, Standard Errors, and p-values for Heterosexual and Sexual Minority Mental Health Outcomes in relation to Emotional and Physical Victimization

Victimization	Outcome	Heterosexual-β	Heterosexual *SE*	Sig (*p*)	Sexual Minority-β	Sexual Minority *SE*	Sig (*p*)
Emotional	Depression	0.357	0.052	<.001	0.450	0.126	<.001
	Anxiety	0.375	0.063	<.001	0.073	0.140	.601
	Alcohol Abuse	0.007	0.034	.026	0.113	0.076	.138
	Drug Abuse	0.097	0.034	.004	0.231	0.096	0.016
Physical	Depression	0.866	0.123	<.001	0.260	0.235	.268
	Anxiety	0.757	0.149	<.001	0.993	0.262	<.001
	Alcohol Abuse	1.330	0.082	<.001	1.394	0.142	<.001
	Drug Abuse	1.309	0.080	<.001	1.248	0.180	<.001

Table 16

Differences between Heterosexual and Sexual Minority β-values for Mental Health Outcomes Related to Physical and Emotional Victimization and difference p-values

Victimization Type	Outcome	Difference (Heterosexual β - Sexual Minority β)	*Sig (p)*
Emotional	Depression	0.093	.494
	Anxiety	-0.302	.050
	Alcohol Abuse	0.036	.665
	Drug Abuse	0.134	.188
Physical	Depression	-0.606	.022
	Anxiety	0.236	.435
	Alcohol Abuse	0.064	.698
	Drug Abuse	-0.061	.757

Appendix B: Figures

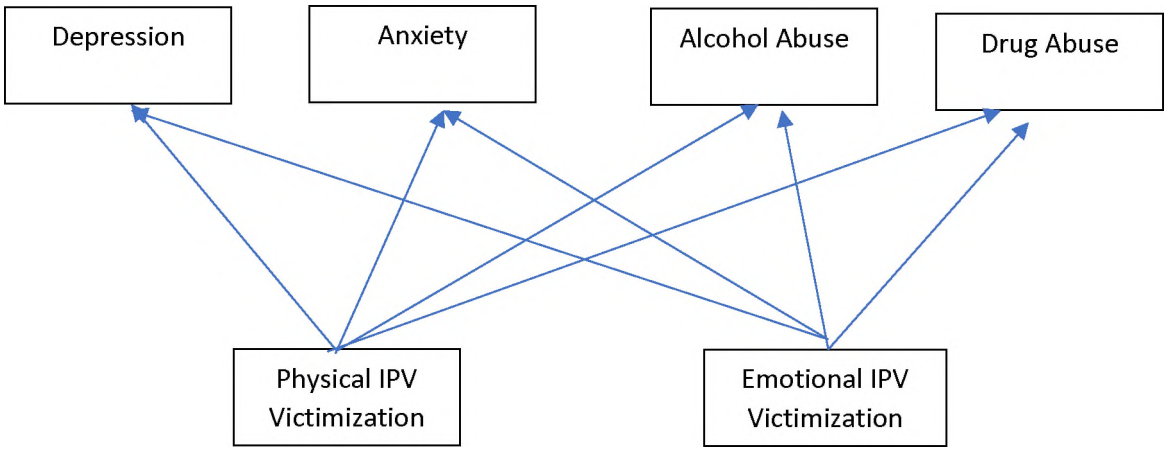

Figure 1. Hypothesis 1 Model for Physical and Emotional Victimization. Models are identical for heterosexual and sexual minority individuals

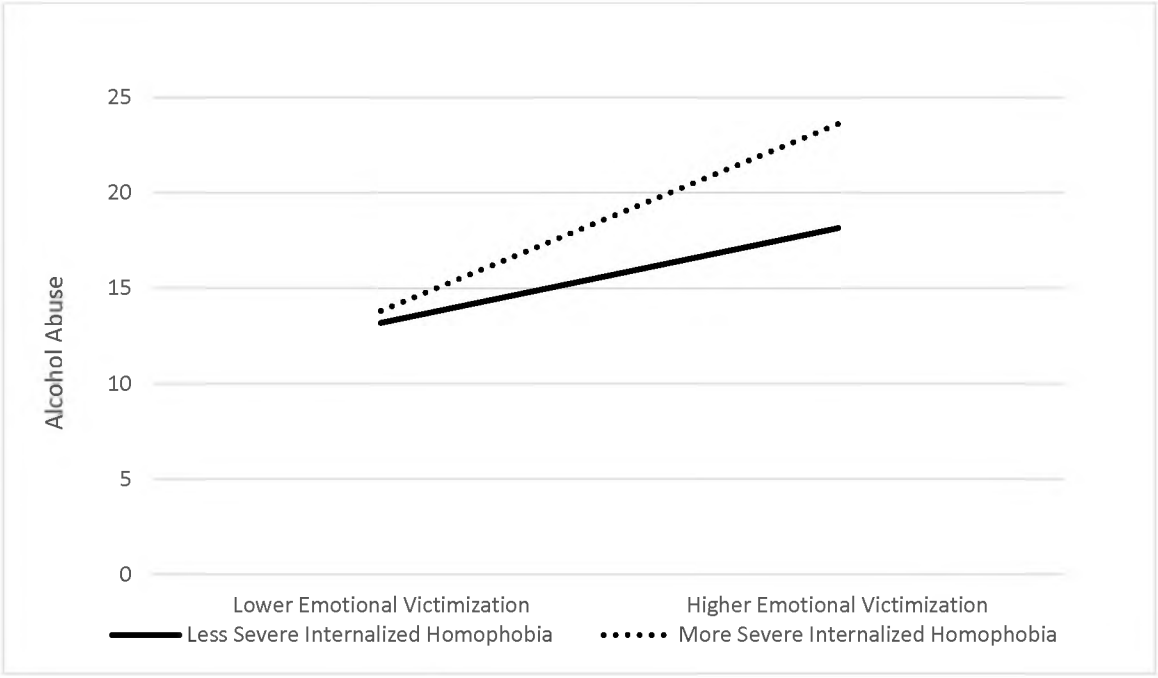

Figure 2. Moderation analysis of emotional intimate partner violence and internalized homophobia in association with alcohol abuse

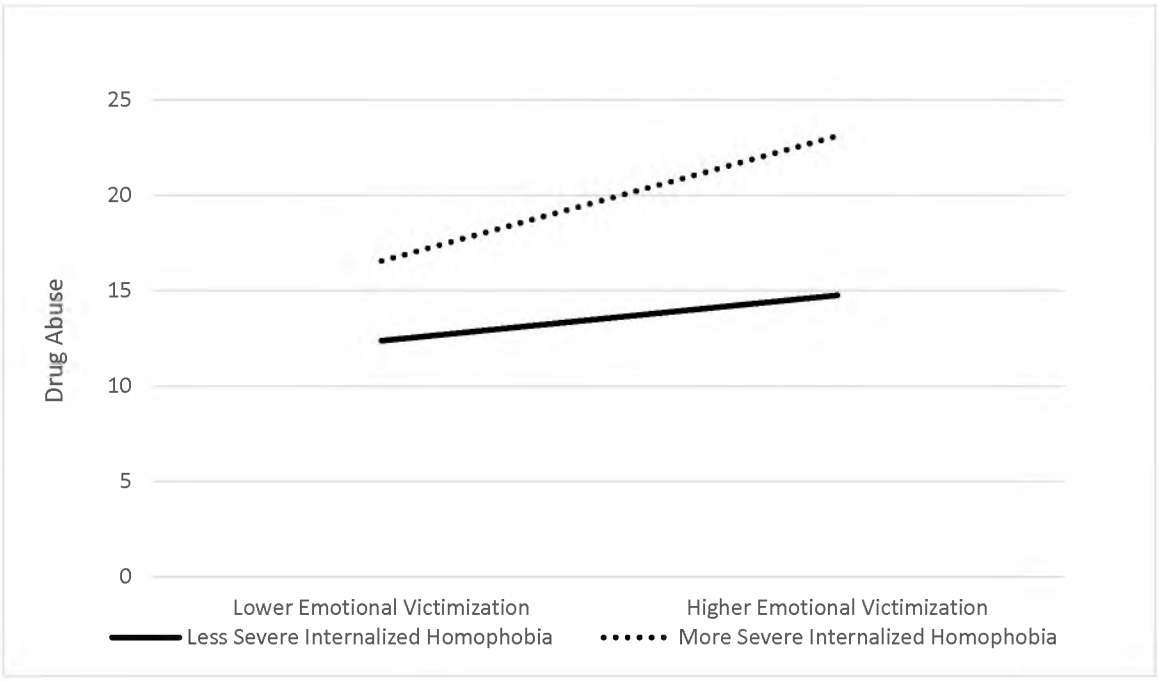

Figure 3. Moderation analysis of emotional intimate partner violence and internalizing homophobia in association with drug abuse

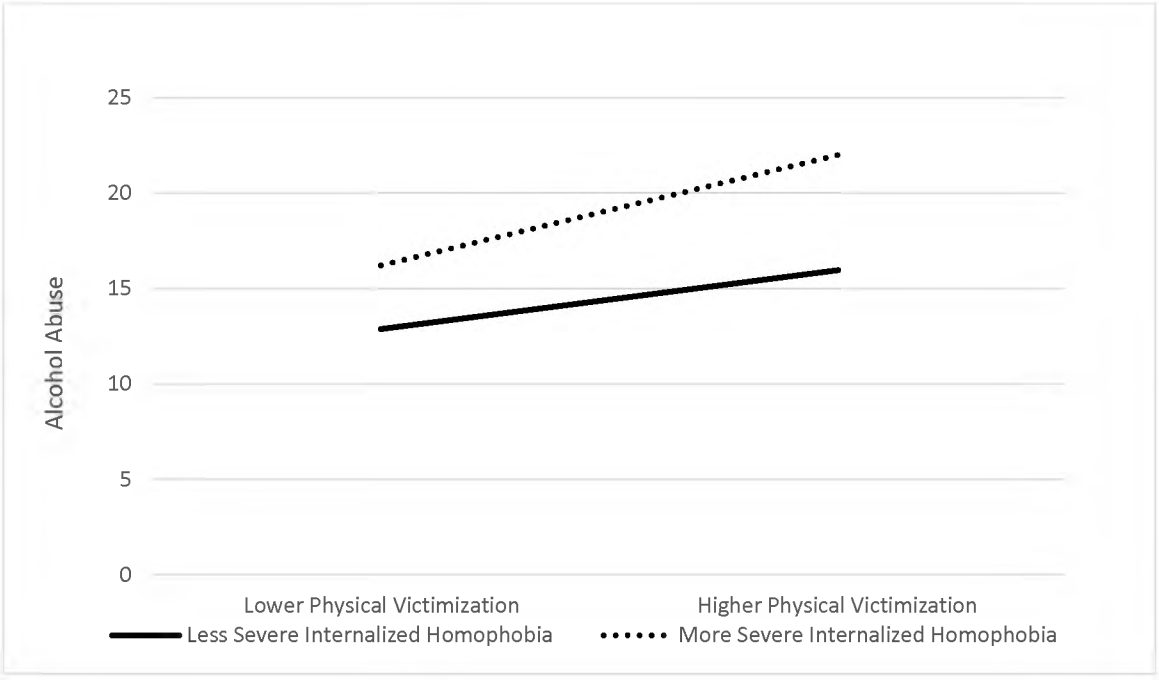

Figure 4. Moderation analysis of physical intimate partner violence and internalized homophobia in association with alcohol abuse

Appendix C: Procedural Forms

Amazon MTurk Script

We are conducting an academic survey about differences in mental health outcomes between heterosexual and sexual minority victims of intimate partner violence. We need to understand you opinions and experiences about mental health and intimate partner violence. Select the link below to complete the survey. **At the end of the survey, you will receive a code at the end of the debriefing materials, which you will paste into the box below to receive credit for taking our survey.**

In order to receive credit for this completing this survey, participants **must** meet the following criteria:

- Participants must be between 18 and 40 years of age.
- Must be a current US resident or US citizen
- Must identify as either heterosexual or a sexual minority
- Must be in a romantic relationship lasting at least three (3) months

Make sure to leave this window open as you complete the survey. When you are finished, you will return to this page to paste the code into the box.

Social Media Recruitment Script

Research on mental health outcomes and intimate partner violence between different sexual orientations!

If you are interested in how mental health outcomes differ between sexual minority and heterosexual victims of intimate partner violence, please go to the survey at https://csuohiopsych.az1.qualtrics.com/jfe/form/SV_cMgmomiZ92N3yQZ

To qualify for this study, you must:

- Be between the ages of 18 and 40
- Be in a romantic relationship lasting at least three (3) months
- Identify as a sexual minority
- Have a partner that identifies as heterosexual or a sexual minorty
- Be a current US resident or a US citizen

This survey will take approximately 30 minutes to complete

P.I. Dr. Elizabeth Goncy, PhD, Cleveland State University

Co-I Edward Gorski, BS, Cleveland State University

Any questions or comments can be directed to Edward at e.j.gorski@vikes.csuohio.edu

Informed Consent

You are being invited to participate in a research project conducted at Cleveland State University by Dr. Elizabeth Goncy and Edward Gorski. Dr. Goncy is an assistant professor in Psychology. Ed is a Master's student in Psychology. Dr. Goncy can be reached with any questions at 216-687-2546 or e.goncy@csuohio.edu. Ed can be reached with any questions at 216-687-2394 and e.j.gorski@vikes.csuohio.edu.

Purpose

The purpose of this study is to better understand the effects of intimate partner violence on adults. We will ask questions about your mood, thoughts, and feelings. We will also ask about drug and alcohol use.

Procedure

You must be between 18 and 40 years old. You must also currently be in a relationship of at least 3 months. Only heterosexual and sexual minority individuals will be invited to participate. You must be currently living in the U.S. or be a U.S. citizen to participate.

You will be asked the following

First you will check below that you have read the information on this page

If you agree to take part in the study, you will then complete an online survey that will take about 30 minutes

We will ask you questions about your mood and emotions. We will also ask questions about your sexual orientation, your past and/or current relationship, and any instance of intimate violence.

You will participate only one time.

Benefits

There are no benefits to you for participation. If you participate through MTurk, you will awarded 0.50 into your account.

Risks

You may find a question upsetting or unpleasant to answer. You can stop at any time without penalty. You can also skip questions you are not comfortable answering.

If you are upon after completing this survey, you can call

National Hopeline Center: 1-800-784-2433

National Suicide Prevention Hotline: 1-800-273-8255

National Crisis Text: Text 741-741

LGBT National Help Center Hotline: 1-888-843-4565

Confidentiality

Another risk related to this study is confidentiality. To lower this risk, we will not link your name or email to your answers. If you participate through MTurk, we will not collect your MTurk worker ID.

Only a summary of results will be published or presented. Only trained researchers will access the data. We will password protect all data. We will not save your computer's IP address. Digital data will be stored on a secure server. This means that only a few people will be able to access your responses. There is also a small risk that others may see you completing this survey. This is true if you choose to complete the survey in a public area. You can reduce this risk by doing the survey alone.

Non-Participation Statement

Your participation in this study is voluntary. You may decide not to participate at any time. There is no penalty for deciding not to participate.

I UNDERSTAND THAT IF I HAVE ANY QUESTIONS ABOUT MY RIGHTS AS A RESEARCH SUBJECT, I CAN CONTACT THAT CLEVELAND STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD AT (216) 687-3630.

I HAVE READ AND UNDERSTAND THE INFORMED CONSENT FORM AND AGREE TOPARTICIPATE IN THIS STUDY. **BY CHECKING BELOW, I ALSO AGREE THAT I AM AT LEAST 18 YEARS OLD.**

Revised Internalized Homophobia Scale (RIHS)

Use the responses below to indicate how much you agree or disagree with each statement. All questions use the following response options

1=Strongly Agree

2=Somewhat Agree

3=Neither Agree Nor Disagree

4=Somewhat Disagree

5=Strongly Disagree

1. I have tried to stop being attracted to men/women in general.
2. If someone offered me the chance to be completely heterosexual, I would accept the chance
3. I wish I weren't attracted to individuals of the same gender.
4. I feel that being attracted to individuals of the same gender is a personal shortcoming for me.
5. I have tried to become more sexually attracted to females/males
6. I would like to get professional help in order to change my sexual orientation to straight/heterosexual
7. I often feel it best to avoid personal or social contact involvement with other men who have sex with men/women who have sex with women.
8. I feel alienated from myself because of my sexual orientation
9. I wish I could develop more erotic feelings for women/men.

Conflict in Adolescent Dating Relationships Inventory (CADRI)

Please read each statement below. Keeping your worst or least satisfying relationship in mind, use the following rating scale to respond:

1=Never: this has never happened in your relationship

2=Seldom: this has happened only 1-2 times in your relationship per year

3=Sometimes: this has happened about 3-5 times in your relationship per year

4=Often: this has happened 6 times or more in your relationship per year

Emotional Perpetration

During a conflict or argument with my boyfriend or girlfriend:

1. I did something to make him/her feel jealous
2. I brought up something bad that he/she had done in the past.
3. I said things just to make him/her angry
4. I spoke to him/her in a hostile or mean tone of voice
5. I insulted him/her with put-downs
6. I ridiculed or made fun of him/her in front of others
7. I kept track of who he/she was with and where he/she was.
8. I blamed him/her for the problem
9. I accused him/her of flirting with someone else.
10. I threatened to end the relationship

Emotional Victimization

1. He/she did something to make me jealous
2. He/she brought up something bad that I had done in the past.
3. He/she said things just to make me angry
4. He/she spoke to me in a hostile or mean tone of voice.
5. He/she insulted me with put-downs.

6. He/she ridiculed or made fun of me in front of others
7. He/she kept track of who I was with and where I was.
8. He/she blamed me for the problem.
9. He/she accused me of flirting with someone else.
10. He/she threatened to end the relationship.

Physical Perpetration

1. I threw something at him/her
2. I kicked, hit or punched him/her
3. I slapped him/her or pulled his/her hair
4. I pushed, shoved, or shook him/her

Physical Victimization

1. He/she threw something at me
2. He/she kicked, hit or punched me
3. He/she slapped me or pulled my hair
4. He/she pushed, shoved, or shook me.

Center For Epidemiological Studies Depression Scale (CESD)

Read each statement below. Use the following scale to respond

1=Rarely or None of the Time (Less than 1 Day)

2=Some or a Little of the Time (1-2 Days)

3=Occasionally or a Moderate Amount of Time (3-4 Days)

4=Most or all of the Time (5-7 Days)

During the past week:

1. I was bothered by things that usually don't bother me
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help.
4. I felt that I was just as good as other people.
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future.
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy.
13. I talked less than usual.
14. I felt lonely.
15. People were unfriendly.
16. I enjoyed life.
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going"

Alcohol Use Disorders Identification Test (AUDIT)

We are going to ask you some questions about your use of alcohol beverages both currently and throughout the last year. By alcoholic beverages, we mean beer, wine, liquors, and spirits such as whiskey, vodka, etc. Please answer all questions honestly. Please remember answers will remain confidential

For questions 1-8, the following response options are used:

1=Never/1-2

2=Monthly or less/3-4

3=2 to 4 times a month/5-6

4=2 to 3 times a week/7-9

5=4 or more times a week/10+

For questions 9-10, the following response options were used

1=No

2=Yes, but not in the last year

3=Yes, during the last year

1. How often do you have a drink containing alcohol?
2. How many drinks containing alcohol do you have on a typical day when drinking?
3. How often do you drink six or more drinks on one occasion?

4. How often during the last year have you found that you were not able to stop drinking once you had started?
5. How often during the last year have you failed to do what was normally expected from you because of drinking?
6. How often during the last year have you needed a drink first thing in the morning to get yourself going after a heavy drinking session?
7. How often during the last year have you had a feeling of guilt or remorse after drinking?
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
9. Have you or someone else been injured as a result of your drinking?
10. Has a relative or friend, or a doctor or another health worker been concerned about your drinking, or suggested you cut down?

Drug Use Disorder Identification Test

We are going to ask you some questions about drug use. Please answer these questions as honestly as possible by indicating which answer is right for you. Please remember your answers are confidential.

Response options for the DUDIT are identical to those of the AUDIT

1. How often do you use drugs other than alcohol?
2. How many times do you take drugs on a typical day when you use drugs?
3. How often are you influenced heavily by drugs?

4. Over the past year, have you felt that your longing for drugs was so strong that you could not resist it?
5. Has it happened, over the past year, that you have not been able to stop taking drugs once you started?
6. How often over the past year have you taken drugs then neglected to do something you should have done?
7. How often over the past year have you needed to take a drug in the morning after heavy drug use the day before?
8. How often over the past year have you had guilty feelings or a bad conscience because you used drugs?
9. Have you or anyone else been hurt (physically or mentally/emotionally) because you used drugs?
10. Has a relative, friend, doctor, or nurse been concerned about your drug use or said to you that you should stop using drugs?

Pennsylvania State Worry Questionnaire (PSWQ)

Rate each of the following statements on a scale of 1 ("Not at all typical of me") to 5 ("Very Typical of me). Please do not leave any items blank

1. If I do not have enough time to do everything, I do not worry about it.
2. My worries overwhelm me.
3. I do not tend to worry about things.
4. Many situations make me worry.
5. I know I should not worry about things, but I just cannot help it.
6. When I am under pressure, I worry a lot.

7. I am always worrying about something.
8. I find it easy to dismiss worrisome thoughts.
9. As soon as I finish one task, I start to worry about everything else I have to do.
10. I never worry about anything.
11. When there is nothing more I can do about a concern, I do not worry about it any more.
12. I have been a worrier all my life.
13. I notice that I have been worrying about things.
14. Once I start worrying, I cannot stop.
15. I worry all the time.
16. I worry about projects until they are all done.

Debriefing

THANK YOU FOR PARTICIPATING IN OUR STUDY TODAY. WE ARE GRATEFUL THAT YOU HAVE SHARED YOUR VIEWS, OPINIONS, THOUGHTS, AND FEELINGS ABOUT A NUMBER OF DIFFERENT TOPICS. WE REALIZE THAT SOME OF THESE TOPIC MAY HAVE MADE YOU UNCOMFORTABLE OR UPSET.

If you are upset and would like to contact someone immediately, you can call any of the following:

National Hopeline Center: 1-800-784-2433

National Suicide Prevention: 1-800-273-8255

National Crisis Text: Text #741-741

National Domestic Violence Hotline: 1-800-799-7233

National Coalition of Anti-Violence Programs: 1-212-714-1141

The Trevor Project: 1-866-488-7386

The Gay, Lesbian, Bisexual, and Transgender National Hotline-1-888-743-4564