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## **Internalized Homonegativity and Alcohol Use as Predictors of Intimate Partner Violence Among Cisgender Sexual Minority Men**

Andrew Thomas Schramm

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INTERNALIZED HOMONEGATIVITY AND ALCOHOL USE AS PREDICTORS OF  
INTIMATE PARTNER VIOLENCE AMONG CISGENDER SEXUAL MINORITY MEN

by

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## DEDICATION

This dissertation is dedicated to Alexander P. Ojeda, a beloved friend, graduate student, and ally who died unexpectedly on October 12, 2014 at the age of 27 years. Prior to his death, Alex encouraged me to pursue my interest in the topic of intimate partner violence among sexual minorities. He has had a tremendous impact on this work and my life, and I am thankful for that.

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## ABSTRACT

Prior research has found that sexual minorities (i.e., individuals who identify as lesbian, gay, bisexual, and/or who are attracted to or have had sexual experiences with members of the same sex) are at heightened risk for intimate partner violence (IPV) as compared to heterosexuals. Although understanding risk factors that place sexual minorities at risk is a crucial step in the prevention of IPV in this population, little is known about such factors. Some have proposed that internalized homonegativity, a component of minority stress, may place individuals at heightened risk for IPV perpetration. Internalized homonegativity is also associated with greater alcohol use and abuse, which is a known IPV risk factor. However, inferences about the association between internalized homonegativity and IPV perpetration are hindered by the methodological limitations of research in this area, the use of measures with unknown psychometric properties, and recruitment of participants from sexual minority-related venues and events. The purpose of this study was to evaluate the relations between alcohol use, internalized homonegativity, and the perpetration of physical, psychological and sexual IPV within sexual minority men by employing a methodological approach that addresses limitations of previous research. Overall, results suggest that internalized homonegativity is significantly associated with both alcohol use and IPV perpetration and that it moderates the effect of alcohol use on IPV perpetration.

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# CHAPTER 1

## INTRODUCTION

### **Prevalence of IPV Among Sexual Minorities**

Intimate partner violence (IPV) is “physical violence, sexual violence, stalking, and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)” (Breiding, Basile, Smith, Black, & Mahendra, 2015, p. 11). Sexual minorities – “people who are attracted to or have had experience with same-sex sex partners, or someone who identifies as lesbian, gay, or bisexual” (Badgett & Goldberg, 2009, p. 3) – report IPV victimization at rates comparable to or greater than heterosexuals (Balsam, Rothblum, & Beauchaine, 2005; Edwards, Sylaska, Barry, et al., 2015; Messinger, 2011; Schramm, 2016; Walters, Chen, & Breiding, 2013). This includes cisgender sexual minority men, the focus of the current study.<sup>1</sup>

For example, Walters et al. (2013) reported that, among a nationally-representative sample of 16,507 adults in the United States (7,421 males), the lifetime prevalence of IPV (which included rape, physical violence, and/or stalking) was 29.0% of heterosexual men, 26.0% of gay men, and 37.3% of bisexual men. Experiencing psychological aggression (victimization) was reported by 49.3% of heterosexual men, 59.6% of gay men, and 53.0% of bisexual men. Although rates of IPV *victimization*

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<sup>1</sup> *Cisgender* means that an individual’s gender corresponds with the sex they were assigned at birth.

among sexual minorities have been established, few estimates of IPV *perpetration* among sexual minorities exist. Edwards and Sylaska (2013) assessed rates of IPV perpetration in a sample of 391 college students and found that 29.7% of participants reported perpetrating at least one form of IPV (which, in this study, included physical, severe psychological, or sexual IPV). This figure included 19.9% of respondents who reported perpetrating physical IPV, 12.5% severe psychological aggression, and 10.5% sexual IPV. These figures were not broken down by gender.

### **IPV Perpetration Risk Factors and Limitations of Prior Research**

While these victimization prevalence rates are important and demonstrate the risk for IPV victimization that faces sexual minorities, little is known about what places this population at risk for IPV perpetration. Many large gaps remain in the sparse research on IPV perpetration among sexual minorities, and the majority of research on IPV among sexual minorities concerns IPV victimization (Edwards, Sylaska, & Neal, 2015).

Perpetration of IPV is the focus of this study because understanding what factors may increase an individual's risk for IPV perpetration, and how to address those risk factors, is an important endeavor that is salient throughout IPV research on heterosexuals. Identifying these risk factors – which are complex, multi-faceted, and interwoven – is a crucial part of developing effective IPV prevention strategies (Centers for Disease Control and Prevention, 2004; Krug et al., 2002; World Health Organization, 2010). This process is detailed in a 2004 Centers for Disease Control and Prevention report as (1) define the problem, (2) identify risk and protective factors, (3) develop and test prevention strategies, and (4) ensure widespread adoption (p. 2). This suggests that those who develop prevention initiatives need to design programs that “use this information

[about risk and protective factors] to plan the content of their program by focusing on the activities that address those risk and protective factors” (Centers for Disease Control and Prevention, 2004, pp. 2-3). While demographic (e.g., race/ethnicity, socioeconomic status), and other non-modifiable, variables remain critical to consider (Field & Caetano, 2004; World Health Organization, 2010), a focus on reducing “*modifiable* risk factors” and strengthening protective factors is also emphasized since these are potentially malleable to prevention and intervention efforts (World Health Organization, 2010, p. 18).

### **Scope of the Present Study**

Within this broad context, the focus of this study is to *evaluate alcohol use and internalized homonegativity as risk factors for IPV perpetration among cisgender sexual minority men*. Cisgender women, transgender men and women, and heterosexual cisgender men are not within the scope of the study as each of these populations deserves its own focused consideration. It is important to avoid overgeneralization or too broad of scope of research in this area given richly diverse cultures and experiences within the “sexual minority” community. Adequately addressing these important, compelling, and meaningful areas of the community’s experience would not be feasible within the targeted scope of the present work.<sup>2</sup> These limitations notwithstanding, because most of the research on IPV perpetration has (a) not assessed sexual orientation or (b) included only heterosexual individuals or those in opposite-sex relationships (Edwards, Sylaska, &

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<sup>2</sup> Readers interested in these populations not within the scope of the present work are invited to review these works on IPV and transgender individuals (Brown, 2007; Brown & Herman, 2015; Cook-Daniels, 2015; National Coalition of Anti-Violence Programs, 2015; Stotzer, 2009; Walker, 2015).

Neal, 2015; Messinger, 2014), in the text below I will summarize research with heterosexual samples as needed in order to give necessary context to the research on this more targeted scope. The focus on sexual minority men, not women, was chosen due to the need identified in prior research for additional research on sexual minority men, which is less abundant than research on sexual minority women (Kimmes et al., 2017). As stated previously, I utilize the framework for sexual orientation described by Breiding et al. (2015), who define sexual minorities as individuals who are attracted to the same sex, have had sexual experiences with the same sex, and/or who identify as gay or bisexual. It bears mentioning that this approach has limitations. It is based on a gender-binary framework and fails to capture fluidity and diversity in sexual orientation and sexualities (van Anders, 2015; Vrangalova & Savin-Williams, 2012; Ward, 2015). With this in mind, however, my colleagues and I hope to make contributions to gaps within this imperfect and evolving literature.

### **Alcohol and Risk for IPV**

The focus of the existing literature on this topic is notable for its focus on the impact of alcohol use – an important risk factor of focus – on IPV *victimization*, which has been directly tested in sexual minority samples (Bartholomew, Regan, Oram, & White, 2008; Bimbi, Palmadessa, & Parsons, 2007; Duncan et al., 2016; Kelley et al., 2014; Klostermann, Kelley, Milletich, & Mignone, 2011; Wu et al., 2014). In contrast, much less is known about the relation between alcohol use and IPV *perpetration* among sexual minorities. Additionally, this knowledge is limited by several methodological limitations such as problematic measurement and sampling approaches (Edwards, Sylaska, & Neal, 2015). Despite these limitations and the comparatively scant attention

paid to alcohol use and IPV perpetration among sexual minorities, results from existing studies suggest that, as in heterosexual relationships, alcohol use is associated with heightened risk of IPV perpetration in sexual minority samples (Bartholomew et al., 2008; Bimbi et al., 2007; Duncan et al., 2016; Kelley et al., 2014; Klostermann et al., 2011; Wu et al., 2014). For example, the number of alcoholic drinks gay and bisexual men reported consuming in a typical week was positively associated with their likelihood of reporting a history of physical IPV perpetration (Kelley et al., 2014). Additionally, Bartholomew et al. (2008) reported that level of alcohol use was significantly correlated with physical ( $r = .19$ ) and psychological ( $r = .16$ ) IPV perpetration. These studies used cross-sectional designs, precluding conclusions about causality.

Assessing the role of alcohol as an IPV risk factor among sexual minorities is especially important in light of research showing that male sexual minorities report higher rates of alcohol use and misuse than heterosexual males (Drabble, Midanik, & Trocki, 2005; Gilman et al., 2001; Reed, Prado, Matsumoto, & Amaro, 2010; Reisner, Falb, Wagenen, Grasso, & Bradford, 2013). For example, Drabble et al. (2005) found that gay men in their sample were significantly less likely to abstain from alcohol consumption than heterosexual men. Additionally, gay men in the same study were three times more likely than heterosexual men to report being drunk two or more times in the preceding year. These studies have begun to examine bivariate relationships in this regard; however, it is critical that we take the next step to determine why this is the case and what modifiable risk factors might be at play. Minority stress processes are a promising area for such progress.

## Minority Stress Model

In addition to considering the general IPV risk factor of alcohol use, it is important to consider risk factors specific to sexual minorities (Badenes-Ribera, Sanchez-Meca, & Longobardi, 2017). The minority stress model (Meyer, 2013) is an important framework to consider in conceptualizing IPV risk unique to sexual minorities. The origins of the minority stress model go back to early health psychology research that identified the impact of stress on health (e.g., Kasl, 1984). The basic finding of this earlier work was that traumatic events, stressful life events, and daily hassles (“stress”) were all positively associated with detrimental health outcomes. The next step in the development of this model was the delineation of the social sources of stress. Social stress “extends stress theory by suggesting that conditions in the social environment, not only personal events, are sources of stress that may lead to mental and physical health effects” (Meyer, 2013, p. 4). This important development ties to the importance of considering levels of analysis other than individual-level variables. This reflects recognition that broader societal conditions – not simply individual factors – impact health and wellbeing (Bronfenbrenner, 1995; Darling, 2007). As described by Meyer (2013), the minority stress model therefore draws upon germinal theories on the impact of social conditions (e.g., Allport, 1954) – which include stigma, prejudice, and discrimination – on health.

As highlighted by Allport and others, the basis of sources of social stress entails a stigmatized or oppressed identity (or identities). That is, in order for social stress (including minority stress) to exist, the social reality must include *stigmatization* of one or more minority identities. Although stigma has been conceptualized in many ways,

Link and Phelan (2001) provide a summary that captures the complexity of the construct, which they divide into five interrelated components:

In the first component, people distinguish and label human differences. In the second, dominant cultural beliefs link labeled persons to undesirable characteristics – to negative stereotypes. In the third, labeled persons are placed in distinct categories so as to accomplish some degree of separation of “us” from “them”. In the fourth, labeled persons experience status loss and discrimination that lead to unequal outcomes. Finally, stigmatization is entirely contingent on access to social, economic, and political power that allows the identification of differentness, the construction of stereotypes, the separation of labeled person into distinct categories, and the full execution of disapproval, rejection, exclusion, and discrimination. Thus, we apply the term stigma when elements of labeling, stereotyping, separation, status loss, and discrimination co-occur in a power situation that allows the components of stigma to unfold. (p. 367)

Theoretical conceptualizations of stigma and minority stress have been developed to specifically capture the ways in which the construct operates with sexual minorities (DiPlacido, 1998; Herek, 2004; Herek & McLemore, 2013; Meyer, 2013).

Meyer (2013) developed an influential model of minority stress as a framework for understanding how minority stress impacts the mental health of sexual minorities. Meyer describes the components of minority stress as occurring on a spectrum from



distal to proximal (Figure 1.1).<sup>3</sup> Badenes-Ribera et al. (2017) provide a useful summary of this minority stress model:

The underlying assumptions of the minority stress concept are that minority stress is (a) unique, which means that it is in addition to general stressors that are experienced by all people, and thus, stigmatized individuals are required to make an adaptation effort beyond that of other similar individuals who are not stigmatized; (b) chronic, which means that minority stress is associated with relatively stable underlying cultural and social structures; and (c) socially based, which means that minority stress arises from social processes, institutions, and structures beyond the individual, rather than individual events or conditions. (p. 1)

As displayed in Figure 1.1, distal minority stress processes (Process A) are objective events and conditions that include discriminatory behavior directed toward sexual minorities). Prior research indicates that such experiences are widespread. Among a sample of gay and bisexual men, 37% reported experiencing anti-gay verbal harassment in the previous six months, 11.2% reported discrimination, and 3.8% reported anti-gay violence (Huebner, Rebchook, & Kegeles, 2004). Nearly all (96%) of a sample of sexual minority college students stated that they had heard a sexual minority-related microaggression (e.g., “I was told being lesbian, gay, bisexual, or queer is ‘just a phase’”, “In my school/workplace it was okay to make jokes about [sexual minorities]”) (Woodford, Kulick, Sinco, & Hong, 2014).

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<sup>3</sup> The concept and text used to describe this continuum are derived from Meyer (2013). However, I created this visualization; this continuum is not visually displayed in the source article.

Expectations of events associated with Process A, and being vigilant to respond to and avoid such events, comprise Process B. An example of phenomena related to Process B is concealing one's sexual minority identity from others. Identity concealment requires ongoing monitoring of one's behavior in order to avoid being perceived as sexual minority (Meyer, 2013). Amongst a sample of male sexual minorities, 7.4% of participants reported that they were completely closeted, and 17.8% reported that they had come out less than nine years ago (Pachankis, Cochran, & Mays, 2015). The concealment/disclosure process is one that is continually navigated throughout sexual minorities' lives (e.g., as new friends or co-workers are met) and should not be thought of as a dichotomous process (Guittar, 2014a, 2014b; Schrimshaw, Siegel, Downing, & Parsons, 2013). Stigma consciousness is another construct associated with Process B, and refers to the extent to which minorities expect to be stereotyped by others (Pinel, 1999, 2004).

Finally, Process C is the internalization of these experiences. A number of terms are used in the literature to describe this process among sexual minorities (e.g., internalized homophobia, internalized homonegativity, heterosexism, heterocentrism) (Herek, 2004; Lottes & Grollman, 2010). For sake of clarity, throughout this document I use "internalized homonegativity". In describing this process, Meyer and Dean (1998) describe this as "the gay person's direction of negative social attitudes toward the self" (p. 161). Similarly, Badnes-Ribera and colleagues (2017) describe internalized homonegativity as "the degree to which individuals belonging to a sexual minority group have internalized negative feelings, attitudes, beliefs, behaviors, and assumptions about their homosexuality" (p. 2). Internalized homonegativity is associated with a wide range

of negative outcomes, including mental health problems (Newcomb & Mustanski, 2010), low self-esteem (Peterson & Gerrity, 2006) and overall psychological distress (Szymanski & Kashubeck-West, 2008). Supporting Meyer's (2013) conceptual model of sexual minority stress, empirical research suggests that individuals who encounter greater levels of Process A constructs (e.g., discrimination, parental rejection upon disclosure of minority sexual orientation) report greater levels of internalized homonegativity (Feinstein, Goldfried, & Davila, 2012; Puckett, Woodward, Hereish, & Pantalone, 2015).

### **Minority Stress & Alcohol Use**

A substantial body of research has established that sexual minority stress processes have a significant impact on the well-being of this population (Hatzenbuehler, 2010, 2014, 2016; Hatzenbuehler et al., 2014; Hatzenbuehler & McLaughlin, 2014; Hatzenbuehler & Pachankis, 2016; Herek, Cogan, Gillis, & Glunt, 1997; Herek & Garnets, 2007; Herek, Saha, & Burack, 2013; Lewis, Derlega, Griffin, & Krowinski, 2003). One form of this impact is that minority stress processes are clearly associated with increased substance use and misuse. For example, sexual minorities who reported having parents unsupportive of their sexual orientation, in comparison to those with supportive parents, reported significantly greater binge drinking and illicit drug use (Rothman, Sullivan, Keyes, & Boehmer, 2012). Rothman et al. (2012) found that gay and bisexual men who had parents unsupportive of their sexual orientation were nearly seven times more likely than those with supportive parents to report binge drinking alcohol. Substance use problems are also associated with sexual orientation-related discriminatory experiences (McCabe, Bostwick, Hughes, West, & Boyd, 2010; Williamson, 2000). A longitudinal study conducted by Hatzenbuehler, McLaughlin, Keyes, and Hasin (2010)

demonstrated the effect of discriminatory policy on rates of alcohol use disorders. The authors administered a measure of alcohol use disorders to a nationally representative sample of adults in two waves (wave 1 occurred in 2001-2002 and wave 2 occurred in 2004-2005), between which several states had passed legislation that discriminated against sexual minorities (anti-same-sex laws). Controlling for a host of possible confounding variables, the authors found that sexual minorities living in states that passed discriminatory legislation during the study period, displayed a 41.9% increase in rates of alcohol use disorders. In contrast, rates did not increase significantly in states that did not pass discriminatory legislation between the two time points.

The association between alcohol use and internalized homonegativity is less well established than its association with the aforementioned forms of minority stress. Although many researchers have theorized that internalized homonegativity explains alcohol use among sexual minorities, empirical research on this association has yielded inconsistent results (Brubaker, Garrett, & Dew, 2009). Several studies have found a significant positive association between internalized homonegativity and alcohol consumption, binge drinking, and problems resulting from alcohol use (Baiocco, D'Alessio, & Laghi, 2010; Cabral, 2007; Kuerbis, Mereish, Hayes, Davis, Shao, & Morgenstern, 2017; Weber, 2008). However, other studies have failed to find a significant association (Amadio, 2006; Ross et al, 2001). The inconsistent nature of these findings may be due to methodological limitations such as sampling techniques (e.g., convenience sample at gay pride events) and inconsistent measurement of these variables. For example, Ross et al. (2001) did not find a significant association between internalized homonegativity and alcohol use. This finding may be impacted by this study's sampling

method: Participants were men who volunteered to attend a seminar on “sexuality and intimacy between men” (p. 98). It is possible that the fact that participants were recruited at an event on same-sex sexuality made it less likely that individuals with high levels of internalized homonegativity would participate. Similarly, among men in their sample, Amadio (2006) did not find significant association between internalized homonegativity and alcohol use or abuse or alcohol-related consequences. The authors suggest that these results may be explained by issues related to low power and limited variance of internalized homonegativity. The authors of these existing studies have called for additional research on the association between internalized homonegativity and alcohol use that utilizes sampling techniques that result in a more diverse sample and employs improved measurement of these constructs.

In sum, being a sexual minority is associated with multiple forms of minority stress, some of which have been clearly linked to increased alcohol use. The impact of internalized homonegativity on alcohol use is less clear. Evaluating this association is important given that alcohol use is a major risk factor for IPV perpetration.

### **Minority Stress and IPV Perpetration**

Prior research has explored a direct association between internalized homonegativity and IPV perpetration. Researchers have proposed that internalized homonegativity may place sexual minority individuals at risk for IPV perpetration because the person’s sexual minority identity (or behavior or attraction associated with that sexual minority status) becomes associated with negative feelings and attitudes that are displaced on one’s partner(s) (Balsam & Szymanski, 2005; Ristock, 2002; West, 2012). Additionally, individuals with elevated levels of internalized homonegativity may,

as a result, believe that they are deserving of violence targeting them, resulting in the continuation of abusive relationships and, thus, greater levels of IPV perpetration (Balsam, 2001). The impact of internalized homonegativity on self-worth, and how that relates to the propensity to remain in abusive relationships, has also been explored. For example, there are parallels between victim self-blaming (e.g., “I deserve the abuse, it’s my fault”) and self-blame for being a sexual minority (e.g., “Gay people are sick, I deserve to be beat up”) (Neisen, 1993).

Another way of conceptualizing the connection between minority stress and IPV perpetration concerns power and control, which are integral to the perpetration of IPV (Graham-Kevan & Archer, 2008). Perpetrators use power and control of IPV victims, and IPV has been identified as a harmful way of asserting power and control over a partner. Although the dynamics of IPV in sexual minority relationships may vary, the central role of power and control remains. And, because of the stigma associated with being a sexual minority (i.e., minority stress), perpetrators can employ this as a control tactic by, for example, threatening to out a partner to an employer (Jeffries & Ball, 2008; Kulkin, Williams, Borne, Bretonne, & Laurendine, 2007; Renzetti, 1992; Renzetti & Merrill, 1998; Ristock, 2002). Some have speculated that conflict related to the disclosure of the relationship (e.g., when one partner is out and another is not; deciding whether to disclose to a partner’s family members) may escalate into IPV (Kulkin, Williams, Borne, de la Bretonne, & Laurendine, 2007). This suggests that minority stress is central to the etiology of IPV perpetration in sexual minority relationships.

Empirical research lends support to these conceptualizations of the association between internalized homonegativity and IPV perpetration; prior research with samples

of sexual minority men has shown that IPV perpetration is associated with internalized homonegativity (Bartholomew et al., 2008; Finneran & Stephenson, 2014; Kelley et al., 2014; Stephenson & Finneran, 2016; Zavala, 2016). For example, Bartholomew et al. (2008) utilized data collected from men who were recruited to participate in the study via random-dialing telephone calls. One hundred ninety-two men who, upon being contacted, stated that they were gay or bisexual completed a packet of questionnaires that were sent to them via mail. Modified versions of the physical and psychological IPV subscales of the Revised Conflict Tactics Scales (Straus, Hamby, & Warren, 2003) and the entire Internalized Homophobia Scale (Wagner, Serafini, Rabkin, Remien, & Williams, 1994) were used to measure IPV perpetration and internalized homonegativity. The authors reported that internalized homonegativity was positively correlated with severity (and incidence) of physical ( $r=.19$ ) and psychological ( $r=.16$ ) IPV perpetration (zero-order correlations). These associations remained significant after controlling for income, exposure to family violence, and alcohol and drug use.

Of the seven published studies that have assessed internalized homonegativity in relation to IPV perpetration among sexual minority men (Bartholomew et al., 2008; Carvalho, Lewis, Derlega, Winstead, & Viggiano, 2011; Finneran & Stephenson, 2014; Kelley et al., 2014; McKenry, Serovich, Mason, & Mosack, 2006; Stephenson & Finneran, 2016; Zavala, 2016), two studies did not find a significant association between internalized homonegativity and IPV perpetration (Carvalho et al., 2011; McKenry et al., 2006). The findings of these studies may have been impacted by notable methodological limitations. Carvalho et al. (2011) was the only study of the seven that measured IPV perpetration using the item “Have you ever been a perpetrator of domestic violence?” (p.

504). The validity of this form of assessment of violent behavior has been called in to question; behaviorally-specific items (e.g., “I pushed my partner”) are a more effective form of assessing violent behavior (Cuevas & Rennison, 2017; Fisher & Cullen, 2000). McKenry et al. (2006) found that, among their sample of 77 adult sexual minorities, the average level of internalized homonegativity among physical IPV perpetrators ( $n=26$ ) did not differ significantly from that of non-perpetrators ( $n=44$ ). However, the average levels of internalized homonegativity were not reported by McKenry et al (2006), and it is unclear how the sample was established given that the sum of the number of perpetrators and non-perpetrators is not equal to the total sample size.

The aforementioned meta-analysis of general and sexual minority-specific risk factors for IPV perpetration (Kimmes et al., 2017) also assessed the association between internalized homonegativity and IPV perpetration. Researchers found a mean effect size of  $r = 0.23$  for the relation between internalized homonegativity and IPV perpetration. The magnitude of this effect was comparable to that of alcohol abuse ( $r = .27$ ), a well-established risk factor, and was greater than that of history of child abuse victimization ( $r = .15$ ) and witnessing IPV between parents in childhood ( $r = .09$ ).

Although this research, collectively, provides preliminary support for the association between internalized homonegativity and IPV perpetration, it is also characterized by significant limitations (Edwards, Sylaska, & Neal, 2015; Longobardi & Badenes-Ribera, 2017). All of these studies were cross-sectional in design and reveal significant issues with measurement. With two exceptions (Bartholomew et al., 2008; Zavala, 2016), all of the studies used convenience and/or snowball sampling. For example, Stephenson and Finneran (2016) recruited their participants from gay-friendly



venues (e.g., bars) in a large urban city. This limits the generalizability of these findings since men with high levels of internalized homonegativity might be less likely to go to such venues. Additionally, Finneran and Stephenson (2014) assessed internalized homonegativity using the Gay Identity Scale, which is not designed to measure internalized homonegativity but, rather, stages of gay identity formation (Brady & Busse, 1994). The current study will address these limitations of previous work by using standardized, validated measures and by recruiting participants from an online source, allowing findings that generalize to participants who may not go to gay venues.

### **Integrating Research on Alcohol & IPV With the Minority Stress Model**

Theoretical explanations for the impact of alcohol on IPV perpetration also highlight the associations among minority stress, alcohol, and IPV. These models (e.g., Finkel, 2007; Leonard & Quigley, 2017; Parrott & Eckhardt, 2017), prominent in the substance abuse literature, go beyond the alcohol-IPV association by integrating basic and applied research on alcohol and aggression. Although the disinhibiting effects of alcohol are well-known (Parrott & Eckhardt, 2017), this association does not explain why, independent of volume and frequency of alcohol consumption, alcohol use may lead to violence in some partnerships but not others.

As described by Finkel (2007), two factors must be considered in the association between alcohol use and aggression directed toward a partner. *Impelling forces* are those that increase the likelihood of violence perpetration. Risk factors for strong violence-impelling forces (which increase the likelihood of aggressive behavior) include distal factors (e.g., witnessing parental IPV, child abuse victimization), dispositional factors (e.g., anger, attachment anxiety, borderline personality traits), relational factors (e.g.,

jealousy, poor communication), and situational (e.g., physiological arousal, environmental irritants).

The second component of Finkel's model is *inhibiting forces*, which are factors that increase the likelihood that one will be able to resist acting aggressively. Risk factors for weak violence-inhibiting forces (which are associated with increased likelihood of aggressive behavior) include distal factors (e.g., cultural acceptance of violence, poor IPV-relevant legal institutions), dispositional factors (e.g., low self-control, psychopathology), relational factors (e.g., low commitment, high partner dependence), and situational factors (e.g., alcohol). Finkel (2007) provided the following summary of the impact of alcohol in relation to violence-impelling forces:

[Alcohol] predicts elevated levels of violent behavior primarily by impairing the cognitive processes that would otherwise combat violence impelling forces. Alcohol is unlikely to increase the likelihood or severity of IPV among individuals who experience no violence-impelling forces, but it is likely to increase the likelihood or severity of IPV among individuals who are experiencing strong violence-impelling forces (p. 201).

This model, taken together with the minority stress model, highlights the possibility that minority stress processes (e.g., exposure to violence) have the effect of impelling forces. That sexual minorities display heightened levels of IPV perpetration in association with alcohol use, therefore, may be due to the fact that sexual minorities are exposed to minority stress processes that have the effect of an impelling force. Although prior research has shown that internalized homonegativity is associated with alcohol use, its role in increasing the likelihood or severity of IPV perpetration in combination with alcohol use has not been assessed. I predict that these risk factors will have a synergistic

effect such that the effect of alcohol use on IPV perpetration will be greater in magnitude for those with higher levels of internalized homonegativity.

### **Aims**

Against this background, the present study had the following aims:

1. Determine whether internalized homonegativity is associated with greater alcohol use. I hypothesized that internalized homonegativity will have a significant positive association with alcohol use.
2. Determine whether internalized homonegativity is associated with greater rates of IPV perpetration. This was to be evaluated separately for sexual, psychological, and physical IPV. I hypothesized that rates at which individuals report perpetrating each form of IPV (comparing perpetrators to non-perpetrators) would be greater for individuals with higher levels of internalized homonegativity. I also hypothesized that greater levels of internalized homonegativity would be associated with greater levels of IPV severity.
3. Determine whether internalized homonegativity moderates the effect of alcohol use on IPV perpetration (displayed visually in Figure 1.2). I hypothesized that internalized homonegativity would moderate the relationship between alcohol use and IPV perpetration such that the effect was stronger for individuals who report greater internalized homonegativity.

Accomplishing these research aims stands to advance the field's understanding of risk factors for IPV perpetration among male sexual minorities.

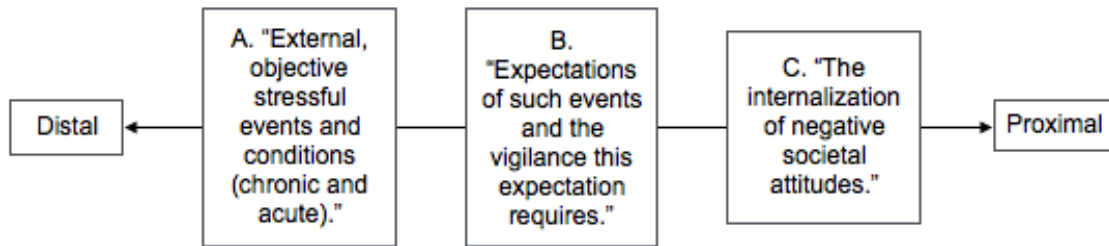


Figure 1.1. Distal-proximal continuum of minority stress processes

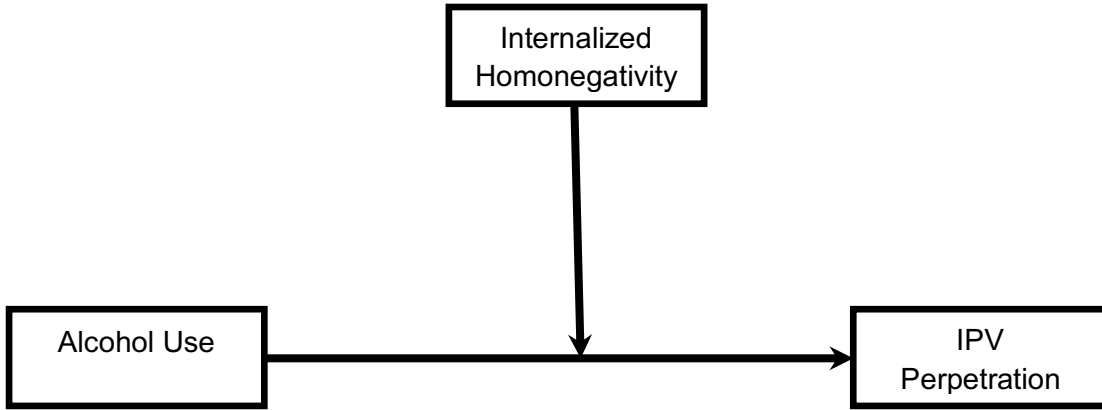


Figure 1.2. Conceptual diagram of model evaluating the possible moderating role of internalized homonegativity. *Note.* Intimate partner violence (IPV) perpetration includes physical assault, sexual coercion, and psychological aggression.

## CHAPTER 2

### METHOD

#### **Data Collection**

Data were collected via Amazon Mechanical Turk (MTurk), a web-based platform with more than 500,000 registered users designed to match people (requesters) requesting the completion of small tasks called HITS with people willing to do them (workers) (Chandler & Shapiro, 2016; Mason & Suri, 2011; Stewart et al., 2015). In the past five years, social science researchers have increasingly used MTurk as a data collection tool, and studies with data collected via MTurk have been published in high-impact journals (Berinsky, Huber, & Lenz, 2012; Chandler & Shapiro, 2016; Shapiro, Chandler, & Mueller, 2013). Advantages of this recruitment source include cost effectiveness, a large participant pool, high quality data, and a diverse sample (Chandler & Shapiro, 2016; Paolacci, Chandler, & Ipeirotis, 2010; Shapiro et al., 2013). A disadvantage is that MTurk samples are nonprobability samples, which limit generalizability; however, research examining the generalizability of data collected on MTurk have found it comparable to or better than other nonprobability samples such as undergraduate participant pools (Buhrmester, Kwang, & Gosling, 2011; Paolacci et al., 2010).

Berinsky, Huber, and Lenz (2012) reviewed existing studies to assess representativeness of MTurk-based samples. They concluded that participants from MTurk are more representative of the United States population than in-person

convenience samples but less representative than probability-based samples and Internet-based panels. More recently, Huff and Tingley (2015) tested the conclusions of Berinsky et al. (2012) using a methodologically robust design. They collected data on MTurk while simultaneously collecting data from a large, nationally-representative sample (the Cooperative Congressional Election Survey [CCES]). Huff and Tingley (2015) found that across samples the types of occupations reported varied by less than a maximum difference of six percent. For example, the portion of each sample that reported holding a full-time professional position was 12% for CCES and 16% for MTurk. This addresses possible concern that MTurk workers are largely unemployed; rather, they appear to use MTurk as a source of supplementary income. The geographic location of respondents was also quite similar across samples. For example, 53.60% of CCES and 57.13% of MTurk participants were from Urban-rural code 1 (i.e., in counties in metro areas with a population of one million or more). Huff and Tingley (2015) also report that 54% of the MTurk sample is male. These authors conclude that “The results demonstrated in this paper show that there are strong reasons for researchers to consider using MTurk to make inferences about a number of broader populations of interest” (Huff & Tingley, 2015; p. 8).

Because MTurk was not designed by its creators to be a research tool, there are some aspects of MTurk that make using it for that purpose cumbersome or impossible (Litman, 2017). For example, in order to send messages to MTurk workers, one must either do so manually (one at a time) or write complicated code; paying participants must also be done manually. It also makes it possible to exclude individuals who have already participated and allows researchers to only make their study available to individuals that

meet a number of demographic characteristics such as gender and age (Litman, 2017). TurkPrime is a web-based service designed to address these limitations of MTurk (Litman, 2017). TurkPrime is programmed to work in conjunction with MTurk. Requesters link their TurkPrime account to their MTurk account and execute tasks needed to conduct a study (e.g., posting new HITS, paying participants) from the TurkPrime platform. Similarly, MTurk workers may link their accounts with TurkPrime.

### **Inclusion Criteria & Target Population**

The target population for this study was adult cisgender men living in the United States. Because the study focus was intimate partner violence, individuals were excluded if they indicated on the screener that they had not had a dating, sexual, or romantic relationship (i.e., boyfriend) with a male in the preceding year. Individuals who indicated any of the following were also excluded: Age less than 18, gender other than cisgender male, or not living in the United States.

### **Procedure<sup>4</sup>**

On the designated start date (4/7/2018), a HIT was posted to MTurk via TurkPrime. This HIT was described in vague terms (Appendix A, Part 1) in order to discourage, to the extent possible, participants providing inaccurate information in order to qualify for the study (e.g., stating that they are sexual minorities when they are not). This is in line with best practices (Buhrmester et al., 2011; Mason & Suri, 2011; Paolacci et al., 2010; Sheehan & Pittman, 2016). Workers who accepted the HIT were presented

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<sup>4</sup> This procedure was changed partway through the data collection process. Detailed information about these changes are provided in the “Procedural Amendment” section. The information in this section describes the procedure prior to the changes described below.



with a link to complete a survey (on Qualtrics). After clicking the Qualtrics link, participants were presented with additional information about the study (Appendix B). If, after reading the informed consent text, respondents indicated that they wished to participate, they were presented with a screener designed to evaluate the aforementioned inclusion criteria. The screener took approximately two minutes to complete.

Individuals who, based on the screener, did not meet the study inclusion criteria were presented with text explaining this (see Appendix A, Part 2). Participants received a payment of \$0.10 for completing this screener, which has been determined to be a fair rate for such a brief screener based on prior research (Sheehan & Pittman, 2016). This payment was credited from my TurkPrime account directly to the participant's MTurk account. On the final page, information on domestic violence and mental health resources was displayed (Appendix C). Participants who met inclusion criteria were presented with text stating that based on their responses they qualify for the full study (see Appendix A, Part 3) and were given the option to continue on to that survey or to decline.

### **Protection of Human Subjects**

**Potential risks.** The risks of participating in the study were minimal. Because of the sensitive nature of the data that were collected (e.g., frequency of violent behavior), a substantial risk was a security breach. However, the risk of this occurring was very low because I did not collect any personally identifying information. Participants' responses were linked to their MTurk Worker ID. However, it was not possible for me to link this to personally identifiable information because MTurk prohibits this. Although MTurk administrators have the ability to link Worker IDs to personally identifiable information,

they did not have access to my dataset since the data were collected in a different system (Qualtrics) than MTurk.

Another possible risk was emotional distress resulting from participants answering questions about violence. For example, it was possible that a participant who had experienced violence would find it distressing to answer questions about this. I minimized this risk by allowing participants to withdraw at any point. Additionally, participants were informed of this prior to beginning the study, therefore, have the option of not participating. Finally, at the end of the survey, participants were presented with contact information for crisis intervention, mental health, and domestic violence services. In an unlikely event that an adverse event should have occurred, my advisor (Dr. Suzanne Swan) would have been immediately notified via cellular phone. In this event, the University of South Carolina Institutional Review Board would also have been notified in accordance with the University's "Unanticipated Problems and Adverse Events Guidelines" policy.

**Potential benefits.** The potential benefits to individual participants are minimal. Participants were compensated for completion of the survey. In effort to reduce risk of undue influence, the compensation rate for this study was reasonable based on past studies and MTurk guidelines. This amount was credited to participants' MTurk account. It is possible that being presented with information about crisis intervention, mental health, and suicide prevention resources will prompt a participant to seek help from these sources. The present study stands to benefit the public since the data that were acquired were necessary to inform the development of violence prevention programs for sexual minority individuals. However, this was not an immediate benefit to study participants.

**Confidentiality.** In order to protect the identity of each participant, the data collected for this study is considered anonymous; not even the investigator was able to link the data with personally identifiable information. The survey will not include questions that prompt participants to disclose personally identifiable information (e.g., name). Data were collected via Qualtrics and are accessible only by research staff who have been given a password to log into the Qualtrics account. After data collection was completed, the data were downloaded as Excel and SPSS files. The dataset is stored on a password-protected, encrypted hard drive.

## **Measures**

Full text of all measures described below can be found in Appendix D.

**Demographic information.** A demographic questionnaire was administered in order to obtain basic information about participants' demographic characteristics. The measure is a revised version of the demographics section of Hamby, Grych, & Banyard (2013). Gender was assessed using a two-step approach recommended in a recent report from the Williams Institute (GenIUSS Group, 2014). As displayed in Appendix D, the first of the two items in this approach assesses "assigned sex at birth" and reads "What sex were you assigned at birth, on your original birth certificate?" with answer choices "Male" and "Female" (p. V). The second item, which assesses "current gender identity," reads "How do you describe yourself?" with answer choices of "Male," "Female," "Transgender," "Do not identify as female, male, or transgender" (p. V). Since the scope of the present study is cisgender men, individuals who chose "Male" for item one and "Male" for item two were categorized as cisgender men and, therefore, meet study inclusion criteria. As stated previously (see Procedure section), the screener included

demographic items necessary to determine inclusion criteria (e.g., age, country in which currently reside). Additional items (e.g., employment status) were included to conceal the inclusion criteria (see Procedure section for additional information). The full survey included additional items assessing demographic information such as level of education and household income.

**Relationship history.** Three items were used to assess whether participants meet the inclusion criteria of having casually dated, had sexual experiences with, or been in a committed relationship with a man within the last year. The first of these items reads, “I have casually dated a male (such as going on a date)” with the answer choices “Yes, within the past year,” “Yes, but not within the past year,” and “Never.” The second item is “I have done something sexual with a male (such as intercourse or oral sex),” and the final item is “I have been in a committed relationship with a male (such as boyfriend or partner).” All items will have the same answer choices. Individuals who respond “Yes, within the past year” to any of these will meet this inclusion criterion for participation.

**Sexual orientation.** Sexual orientation was measured as described in a report on best practices for measuring sexual orientation on self-report surveys (Badgett & Goldberg, 2009). Badgett & Goldberg (2009) conceptualize sexual orientation as being comprised of three components: sexual behavior, self-identification, and attraction (i.e., the gender(s) to which an individual is attracted). The item previously described in the “Relationship history” section was used to assess history of same-sex sexual experiences (“I have done something sexual with a male (such as intercourse or sex,” with answer choices “Never,” “Yes, in the past year,” and “Yes, but not within the past year.”). The other two items to assess these components of sexual orientation are taken directly from

Badgett & Goldberg (2009). The item assessing self-identification reads, “Do you consider yourself to be (a) Heterosexual or straight; (b) Gay or lesbian; or (c) Bisexual.” Finally, the item assessing sexual attraction and reads “People are different in their sexual attraction to other people. Which best describes your feelings? Are you:”, with response options ranging “Only attracted to females” to “Only attracted to males.”

**Internalized homonegativity.** Internalized homonegativity was measured using the Personal Internalized Heterosexism scale (LaFollette, 2013). It is a 16-item self-report measure assessing participants’ feelings about being attracted to members of the same sex. This measure has three subscales: Negative Affect (e.g., Because of my attraction to the same sex, I feel worthless), Positive Affect (e.g., “I feel happy when I think about my attraction to the same sex.”), and Acceptance (e.g., “My same-sex attraction does not concern me.”). LaFollette (2013) reported adequate internal consistency for the Negative Affect (Cronbach’s alpha = .87), Positive Affect (Cronbach’s alpha = .98) and Acceptance (Cronbach’s alpha = .79) subscales. Response options include “Never” (coded as “1”) to “Almost all of the time” (Coded as “6”). Scores to each subscale are calculated by averaging the value of participants’ responses to each item on the subscale. The eight-item Negative Affect subscale was used for the present study because it captures the internalization of minority stress processes (in contrast to, for example, the Acceptance subscale, which measures the inverse). In the present study, adequate internal consistency was evident, as Cronbach’s  $\alpha = .92$ .

**IPV Perpetration.** The Revised Conflict Tactics Scale (CTS2S) is the most widely used measure of IPV (Straus & Douglas, 2004; Straus, Hamby, Boney-McCoy, & Sugarman, 1996; Straus et al., 2003). It measures IPV perpetration and victimization, and

its subscales are “negotiation,” which measures positive conflict management strategies that are alternatives to violence, “psychological aggression,” “physical assault,” “injury,” and “sexual coercion.” The complete CTS2 contains 78 items (39 for perpetration and 49 for victimization). The following subscales of the CTS2 were administered: psychological aggression (e.g., “I threatened to hit or throw something at my partner.”), physical assault (e.g., “I choked my partner”), and sexual coercion (e.g., “I used force (like hitting, holding down, or using a weapon) to make my partner have sex.”). The negotiation subscale (e.g., “I agreed to try a solution to a disagreement my partner suggested.”) and the injury subscale (e.g., “My partner went to the doctor because of a fight with me.”) were not administered because they do not align with my research questions. Administration of individual subscales has been deemed acceptable by the creators of the measure (Straus et al., 1996; Straus et al., 2003). As displayed in Appendix D, respondents are presented with a series of statements describing IPV perpetration. Response options indicate the frequency (e.g., “Once in the last year”, “6-10 times in the last year”) with which each behavior has occurred during the indicated time interval.

This measure was scored in accordance with the procedure suggested by its developers (Straus et al., 2003), which is to sum the midpoints for the response categories chosen by each participant within each subscale. For response categories “never” (0), “once” (1), and “twice” (2), the item is not recoded. The category “3 to 5 times” was recoded as 4, “6 to 10 times” as 8, “11 to 20 times” as 15, and “more than 20 times” as 25. This procedure was conducted for each of the three subscales I administered (27 items), yielding a sum score for each form of IPV perpetration in the past year. Those who

indicate “Yes, this has happened but not in the past year” were coded as “0.” Adequate internal consistency has been established for this scoring method for the psychological aggression ( $\alpha = .79$ ), physical assault ( $\alpha = .86$ ), and sexual coercion ( $\alpha = .87$ ) subscales (Straus et al., 2003). IPV occurring in the last year was selected as the time frame of reference given that lifetime prevalence, for example, is less valid than more recent recollections of the frequency and nature of violence in relationships (Straus et al., 2003)

There was an error in the wording on one of the CTS items. The second use of the word “not” was omitted from the following item from the sexual coercion scale: “I insisted on sex when my partner did not want to (but did not use physical force”). Thus, the sentence read “I insisted on sex when my partner did not want to (but did use physical force.” Because this error could change how participants interpreted this item, I excluded it from my analyses. In the current study, internal consistency for the total IPV score was  $\alpha = .97$ .

It was important to ensure that participants’ responses pertained to their experiences in male relationships in the prior year. Therefore, a confirmation item was displayed immediately before the CTS. This item read, “Questions in the next section are about interactions you have had with MALE PARTNERS in the last year. By “male partner” we mean a man who you have casually dated, had sexual experiences with, or been in a committed relationship with. Please click “yes” below to confirm that you understand that these questions are about male partners in the last year only.” Response options were “I understand, and have had a male partner (such as dating, sexual experiences, or being in a relationship) in the last year,” and “I have NOT had a male partner (such as casually dating, sexual experiences, or being in a relationship) in the last

year.” If participants chose the first response option (“I understand, and...”) they proceeded to the CTS2. If they chose the second response option (“I have NOT had...”) they were directed to an item that stated “Earlier in the survey you reported that you had a male partner in the past year – please confirm whether this is correct and, if so, what the nature of that relationship was” with options for casual dating sexual experiences, committed relationship, “I have been in a relationship with a male, but not in the past year,” and “I have never been in a relationship with a male.” If participants chose either of the last two response options, they were excluded from the study and directed to the end of the survey. If they indicated that they had, in fact, met the relationship criteria, they were directed to the CTS2.

**Alcohol use.** The Alcohol Use Disorders Identification Test (AUDIT) is a 10-item self-report questionnaire developed by the World Health Organization to identify individuals whose alcohol use has become hazardous or harmful to their health (Reinert & Allen, 2002; World Health Organization, 2001). It includes 3 items on the amount and frequency of drinking, 3 questions on alcohol dependence, and 4 on problems caused by alcohol. The psychometric properties of this instrument have been assessed and prior reports suggest the AUDIT has adequate internal consistency, content validity, criterion validity, and construct validity (Allen, Litten, Fertig, & Babor, 1997; Reinert & Allen, 2002; World Health Organization, 2001). Estimates of the measure’s internal consistency include Cronbach’s  $\alpha = .81$  (Kokotailo et al., 2004) and  $\alpha = .94$  (Carey, Carey, & Chandra, 2003). A review by Reinert and Allen (2002) concluded that the AUDIT has superior sensitivity and specificity than other, comparable instruments.



The AUDIT is scored by summing the values associated with each response (see items and corresponding values in Appendix D), with scores ranging from 0 to 40. Total scores of 8 or more are recommended as “indicators of hazardous and harmful alcohol use, as well as possible alcohol dependence” (World Health Organization, 2001). An advantage of this instrument is that it allows for the measurement of a range of alcohol use—including non-problematic use to abuse/dependence (World Health Organization, 2001). In the present study, adequate internal consistency of the AUDIT was established by Cronbach’s  $\alpha = .84$ .

Three additional items were administered as a supplemental measure of alcohol use. These items were consistent with the “quantity frequency” approach recommended by Rehm and colleagues (1999). The first item read “During the past 12 months, how often, on average did you drink alcoholic beverages?” with response options “everyday,” “4-6 times/week,” “2-3 times/week,” “once a week,” “1-3 times a month,” less than once a month, and “not applicable.” The second and third items, which each had an open-ended field to enter a numeric response, read “On the days when you drank, how many drinks did you usually have?” and “In the past 12 months, what is the highest number of drinks you can recall having on one occasion?” These items were administered as a supplement to the AUDIT due to concern of possible floor effects with the AUDIT given that I was administering it to a non-clinical population. However, this did not occur, and these items were not used in analyses.

**Data Quality Items.** Participants who were invited to complete the full survey were presented with an item at the end of the survey that read “We recognize that there are many factors that impact how someone responds to questionnaires such as this. It is

helpful for us to have a sense of how accurate your responses to the questions in this survey were. Is there any reason that we should not include your data in our analyses? For example, careless responding, not being honest in your responses, or not answering accurately on the screening survey?” Participants were advised that their response to this item would not impact their payment and were presented with the response options “You should include my responses in your analyses” and “You should NOT include my responses in your analyses.”

Finally, two open-ended questions were administered as an opportunity for participants to provide feedback on the survey, add information about their responses, or share any additional information they wished. Immediately after the PHS items, participants were presented with the following text (followed by a textbox in which they could write any comments): “Is there any additional information you wish to add about the questions in this section? (Optional)” The open-response item at the end of the survey read, “Thank you for completing this survey. We would appreciate any suggestions or feedback you have about this study. Please share any comments below. (Optional)”

### **Data Analytic Approach**

Descriptive statistics, bivariate correlations (zero-order and partial) were first calculated for key study variables. For Aim 1 and Aim 2, zero-order and partial correlations were used to evaluate the associations between internalized homonegativity, alcohol use, and IPV perpetration. Aim 3 was evaluated using multiple linear regression in which alcohol use, internalized homonegativity, and the product of the two were entered as predictors of IPV perpetration. Participants’ age, income, and racial/ethnic minority status (this variable was coded as 1 = Black or African American, Asian,

American Indian or Alaska Native, and Native Hawaiian or Pacific Islander; and 2 = Caucasian or White.

All analyses were conducted using IBM SPSS Statistics Version 26.0.0.0. Predictors were mean-centered prior to calculating the interaction term. All analyses used the SPSS bootstrapping feature (2,000 sampling iterations) for the calculation of parameter estimates, with 95% confidence intervals (two-tailed). Bias-corrected and accelerated confidence intervals were calculated.

Several methods were used to evaluate the quality of data that were obtained and to exclude individuals when indicated. First, I looked at the amount of time (in minutes) it took for participants to complete the survey. Testing the survey prior to launching it revealed that it took approximately 3.5-4 minutes to click through the survey without reading any of the items. It took approximately 6-10 minutes to complete the full survey while reading all of the items. I excluded individuals who completed the survey in less than 5 minutes because, based on the trial completions of the survey, this appeared to be a reasonable timeframe below which to exclude participants. The upper bound of this limit was not explored as a data quality check because individuals could have been interrupted while completing the survey. Third, individuals who indicated that their data should not be used on the aforementioned item (“...is there any reason that your responses should not be included in data analyses”) were excluded. The data were inspected visually as well, and individuals who displayed clear inattentiveness by selecting, for example, the same response option for an entire survey (e.g., all “strongly agree” for the PHS” or all “20+ times” for all CTS2 items) were also excluded from analyses. Fifth, I also calculated standardized residuals, Cook’s distance, and DFBetas for the regression model

with the outcome of total IPV score. Data were plotted to visually identify clear outliers. Recommendations provided by Field (2013) were used for identifying outliers and individuals with extreme impact on the regression results. See Figure 3.3 for a visualization of this procedure.

### **A Priori Power Analyses**

A priori power analyses were conducted using G\*Power (release 3.1.9.2; Faul, Erdfelder, Lang, & Buchner, 2009) in order to determine a sufficient sample size for my research aims. The model in Figure 1.2 was evaluated and includes the covariates: age, race, and education level. Using the conventional specifications for power ( $1 - \beta = .8$  and  $\alpha = .05$ ) and a conservative effect size estimate of  $f^2 = 0.02$  for the three independent variables of interest (i.e., internalized homonegativity, alcohol use, and the interaction term), a sample size of  $n = 550$  would be required. This figure was multiplied by 10 since approximately 10% of the population is sexual minority and then again by two since approximately half of MTurk workers are male (Ross, Zaldivar, Irani, & Tomlinson, 2010). Thus, I estimated that in order to reach the sample size of 550 I would need approximately 11,000 individuals to complete the screener.

### **Procedural Amendment**

A change to the study procedure was made partway through data collection. Data collection began on 4/7/2018. On 4/15/2018, data collection was paused because of concern that the participation rate was lower than expected. At this point (8 days after launching the survey), 3,031 participants had accessed the survey to complete the screener, and 89 met inclusion criteria. Given previous experience that the majority of workers to complete a HIT do so within the first 1-2 weeks after the HIT is posted, I had

concern that changes may have been necessary to increase participation rates. The research team met to re-evaluate the procedure and troubleshoot. We also consulted with a TurkPrime project manager. Three changes were made to the aforementioned procedure because they were identified as solutions that would likely increase participation rates. First, we increased the compensation rate for completing the screener from \$0.10 to \$0.25. In order to compensate for this significant increase in compensation rate while staying within grant budget, the compensation rate for completing the full survey was decreased from \$2.00 to \$1.25. This decrease was deemed acceptable because the survey completion time was shorter than anticipated. Second, a TurkPrime feature was utilized so that the HIT would only post to male workers. This eliminated the need to pay women for completing the screener. Finally, the HIT title was also changed from “Screening for University of South Carolina research survey” to “Easy 25 cent screener with \$1.25 bonus if qualified.” An IRB amendment was submitted and these changes were made in TurkPrime and to the study materials (e.g., informed consent information) in Qualtrics. Once the IRB amendment was approved, the HIT was then re-launched on 4/24/2018; I refer to this as Phase 2 of the data collection process. Study materials were identical between Phase 1 and Phase 2 with the exception of the aforementioned changes (compensation amount, TurkPrime feature of displaying HIT to men only, and HIT description). Phase 1 materials (informed consent, HIT description) are displayed in the Appendices. Independent samples *t*- tests indicate that participants in Phase 1 do not significantly differ from those in Phase 2 on key study variables.

## CHAPTER 3

### RESULTS

#### **Screener**

Information about rates at which individuals accessed the survey and were excluded on the basis of each inclusion criterion are displayed in Figure 3.1. A total of 5,303 individuals clicked on the survey link. Thirty-five of these closed the window without proceeding past the initial survey description page and four declined to consent to participation. Of the remaining 5,264 prospective participants, 128 exited the survey before completing the screener. Per study inclusion criteria (see Method section), prospective participants were then excluded if they did not identify as a cisgender male ( $n = 1,911$ ); were not in the United States at the time of accessing the survey ( $n = 192$ ); were less than 18 years old ( $n = 1$ ); and/or had not dated, been in a committed relationship, or had sexual experiences with men in the last year ( $n = 2,776$ ). Of the remaining 256 individuals, five were screened-in but then declined to participate. Eleven indicated in response to a confirmation item that preceded the CTS that they had not dated, been in a relationship with, or had sexual experiences with men in the last year. This resulted in 240 eligible participants.

#### **Data Quality Checks**

Once this sample of 240 participants who met initial inclusion criteria was established, and prior to beginning data analyses, several methods for assessing data quality were executed. This process is displayed visually in Figure 3.2. First, 21

participants were excluded because they completed the survey in less than five minutes. Inconsistent responses on the alcohol use items (i.e., greatest number of drinks reported was lower than the typical number of drinks consumed) were reported by eight participants who were then excluded (e.g., a participant indicating that on a drinking occasion they have typically drank 12 drinks in the last year and that the highest number of drinks consumed in one such occasion was 3). Three self-reported that their responses should not be used on a data quality check item (see Method section), and an additional three participants were excluded from data analysis because they displayed a pattern of invalid responding (e.g., same answer choice for entire PHS and CTS). This resulted in a sample of 205 participants. However, upon beginning data analysis, it was revealed that five of these individuals had missing data on sexual orientation items (attraction and/or identification) due to an error in survey administration for the first few participants to take the survey. Since information about sexual orientation is critical to the present study, these participants were excluded from analyses. Finally, two individuals were identified as clear outliers, using procedure described by Field (2013), and were removed. This resulted in a final sample of  $N = 198$ .

### **Sample Description**

Basic demographic information is displayed in Table 3.1 and Table 3.2. Participants' age ranged from 20 to 68 years ( $M = 33.93$ ,  $SD = 10.05$ ). About seventy-five percent identified as White and the same portion of the sample reported being employed full-time. As displayed in Table 3.3, 69.2% of participants reported male dating in the prior year, 90.4% reported same-sex sexual experiences in the prior year, and 56.1% reported being in a committed relationship with a man in the past year. (Note

that participants could be included in more than one of these categories). Interestingly, a substantial portion of the sample also reported the following with females in the past year: dating (37.4%), sexual experiences (36.9%), and committed relationship (32.3%). Prevalence rates for each form of violence were also evaluated. As displayed in Table 3.4, 73.7% of participants engaged in at least one form of IPV perpetration, 39.5% sexual coercion, 66.3% psychological aggression, and 34.1% physical assault. Additional descriptive information on key study variables is displayed in Table 3.5.

As stated in the data analytic plan, age, income, and racial/ethnic minority status were included as covariates given prior research suggesting that these demographic variables may impact the relations of interest in the present study. These are the results reported below. However, in order to assess the role of other possible confounders, I conducted the analyses with covariates selected on the basis of their bivariate association with the independent variables and dependent variables (bivariate Pearson correlations are displayed in Table 3.6). This is in line with recommendations by, for example, Porter and Raudenbush (1987; cited by Bosson, Parrott, Swan, Kuchynka, & Schramm, 2015), for example, who suggest that covariates should be variables that correlate with the dependent variable but not with all of – or, to the same extent as – their correlation with the independent variables. This, a critical consideration in eliminating, to the extent possible, confounding variables and increasing internal validity (Raab, 1994).

As shown in Table 3.6, in this sample – of men who reported same sex dating, sexual, or committed relationship experiences in the last year – the dependent variable (IPV perpetration) was associated on a bivariate level with identifying as heterosexual ( $r = .23, p < .05$ ) and reporting less same-sex attraction (e.g., “I am only attracted to



women;”  $r = -.24, p < .05$ ). Partner violence perpetration was positively associated with dating a female in the last year ( $r = .28, p < .05$ ) and with being in a committed relationship with a female in the last year ( $r = .25, p < .05$ ); these two independent variables (dating women and being in a committed relationship with a female) were significantly associated ( $r = .74, p < .05$ ). With this in mind, the analyses reported below (in which age, income, and racial/ethnic minority status were covaried) were also conducted using together as covariates: female dating and/or partner, heterosexual identification, level of same-sex attraction, and age. The results of these additional analyses did not differ in terms of significance levels, direction of coefficients, or interpretation.

#### **Aim One: Internalized Homonegativity and Alcohol Use**

Aim One was to determine whether internalized homonegativity is associated with greater rates of alcohol use. Pearson correlations between the AUDIT total score and the Negative Affect subscale of the PHS were calculated in order to assess this association. Results (Table 3.6) indicate that alcohol use was positively associated with internalized homonegativity ( $r = .19, p < .05$ ). This finding held true in partial correlation analyses, while controlling for the aforementioned covariates (Table 3.7;  $r = .19, p < .05$ ).

#### **Aim Two: Internalized Homonegativity and IPV Perpetration**

Aim Two was to determine whether internalized homonegativity is associated with greater rates of IPV perpetration. Internalized homonegativity was significantly associated with greater levels of total IPV perpetration ( $r = .44, p < .05$ ). This finding also held true in partial correlation analyses, while controlling for the aforementioned covariates (Table 3.7;  $r = .19, p < .05$ ).

### **Aim Three: Internalized Homonegativity as Moderator of Effect of Alcohol Use on IPV Perpetration**

Finally, Aim Three was to evaluate internalized homonegativity as a moderator of the effect of alcohol use on IPV perpetration. Results are displayed in Table 3.8 and Figure 3.3 and suggest that internalized homonegativity is a significant moderator of the effect of alcohol use on IPV perpetration ( $b = 2.71$ ;  $SE = 0.44$ ;  $t = 6.14$ ; bootstrapped 95% C.I. [1.21, 4.87]). To further probe this interaction, I also utilized the pick-a-point approach using the conventional points of  $M$ ,  $M - 1SD$ , and  $M + 1SD$  of the PHS. The results of this post-hoc probing suggest that the conditional effect of internalized homonegativity on the association between alcohol use and IPV perpetration is significant for individuals with average or greater levels of internalized homonegativity. Alcohol use was associated IPV perpetration when internalized homonegativity was average to high. However, those with low levels of internalized homonegativity were much less likely to perpetrate IPV regardless of level of internalized homonegativity.

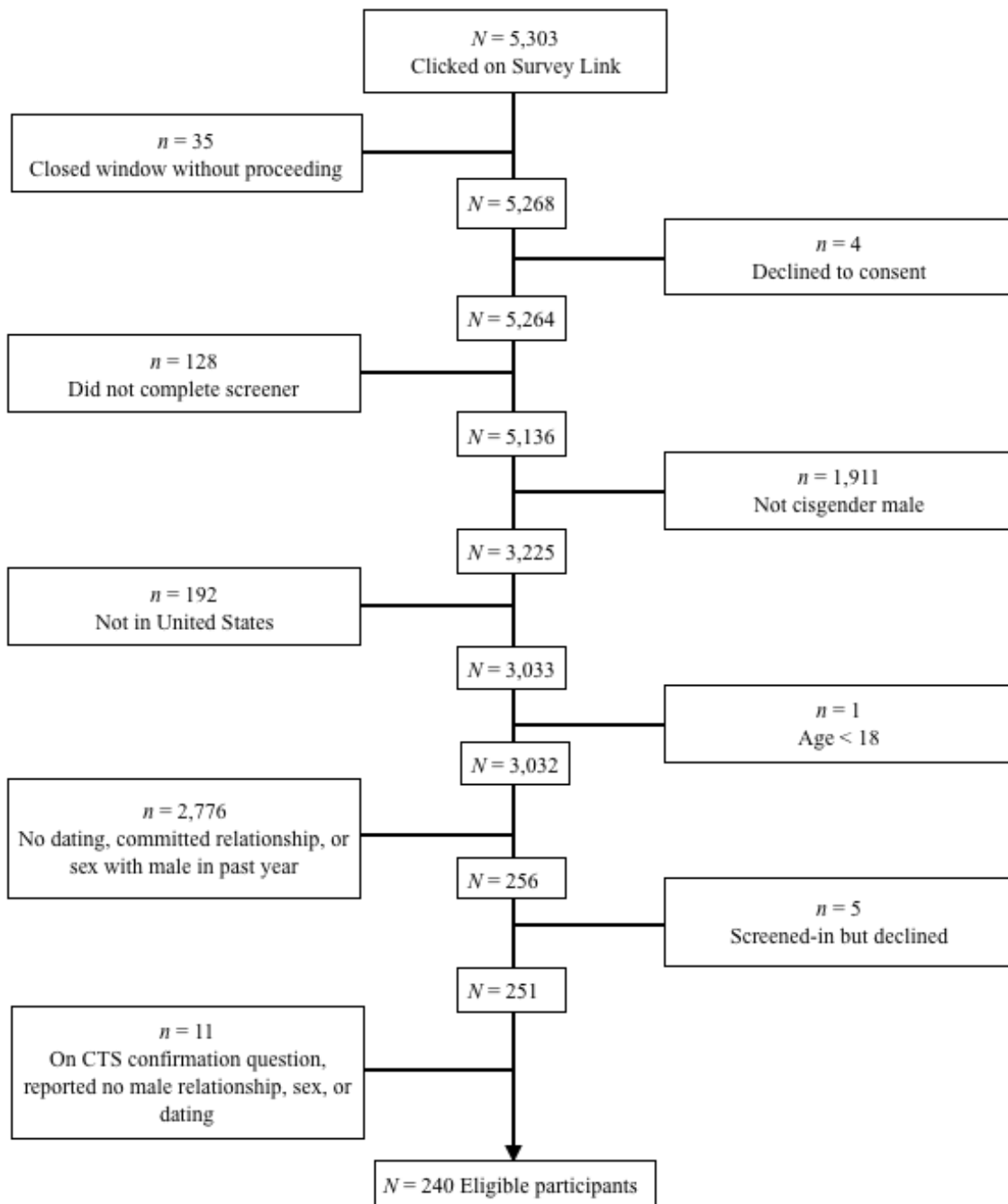


Figure 3.1. Flowchart identifying number of excluded participants per exclusion criterion.

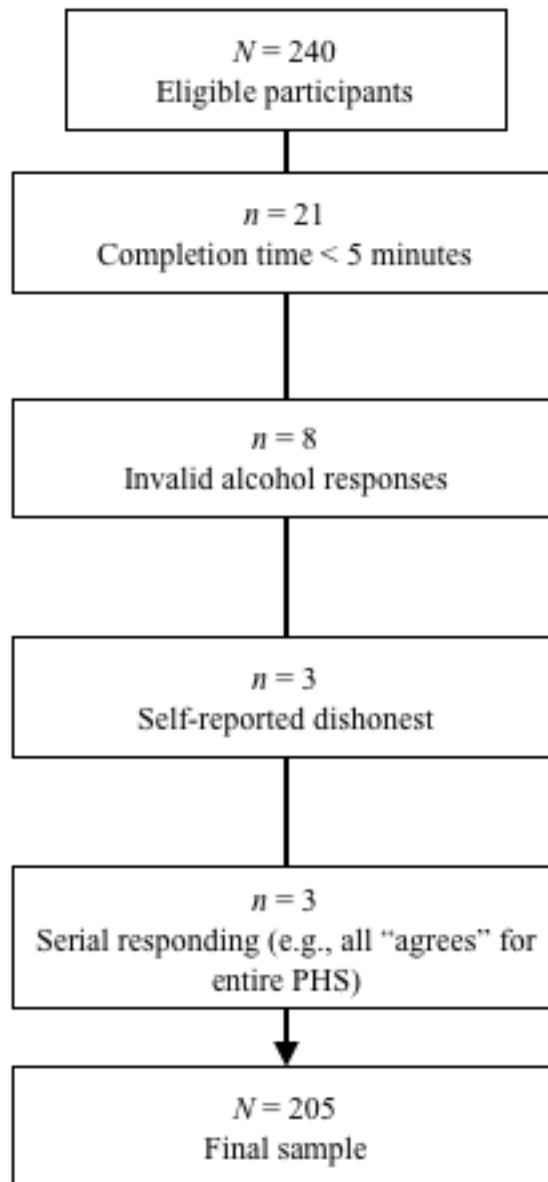


Figure 3.2. Flowchart illustrating process of identifying final analytic sample.

Table 3.1. Descriptives of screened-in participants.

Construct	<i>n</i> (%)
<b>Sexual Orientation</b>	
Heterosexual or straight	15 (7.6%)
Gay	90 (45.5%)
Bisexual	90 (45.5%)
Other, please specify	3 (1.5%)
<b>Sexual Orientation Attraction</b>	
Only attracted to females	5 (2.5%)
Mostly attracted to females	45 (22.7%)
Equally attracted to males and females	37 (18.7%)
Mostly attracted to males	36 (18.2%)
Only attracted to males	74 (37.4%)
Not sure	1 (0.5%)
<b>Education</b>	
No high school	1 (0.5%)
Some high school, did not graduate	1 (0.5%)
GED	4 (2.0%)
High school graduate	13 (6.6%)
Some college, no degree	51 (25.8%)
Associate (2 year) degree	23 (11.6 %)
Bachelor's (4 year) degree	79 (39.9%)
Some graduate school, no additional degrees	4 (2.0%)
Master's degree	16 (8.1%)
Doctoral degree (PhD, MD, JD)	6 (3.0%)
<b>Parent Education</b>	
No high school	4 (2.0%)
Some high school, did not graduate	7 (3.5%)
High school graduate	55 (27.8%)
Some college, no degree	29 (14.6%)
Associate (2 year) degree	28 (14.1%)
Bachelor's (4 year) degree	49 (24.7%)
Some graduate school, no additional degrees	3 (1.5%)
Master's degree	16 (8.1%)
Doctoral degree (PhD, MD, JD)	7 (3.5%)
<b>Income</b>	
Less than \$20,000	21 (10.6%)
\$20,000 to \$34,999	43 (21.7%)
\$35,000 to \$49,999	48 (24.2%)
\$50,000 to \$74,999	44 (22.2%)
\$75,000 to \$99,999	21 (10.6%)
Over \$100,000	21 (10.6%)

Note. *N* = 198

Table 3.2. Descriptives of screened-in participants (Part 2).

Construct	<i>n</i> (%)
<b>Relationship Status</b>	
I am not dating, in a relationship, or doing anything sexual with anyone	15 (7.6%)
Casual dating	38 (19.2%)
Doing something sexual	37 (18.7%)
In a committed relationship with a boyfriend or girlfriend	56 (28.3%)
In a committed relationship with a partner, husband, or wife	43 (21.7%)
Dating, in a relationship, or doing something sexual with multiple individuals	6 (3.0%)
Other, please specify	3 (1.5%)
<b>Hispanic or Latino</b>	
Yes	37 (18.7%)
No	161 (81.3%)
<b>Race</b>	
White	151 (76.3%)
Black or African American	24 (12.1%)
Asian	12 (6.1%)
Native Hawaiian or Pacific Islander	3 (1.5%)
Other	8 (4.0%)
<b>Employment Status</b>	
Employed full-time	148 (74.7%)
Employed part-time	25 (12.6%)
Unemployed	10 (5.0%)
Retired	4 (2.0%)
Student	6 (3.0%)
Disabled or too ill to work	4 (2.0%)
Other, please specify	1 (0.5%)
Age	$M = 33.93$ ; $SD = 10.05$ ; Range 20-68 years

Note.  $N = 198$ .

Table 3.3. Screened-in participants' relationship history

Construct	<i>n</i> (%)
<b>Male Dating History</b>	
Yes, within the past year	137 (69.2%)
Yes, but not within the past year	37 (18.7%)
Never	24 (12.1%)
<b>Male Sexual History</b>	
Yes, within the past year	179 (90.4%)
Yes, but not within the past year	10 (5.1%)
Never	9 (4.5%)
<b>Male Relationship History</b>	
Yes, within the past year	111 (56.1%)
Yes, but not within the past year	43 (21.7%)
Never	44 (22.2%)
<b>Female Dating History</b>	
Yes, within the past year	74 (37.4%)
Yes, but not within the past year	73 (36.9%)
Never	51 (25.8%)
<b>Female Sexual History</b>	
Yes, within the past year	73 (36.9%)
Yes, but not within the past year	60 (30.3%)
Never	65 (32.8%)
<b>Female Relationship History</b>	
Yes, within the past year	64 (32.3%)
Yes, but not within the past year	63 (31.8%)
Never	71 (35.9%)

Note. *N* = 198.

Table 3.4. Prevalence of IPV subtypes.

IPV Form	n (%)
Any IPV Perpetration	
No	52 (26.3%)
Yes	146 (73.7%)
Any Sexual Coercion	
No	118 (59.6%)
Yes	80 (40.4%)
Any Psychological Aggression	
No	65 (32.8%)
Yes	133 (67.2%)
Any Physical Assault	
No	131 (66.2%)
Yes	67 (33.8%)

Note. *N* = 198.



Table 3.5. Descriptive statistics for key study variables.

Construct	<i>M</i>	<i>SD</i>	Median	Min, Max	Skewness
Total IPV Perpetration	27.25	60.40	6.00	0.00, 380.00	4.11
Sexual Coercion	6.71	15.68	0.00	0.00, 105.00	3.63
Psychological Aggression	11.83	20.77	4.00	0.00, 126.00	3.04
Physical Assault	8.70	28.59	0.00	0.00, 177.00	4.55
Alcohol Use	6.82	6.53	4.00	0.00, 29.00	1.11
Internalized Homoneg.	0.77	0.91	0.44	0.00, 4.13	1.57

Note. *N* = 198

Table 3.6. Bivariate correlations amongst study variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. IPV Perpetration	1.00														
2. Int. Homoneg.	.44*	1.00													
3. Alcohol Use	.40*	.19*	1.00												
4. Heterosexual id.	.23*	.39*	.08	1.00											
5. Same-sex attraction	-.24*	-.38*	-.15*	-.41*	1.00										
6. Dated male	.13	.05	-.01	-.06	.14	1.00									
7. Sex w/male	-.24*	-.40*	-.20*	-.18*	.19*	-.17*	1.00								
8. Male partner	.14	-.18*	-.08	-.17*	.32*	.20*	.11	1.00							
9. Dated female	.28*	.32*	.20*	.21*	-.74*	.04	-.19*	-.18*	1.00						
10. Sex w/female	.11	.27*	.13	.34*	-.77*	-.03	-.12	-.19*	.82*	1.00					
11. Female partner	.25*	.31*	.21*	.25*	-.71*	.07	-.27*	-.17*	.76*	.79*	1.00				
12. Age	-.15*	-.19*	-.13*	-.04	.25*	-.07	.15*	-.07	-.22*	-.16*	-.13	1.00			
13. Education level	.05	-.01	-.02	-.03	.19*	.09	-.02	.09	-.08	-.11	-.15*	.16*	1.00		
14. Racial/Ethnic Min.	.11	.16*	-.03	-.03	-.13	.12	-.07	.02	.13	.14	.10	-.16*	.02	1.00	
15. Income	.06	-.08	.09	.04	-.09	.02	-.05	.12	.10	.14*	.14	.02	.31*	.00	1.00

Note. Pearson Correlations; \*  $p < .05$  using bootstrapping with bias-corrected and accelerated confidence intervals (two-tailed);  $N = 198$ .

Table 3.7. Partial correlations among key study variables.

	1	2	3
1. IPV Perpetration	1.00		
2. Int. Homoneg.	.43*	1.00	
3. Alcohol Use.	.40*	.19*	.01

*Note.* Covariates: Age, income, racial/ethnic minority status; \*  $p < .05$  using bias-corrected and accelerated confidence intervals (two-tailed).

Table 3.8. Internalized homonegativity as a moderator of the association between alcohol use and IPV perpetration.

Independent variable	<i>b</i>	<i>SE</i>	$\beta$	<i>t</i>	Bootstrapped Values	
					<i>p</i>	95% <i>C.I.</i>
Step 1: Covariates, $F(3, 194) = 2.39, p = .070, R^2 = 0.04$						
Constant	24.12	4.88		4.94	.001*	16.46, 33.23
Age	-0.83	0.43	-0.14	-1.94	.020*	-1.57, -0.22
Income	2.62	2.91	0.06	0.90	.364	-2.44, 8.22
Racial Minority	13.16	10.11	0.09	1.30	.274	-8.48, 37.93
Step 2: Key predictors, $F(5, 192) = 17.42, p < .000, R^2 = 0.31, \Delta R^2 = 0.27$						
Constant	25.16	4.16		6.05	<.000*	17.79, 33.98
Age	-0.20	0.37	-0.03	-0.52	.446	-0.71, 0.33
Income	2.63	2.49	0.06	1.05	.285	-1.73, 7.09
Racial Minority	8.76	8.70	0.06	1.01	.347	-8.64, 26.29
Alcohol Use	3.01	0.57	0.33	5.26	.007*	1.47, 4.62
Int. Homoneg.	24.50	4.19	0.37	5.85	.004*	13.23, 38.43
Step 3: Interaction Term, $F(6, 191) = 23.40, p < .000, R^2 = 0.42, \Delta R^2 = 0.11$						
Constant	22.07	3.85		5.74	<.000*	15.34, 29.39
Age	-0.27	0.34	-0.05	-0.80	.235	-0.73, 0.17
Income	3.67	2.29	0.09	1.61	.110	-0.27, 7.67
Racial Minority	8.87	7.97	0.06	1.11	.305	-7.34, 25.88
Alcohol Use	1.88	0.56	0.20	3.39	.006*	0.91, 2.99
Int. Homoneg.	19.43	3.93	0.29	4.95	.004*	9.76, 31.02
Interaction	2.71	0.44	0.37	6.14	.007*	1.21, 4.87

Note.  $N = 198$ ; dependent variable = IPV perpetration total score; \*  $p < .05$ ;  $b$  = unstandardized regression coefficient,  $\beta$  = standardized regression coefficient.

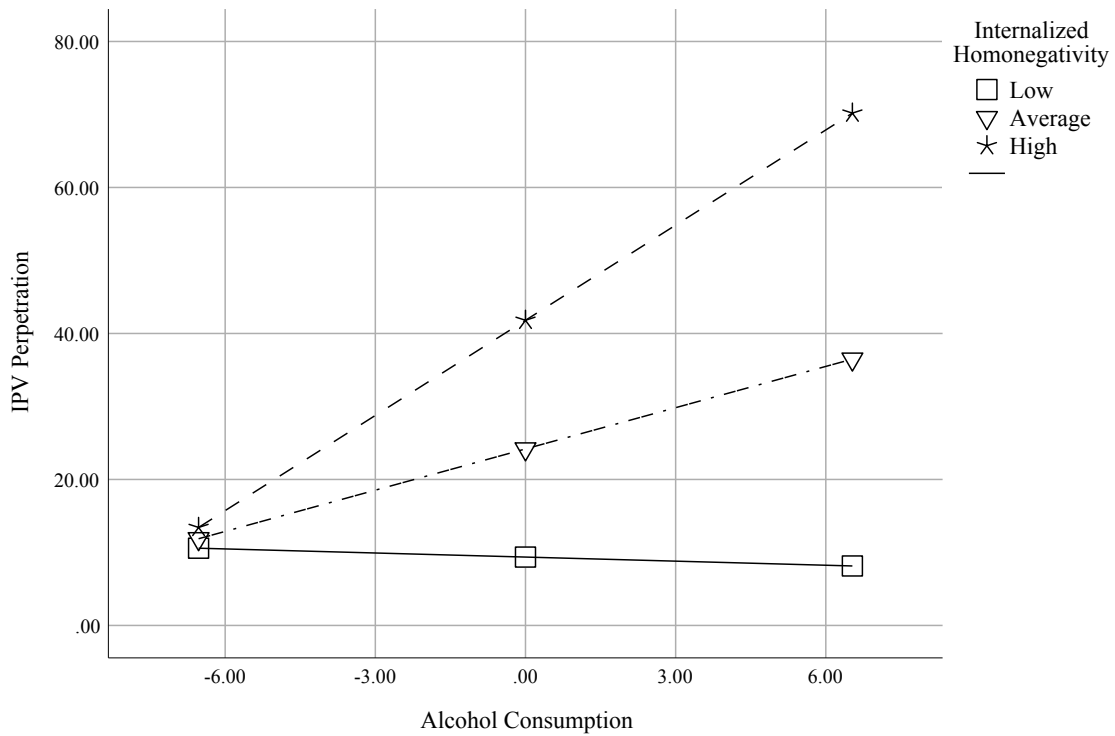


Figure 3.3. Visualization of the moderating role of internalized homonegativity on the effect of alcohol use on IPV perpetration. Note: Low (PHS = -.76):  $b = -.19$ ,  $SE = .74$ ,  $p = .802$ ; Average (PHS = 0):  $b = 1.88$ ,  $SE = .56$ ,  $p < .001$ ; High (PHS = .91):  $b = 4.35$ ,  $SE = .57$ ,  $p < .000$ .

## CHAPTER 4

### DISCUSSION

Despite evidence that sexual minority individuals face disproportionately high rates of intimate partner violence, knowledge on factors that place this population at risk for IPV is under-developed. The purpose of this study was to test the independent and synergistic effects of alcohol use – a well-established risk factor for IPV perpetration – and internalized homonegativity – a form of minority stress – as risk factors for the perpetration of partner violence in same-sex relationships.

Overall, the results of this cross-sectional study provide evidence that, overall, both alcohol use and internalized homonegativity place sexual minorities at risk for IPV perpetration. These risk factors are associated with one another – i.e., alcohol use is positively correlated with internalized homonegativity – and the interaction of the two risk factors significantly increases risk for IPV perpetration. More specifically, alcohol use was associated with IPV perpetration among individuals with average to high levels of internalized homonegativity. Low alcohol use was associated with less IPV regardless of level of internalized homonegativity, lending support to the idea that under the condition of high internalized homonegativity *and* in the presence of high alcohol use lie the greatest risk for IPV perpetration.

It is clear that internalized homonegativity has a negative impact on the wellbeing of sexual minorities. Not only does internalized homonegativity exert negative influence on the wellbeing of a sexual minority individual, it can place their partner at risk of IPV

victimization as well. Although many theoretical conceptualizations have linked alcohol use and internalized homonegativity, existing empirical work has yielded mixed results (Brubaker, Garrett, & Dew, 2009). The results of the present study replicate those of prior studies that have reported a significant association between internalized homonegativity and alcohol use (e.g., Kuerbis, Mereish, Hayes, Davis, Shao, & Morgenstern, 2017; Weber, 2008).

### **Violence Prevention**

A recent report from the Centers of Disease Control and Prevention (CDC; Niolon et al., 2017) outlines programs, policies, and practices for preventing IPV perpetration and victimization. Preventing or decreasing alcohol use via alcohol-related policies or individual-level interventions is identified by the authors of this report as one part of a comprehensive approach to prevent IPV. Broader strategies include teaching self and healthy relationship skills, creating protective environments (e.g., improving school climate and safety), and disrupting “developmental pathways toward partner violence” (Niolon et al., 2017, p. 12). A theme of these strategies includes building social support, fostering healthy and supportive parent and family relationships, and creating environments (e.g., at schools) that are conducive to healthy development.

Applying the findings of the current study to this work – these results confirm that alcohol use is also a risk factor for IPV perpetration among sexual minorities. This is not a surprising finding given prior research on the central role of alcohol use as a risk factor for IPV. A more striking finding, as applies to the aforementioned CDC report on IPV prevention, pertains to the significant risk for IPV perpetration associated with internalized homonegativity. Experiences that have been shown to contribute to the

development of internalized homonegativity – such as parent or family rejection and anti-sexual minority discrimination – align with those identified in Niolon et al. (2017) as important to minimize. As with alcohol use, it appears that *minority stress may place individuals at increased risk for well-established IPV risk factors that are not specific to sexual minorities* (e.g., low social support). Macro-level solutions for addressing internalized homonegativity and promoting equality are an important part of the prescription.

### **Strengths**

Previous research on the associations among internalized homonegativity, alcohol use, and IPV perpetration have yielded mixed results. The present study extended this area of research by assessing these constructs with psychometrically-sound measures using a sample recruited from a source not specific to sexual minorities (e.g., gay bars). Another strength of the study is its inclusion of men who identify as heterosexual – an under-examined population that appears to be at heightened risk of assaulting male intimate partners. This study stands in contrast with prior studies on sexual minority wellbeing that have excluded participants who identify as heterosexual even if they endorse same-sex dating, casual relationships, or sexual experiences.

### **Limitations**

One limitation of this study was the need to change sampling strategy partway in order to increase enrollment. I increased the payment amount for the screener and targeted only men rather than having both men and women take the screener. However, no significant differences between Phase 1 and Phase 2 were evident in analyses comparing these groups. These findings are in need of replication using a larger



probability-based sample. In future research, an improvement would be to include measures of other risk factors such as those discussed in the introduction; this includes general ones such as child abuse, psychopathology and also sexual-minority specific ones such as family rejection after self-disclosure of sexual orientation.

Another limitation that was evident pertained to individuals' experiences who did not fall under the categories measured by the CTS2. Several individuals remarked in comments following their CTS that some of their responses referred to consensual acts. Upon reviewing the wording of the CTS2 items and instructions, it is clear that the nonconsensual nature of the construct of IPV that we wish to capture is not delineated from consensual experiences. As a result, some of the physical and sexual coercion items may be muddled between consensual (preferred) and non-consensual acts.

### **Future Research**

Several other questions are raised by these data although they were not the focus of the study here. For example, as displayed in the correlation matrix (which included all key study variables), participants who endorsed same-sex attraction were significantly less likely to perpetrate IPV. Those who did not identify as gay or bisexual (but met inclusion criteria for the study of having same-sex sexual experiences, casual dating, or committed relationship) had significantly greater levels of internalized homonegativity. An important area for future research is the execution of a longitudinal study in which these interrelated constructs can, to some degree, be disentangled. A longitudinal study evaluating temporal precedence will be an important step. For example, prior research suggests that it is likely that both of the following statements are true: IPV leads to increased alcohol use and increased alcohol use contributes to rates of IPV. It was not

possible to disentangle such temporal and causal aspects of these phenomena using the current data.

In the future, I am interested in moving upstream to understand what developmental experiences place individuals on this trajectory. Since family rejection after disclosing sexual orientation increases substance use and internalized homonegativity among sexual minority youth (Puckett et al., 2015), another prevention effort could be supporting youth as they disclose to their families and their families as they process that information. Investigating the impact of efforts to reduce other forms of minority stress in this population is also indicated. Lin and Israel (2012) provide some promising data on the potential for an online intervention to decrease internalized homonegativity. However, no prior study has examined this in relation to IPV prevention.

## **Conclusion**

It is time to move from describing the *what* of IPV in sexual minority relationships (i.e., prevalence) to better understanding the *why*. The field has an underdeveloped understanding of what risk factors unique to sexual minorities place them at risk for violence in their relationships. As is stated by Krug et al. in a 2002 World Health Organization Report, in order to prevent violent phenomena from occurring, we must understand what places people at risk for it. The ultimate goal of this work is to shed light on violent phenomena in LGBT+ intimate relationships in order to learn how to prevent it and to promote safe and nurturing relationships. This study suggests that ameliorating minority stress in this population may have a beneficial effect on alcohol use and IPV rates, although causal relationships need to be elucidated by future research.

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## APPENDIX A

### MTURK HIT DESCRIPTION AND PROMPTS

#### **Part 1: Hit Description**

HIT Title: Screening for University of South Carolina research survey

Compensation: \$0.10

Description: You are invited to complete a survey that is part of a dissertation-related research project about conflict in relationships that is being conducted at the University of South Carolina. The first step is a 2-minute screening survey that you will be paid \$0.10 to complete. This survey is used to see if you are eligible to participate. If, based on your responses to the screening survey, you are eligible for the study you will be invited to complete a 20-minute survey with a compensation rate of \$2.00. If you are interested in participating, please click this link for more detailed information about this project and the types of questions you will be asked if you choose to participate.

#### **Part 2: Text for excluded participants**

We thank you for your time completing this brief survey. Based on your responses, you do not meet the inclusion criteria for the full survey. Click “proceed” to receive your MTurk completion code. This code must be entered into MTurk in order to receive payment.

**Part 3: Text for participants who met inclusion criteria**

Congratulations! Based on your responses to the screener, you are eligible to complete the full survey. You will receive \$0.10 for completing the screener. If you choose to complete the full survey, which takes approximately 20 minutes, you will receive a bonus of \$2.00 (for a total of \$2.10).

Would you like to continue to the survey. If so, select “yes” only if you have time to complete it now, because you will be unable to re-open the survey later. If you select “no,” you will be taken to a screen to receive payment only for the screener and cannot re-open the survey.

- a. Yes, I want to continue to the full survey and can complete it now
- b. No, I would like to go to the exit screen.



## APPENDIX B

### INFORMED CONSENT INFORMATION

#### **KEY INFORMATION ABOUT THIS RESEARCH STUDY**

Thank you for your interest in participating in this study. This study is being conducted by Andrew Schramm. I am a graduate student in the Department of Psychology at the University of South Carolina and this research is for my dissertation. The purpose of the study is to better understand factors that impact how individuals deal with conflict in relationships. Your participation is completely voluntary. If you choose to participate, you will be asked to complete a screening survey to evaluate whether you are eligible for the study. This survey includes questions about your demographic characteristics and relationship history. You will receive \$0.10 for completing the 1-2 minute survey.

If, based on your responses to the screening survey, you are eligible for the study, you will be invited to complete a lengthier survey. Only individuals who are deemed eligible based on their responses to the screening survey will be invited to complete the full survey. The full survey takes approximately 20 minutes to complete and you will receive \$2.00 if you chose to complete it. This survey includes questions about your attitudes, substance use, and behavior in relationships. It also includes questions you may find upsetting such as questions about your experiences with violence. Please review the important information below so that you can make an informed decision about whether to participate.

## **Confidentiality**

We take your confidentiality seriously. The data collected from this study are considered anonymous because your responses cannot be linked to personally identifiable information. I will have access to your MTurk Worker ID in order to process your payment. However, I will not be able to pair your ID with your name or other identifiable information. Additionally, the survey questions will not ask for identifiable information such as your name.

## **Payment**

If you choose to participate, you will be paid \$0.10 for completing the screening questionnaire. If you qualify for the study you will be paid \$2.00 for completing a lengthier survey. In order to be paid, you must complete the survey.

## **Voluntary Participation**

You are not at all obligated to participate in this study. You may withdraw from the study at any point but will not receive compensation unless you complete the whole study.

## **Risks and Benefits**

A benefit of participating is that you will be paid to complete the surveys. A potential risk is that some individuals may find the questions in the survey upsetting. In case you do feel upset by these questions, at the end of the study you will be provided with a list of resources including information about people that may be able to help you with these feelings. Additionally, you are free to withdraw from the study at any time. Another risk

is a possible data breach. However, we will take great measures to protect your responses and they will never be linked with information that could be used to identify you.

### **Contact Information**

If you have questions or concerns about this study, you can contact Andrew Schramm at [schramma@email.sc.edu](mailto:schramma@email.sc.edu). You can also contact Suzanne Swan (a Psychology professor overseeing the research) at [swansc@mailbox.sc.edu](mailto:swansc@mailbox.sc.edu) or 803-777-4200. If you have questions about your rights as a research participant, you can also contact the University of South Carolina's Office of Research Compliance at 803-777-7095.

## APPENDIX C

### RESOURCE LIST

This list of resources was compiled for individuals who are in violent situations, have mental health needs, or are in crisis. The resources below are available to you for free of charge. Note that the descriptions of the resources below are taken from each organization's website and is subject to change. If you are in immediate danger, call 911 or go to the nearest hospital emergency department.

#### **IMAlive Online Crisis Network**

[www.imalive.org](http://www.imalive.org)

IMAlive is a live online network that uses instant messaging to respond to people in crisis. It is staffed by volunteers who are trained and certified in crisis intervention. People need a safe place to go during moments of crisis and intense emotional pain.

#### **IAMAlive National Hotline**

[www.hopeline.com/hotline](http://www.hopeline.com/hotline)

1-800-422-HOPE (4673)

If you (or someone you know) are depressed and thinking about suicide, please call to talk to a caring crisis hotline volunteer. Your call is free and confidential.

#### **National Sexual Assault Hotline**

[www.online.rainn.org](http://www.online.rainn.org)

1-800-656-HOPE (4673)

Anyone affected by sexual assault, whether it happened to you or someone you care about, can find support from the National Sexual Assault Hotline. Call to be connected with someone over the phone who can help. You can also get help online via live chat (<https://hotline.rainn.org/online>)

#### **National Domestic Violence Hotline**

<http://www.thehotline.org/>

1-800 -799-SAFE or 1-800-799-7233.

If someone needs to talk about being hurt by or are afraid of a dating partner:

#### **National Suicide Prevention Lifeline**

<https://suicidepreventionlifeline.org>

1-800-273-8255

We can all help prevent suicide. The Lifeline provides 24/7, free and confidential support for people in distress, prevention and crisis resources for you or your loved ones, and best practices for professionals.

### **Lesbian, Gay, Bisexual and Transgender National Hotline**

<https://www.glbthotline.org/national-hotline.html>

1-888-843-4564

The Lesbian, Gay, Bisexual and Transgender (LGBT) National Hotline provides telephone, online private one-to-one chat and email peer-support, as well as factual information and local resources for cities and towns across the United States.

### **Trevor Project:**

<http://www.thetrevorproject.org>

1-866-488-7386

The nation's only 24/7 crisis intervention and suicide prevention lifeline for lesbian, gay, bisexual, transgender and questioning young people ages 13-24. Online instant messaging is available 7 days a week between 3pm and 10 pm ET/12pm and 7pm PT. or text "Trevor" to 1-202-304-1200 to message via text messaging. Available Monday through Friday between 3pm and 10pm ET/12pm and 7pm PT.

### **SAMHSA's National Helpline**

<https://www.samhsa.gov/find-help/national-helpline>

1-800-662-HELP (4357),

Also known as the Treatment Referral Routing Service, this is a confidential, free, 24-hour-a-day, 365-day-a-year, information service, in English and Spanish, for individuals and family members facing mental and/or substance use disorders. This service provides referrals to local treatment facilities, support groups, and community-based organizations.

### **Crisis Text Line**

Text NAMI to 741-741

Connect with a trained crisis counselor to receive free, 24/7 crisis support via text message.

### **NAMI HelpLine**

<https://www.nami.org/Find-Support/NAMI-HelpLine>

1-800-950-NAMI (6264)

The NAMI HelpLine can be reached Monday through Friday, 10 am–6 pm, ET. HelpLine staff and volunteers are prepared to answer your questions about mental health issues including symptoms of mental health conditions, treatment options, and local support groups and services.

## APPENDIX D

### STUDY MEASURES

*Note:* Participants will not see the measure names as displayed here (e.g., Conflict Tactics Scale).

#### **Screener**

1. How old are you? (in years) [drop-down menu]
2. What sex were you assigned at birth, on your original birth certificate
  - a. Male
  - b. Female
3. How do you describe yourself?
  - a. Male
  - b. Female
  - c. Transgender
  - d. Do not identify as male, female, or transgender
4. What is your employment status?
  - a. Employed full-time
  - b. Employed part-time
  - c. In the military
  - d. Laid off
  - e. Unemployed
  - f. Retired
  - g. Student
  - h. Homemaker
  - i. Disabled or too ill to work
  - j. Other, please specify

The next three questions are about your experiences with **men**.

5. I have casually dated a male (such as going on a date)
  - a. Yes, within the past year
  - b. Yes, but NOT within the past year
  - c. Never
6. I have done something sexual with a male (such as intercourse or oral sex)
  - a. Yes, within the past year
  - b. Yes, but NOT within the past year
  - c. Never
7. I have been in a committed relationship with a male (such as boyfriend or partner)

- a. Yes, within the past year
- b. Yes, but NOT within the past year
- c. Never

The next three questions are about your experiences with **women**.

- 8. I have casually dated a female (such as going on a date)
  - a. Yes, within the past year
  - b. Yes, but NOT within the past year
  - c. Never
- 9. I have done something sexual with a female (such as intercourse or oral sex)
  - d. Yes, within the past year
  - e. Yes, but NOT within the past year
  - f. Never
- 10. I have been in a committed relationship with a female (such as girlfriend or partner)
  - g. Yes, within the past year
  - h. Yes, but NOT within the past year
  - i. Never
- 11. Do you currently live in the United States
  - j. No
  - k. Yes
- 12. Do you consider yourself to be
  - l. Heterosexual or straight;
  - m. Gay or lesbian; or
  - n. Bisexual?
  - o. Other, please specify
- 13. People are different in their sexual attraction to other people. Which best describes your feelings?
  - a. Only attracted to females
  - b. Mostly attracted to females
  - c. Equally attracted to females and males
  - d. Mostly attracted to males
  - e. Only attracted to males
  - f. Not sure

## **FULL SURVEY**

- 1. What is the highest level of school you completed?

- a. No high school
  - b. Some high school, didn't graduate
  - c. GED
  - d. High school graduate
  - e. Some college, no degree
  - f. Associate (2 year) degree
  - g. Bachelor's (4 year) degree
  - h. Some graduate school, no additional degrees
  - i. Master's degree
  - j. Doctoral degree (PhD, MD, JD)
2. What is the highest level of school your parents/guardians completed? (Note: If parents/guardians completed different levels of education, indicate whichever is higher.)
- a. No high school
  - b. Some high school, didn't graduate
  - c. GED
  - d. High school graduate
  - e. Some college, no degree
  - f. Associate (2 year) degree
  - g. Bachelor's (4 year) degree
  - h. Some graduate school, no additional degrees
  - i. Master's degree
  - j. Doctoral degree (PhD, MD, JD)
  - k. I'm not sure
3. What is your annual household income?
- a. Less than \$20,000
  - b. \$20,000 to \$34,999
  - c. \$35,000 to \$49,999
  - d. \$50,000 to \$74,999
  - e. \$75,000 to \$99,999
  - f. Over \$100,000
4. Which of the following best describes your current relationship status? (Check all that apply)
- a. Casual dating, not in a committed relationship
  - b. Doing something sexual with someone, not in a committed relationship
  - c. In a committed relationship with boyfriend or girlfriend
  - d. In a committed relationship with partner, wife, or husband
  - e. I am not dating, in a relationship, or doing anything sexual with anyone
  - f. I am dating, in a relationship, or doing something sexual with multiple individuals. (Please describe)
  - g. Other (please describe)
5. What is the gender of the person(s) you described above?
- a. Male
  - b. Female
  - c. Doesn't identify as male or female



6. Are you currently living with the person you described above? (Or, if multiple individuals, are you living with either of them?)
  - a. Yes
  - b. No
7. If you are currently dating, in a relationship, or doing anything sexual with more than one person, please describe the nature of those relationships and their genders below. [*Textbox for written response*]
8. What is your zip code? (Optional)
9. Do you consider yourself Hispanic or Latino?
  - a. Yes
  - b. No
10. Which of the following do you consider yourself?
  - a. White
  - b. Black or African American
  - c. Asian
  - d. American Indian or Alaska Native
  - e. Native Hawaiian or Pacific Islander
  - f. Other, please specify

### **Personal Heterosexism Scale**

Items should be answered with a number from 1 to 6. 1=Never; 2= once in a while (less than 10% of the time); 3=sometimes (10-25% of the time), 4=a lot (26-49% of the time); 5=most of the time (50-70%), 6=almost all of the time (more than 70% if the time).

1. When I think of my same-sex attraction, I feel depressed.
2. I feel happy when I think about my attraction to the same-sex.
3. When I think about being attracted to the same-sex, I feel glad.
4. Because of my attraction to the same-sex, I feel worthless.
5. I feel unashamed of my same-sex attraction.
6. I feel that my same-sex attraction is embarrassing.
7. My same-sex attraction does not concern me.
8. If others accepted my same-sex attraction, I would not try to conceal it.
9. I dislike myself for being attracted to the same-sex.
10. I do not resent being attracted to the same-sex.
11. I get angry when I think about being attracted to the same-sex.
12. When I think of my same-sex attraction, I feel relaxed.
13. Because of my attraction to the same-sex, I feel anxious.
14. I wish I were not attracted to the same-sex.
15. If it were possible, I would not be attracted to the same-sex.
16. I think I might be better off dead than be attracted to the same-sex.

*Negative Affect is composed of a mean score of items 1, 4, 6, 9, 11, 13, 14 and 15.*

*Positive Affect is composed of a mean score of items 2, 3, and 12. Acceptance is composed of a mean score on items 5, 7, 8, and 10. Item 16 was excluded from the final scale.*

17. Is there any additional information you wish to add about the questions in this section? (Optional) [Textbox]

### **Conflict Tactics Scale**

*Confirmation question:* Questions in the next section are about interactions you have had with MALE PARTNERS in the last year. By “male partner” we mean a man who you have casually dated, had sexual experiences with, or been in a committed relationship with. Please click “yes” below to confirm that you understand that these questions are about male partners in the last year only.

- a. I understand, and have had a male partner (such as dating, sexual experiences, or being in a relationship) in the last year.  
→ Proceed to CTS2
- b. I have NOT had a male partner (such as casually dating, sexual experiences, or being in a relationship) in the last year  
→ “Earlier in the survey you reported that you had a male partner in the past year. Please confirm – what was the nature of that relationship? (check all that apply)
  - a. Casual dating (Proceed to CTS2)
  - b. Sexual experiences (Proceed to CTS2)
  - c. Committed relationship (Proceed to CTS2)
  - d. I have been in a relationship with a male, but no in the past year. (Exclude)
  - e. I have never been in a relationship with a male. (Exclude)

### *CTS Introduction*

No matter how well a couple gets along, there are times when they disagree, get annoyed with one another, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or are upset for some other reason. Couples also have many different ways of trying to settle their differences. Some questions are about you and others are about your partner. Please choose the response that describes how many times these things have happened with a MALE PARTNER in the **PAST YEAR**.

How often did this happen?

- 1 = Once in the past 6 months
- 2 = Twice in the past 6 months
- 3 = 3-5 times in the past 6 months
- 4 = 6-10 times in the past 6 months
- 5 = 11-20 times in the past 6 months
- 6 = More than 20 times in the past 6 months
- 7 = Not in the past 6 months, but it did happen before
- 8 = This never happened in the past 6 months

- 1 I insulted or swore at my partner. [*Psychological Aggression*]
- 2 I threw something at my partner that could hurt. [*Physical Assault*]
- 3 I twisted my partner's hair. [*Physical Assault*]
- 4 I made my partner have sex without a condom. [*Sexual Coercion*]
- 5 I pushed or shoved my partner. [*Physical Assault*]

- 6 I used force (like hitting, holding down or using a weapon) to make my partner have oral or anal sex. [*Sexual Coercion*]
- 7 I used a knife or gun on my partner. [*Physical Assault*]
- 8 I called my partner fat or ugly. [*Psychological Aggression*]
- 9 I punched or hit my partner with something that could hurt. [*Physical Assault*]
- 10 I destroyed something that belonged to my partner. [*Psychological Aggression*]
- 11 I choked my partner. [*Physical Assault*]
- 12 I shouted or yelled at my partner. [*Psychological Aggression*]
- 13 I slammed my partner against a wall. [*Physical Assault*]
- 14 I beat up my partner. [*Physical Assault*]
- 15 I grabbed my partner. [*Physical Assault*]
- 16 I used force (like hitting, holding down, or using a weapon) to make my partner have sex. [*Sexual Coercion*]
- 17 I stomped out of the room or house or yard during a disagreement. [*Psychological Aggression*]
- 18 I insisted on sex when my partner did not want to (but did use physical force). [*Sexual Coercion*]<sup>5</sup>
- 19 I slapped my partner. [*Physical Assault*]
- 20 I used threats to make my partner have oral or anal sex. [*Sexual Coercion*]
- 21 I burned or scalded my partner on purpose. [*Physical Assault*]
- 22 I insisted my partner have oral or anal sex (but did not use physical force). [*Sexual Coercion*]
- 23 I accused my partner of being a lousy lover. [*Psychological Aggression*]
- 24 I did something to spite my partner. [*Psychological Aggression*]
- 25 I threatened to hit or throw something at my partner. [*Psychological Aggression*]
- 26 I kicked my partner. [*Physical Assault*]
- 27 I used threats to make my partner have sex. [*Sexual Coercion*]

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<sup>5</sup> As stated in the method section, this item contained an error as written on my survey. It should read “does not use physical force” rather than “did use physical force.” Because this error could change the meaning and interpretation of the item for respondents, this item was excluded from analyses.

## AUDIT

1. How often do you have a drink containing alcohol?

- (0) Never [Skip to Qs 9-10]
- (1) Monthly or less
- (2) 2 to 4 times a month
- (3) 2 to 3 times a week
- (4) 4 or more times a week

2. How many drinks containing alcohol do you have on a typical day when you are drinking?

- (0) 1 or 2
- (1) 3 or 4
- (2) 5 or 6
- (3) 7, 8, or 9
- (4) 10 or more

3. How often do you have six or more drinks on one occasion?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

Skip to Questions 9 and 10 if Total Score for Questions 2 and 3 = 0

4. How often during the last year have you found that you were not able to stop drinking once you had started?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

5. How often during the last year have you failed to do what was normally expected from you because of drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

7. How often during the last year have you had a feeling of guilt or remorse after drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?

- (0) Never
- (1) Less than monthly
- (2) Monthly
- (3) Weekly
- (4) Daily or almost daily

9. Have you or someone else been injured as a result of your drinking?

- (0) No
- (2) Yes, but not in the last year
- (4) Yes, during the last year

10. Has a relative or friend or a doctor or another health worker been concerned about your drinking or suggested you cut down?

- (0) No
- (2) Yes, but not in the last year
- (4) Yes, during the last year

### Supplemental Alcohol Items

1. During the past 12 months, how often, on average did you drink alcoholic beverages?
  - a. Everyday
  - b. 4-6 times per week
  - c. 2-3 times per week
  - d. Once a week
  - e. 1-3 times a month
  - f. Less than once a month
  - g. Not applicable
2. On the days you drank, how many drinks did you usually have? [enter numeric response]
3. In the past 12 months, what is the highest number of drinks you can recall having on one occasion? [enter numeric response]

### Data Quality Check

We recognize that there are many factors that impact how someone responds to questionnaires such as this. It is helpful for us to have a sense of how accurate your responses to the questions in this survey were. Is there any reason that we should not include your data in our analyses? For example, careless responding, not being honest in your responses, or not answering accurately on the screening survey? Your response to this question will NOT impact your payment for this HIT.

- a. You should include my responses
- b. You should NOT include my responses

### Feedback Item

Thank you for completing this survey. We would appreciate any suggestions or feedback you have about this study. Please share any comments below. (Optional) [Textbox]