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MULTIPLE MINORITY STRESS, PROBLEMATIC DRINKING, AND INTIMATE PARTNER VIOLENCE IN SEXUAL MINORITIES OF COLOR

by

KEVIN MOINO

Under the Direction of Dominic J. Parrott, Ph.D.

ABSTRACT

The Minority Stress model (Meyer, 2003) posits that minorities experience stressors related to their marginalized identity that lead to health disparities. The current study addressed limitations in the literature by employing both intersectional and additive approaches to study the combined effects of racial and sexual minority stress on problematic drinking and IPV. 349 cisgender sexual minorities of color were recruited through an online panel service. Participants completed an online survey that assessed multiple minority stressors, problematic drinking, and IPV. Results supported a two-factor (external and internal minority stress) model that included intersectional constructs of both racial and sexual minority stressors. These constructs were positively related to problematic drinking as well as IPV. Additionally, modelling sexual and racial minority stressors additively revealed differential relationships between sexual, racial, external, and internal minority stressors and outcomes. The benefits of incorporating an intersectional approach in the study of LGB health are discussed.

INDEX WORDS: Minority Stress, Intersectionality, Alcohol Use, IPV, Health, SEM

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KEVIN MOINO

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Science

in the College of Arts and Sciences

Georgia State University

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INTRODUCTION

Although there have been great strides in LGBT rights in the past decades, sexual minorities are still marginalized in society. For decades now, researchers have documented pervasive health disparities between LGBT people and their heterosexual peers. For example, research has shown that sexual minorities persistently have worse mental health outcomes, including but not limited to depression, anxiety, suicidality, violence, and sexual behaviors (Burton, Marshal, Chisolm, Sucato, & Friedman, 2013; CDC, 2011; Pascoe & Smart Richman, 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014). Additionally, they have worse physical health outcomes, such as increased rates of cancer, cardiovascular disease, and respiratory diseases (Lick, Durso, & Johnson, 2013) as well as behavioral health outcomes such as substance abuse (Goldbach, Tanner-Smith, Bagwell, & Dunlap, 2014) and intimate partner violence (IPV) (Balsam & Szymanski, 2005; Finneran & Stephenson, 2014). Although researchers have made great strides in advancing knowledge about LGBT health disparities, there are still fundamental knowledge gaps necessary to overcome these disparities. Namely, most of the extant literature has neglected to examine how psychosocial factors that are associated with health disparities in White sexual minorities function in sexual minorities of color. This is a problem because sexual minorities of color face oppression not only because of their sexual orientation, but also because of their race. Thus, in order to truly improve the health of sexual minorities, research must incorporate their multiple identities and the intersection of those identities (Institute of Medicine, 2011). Importantly, previous research has struggled to quantify the effects of concurrent oppression targeted at individuals' sexual and racial identities.

In order to address this gap, the present study used one of the prevailing theories in LGBT health – the minority stress framework – to understand two highly related and all-

encompassing health outcomes: problematic drinking and intimate partner violence. Of note, psychology have lagged behind the humanities and sociology in their acknowledgement that people have multiple intersecting identities that differentially affect how people experience the world. Examining how people's experiences related to these identities affect health outcomes is essential to address the burdens experienced by the most marginalized among us. As such, the present study sought to integrate minority stress and intersectional frameworks to examine robust health disparities in the LGBT community. Specifically, experiences of minority stress due to race and sexual orientation were modelled concurrently to better explain the associations between minority stress, problematic drinking, and intimate partner violence in sexual minorities of color.

The Minority Stress Model

The Minority Stress Model (Meyer, 1995, 2003) is a prevailing theoretical framework that explains how unique stressors experienced by marginalized populations are associated with negative health outcomes. The framework posits that marginalized populations experience chronic stress related to their stigmatized identities. The model conceptualizes three types of minority stressors: internalized oppression, stigma, and lived experiences of discrimination and violence. *Internalized oppression* is the internalization of negative societal messages about one's marginalized identity. *Stigma* is defined as a minority individual's expectations of rejection and discrimination. Lastly, the model takes into account the actual *lived experiences of discrimination*. Minority stress theory is of critical importance for two key reasons: (1) it was among the first to recognize that minority stressors arose not just from negative life events, but from the very experience of being minority in a dominant society; and (2) it was among the first to introduce the idea that societal and systemic factors of oppression were related to individual

health outcomes. For these reasons, the adoption of this framework helped usher in the subfield of LGBT health.

A key strength of the minority stress framework is that it allows for the examination of the putative mechanisms that tie an individual's minority identity to adverse health outcomes. The framework conceptualizes minority stressors through degrees of proximity to the individual. Minority stressors exist on a continuum that ranges from the most distal to the most proximal: (1) experiences of discrimination and prejudice, (2) stigma, the expectations of discrimination, and the hypervigilance such expectations require, and (3) internalization of societal oppression. Essentially, distal minority stressors become proximal through cognitive appraisals, which would later become the fundamental theory on how minority stressors "get under the skin" to affect health.

Since its conception, the minority stress framework has received considerable empirical study. Research supports the link between the continuum of minority stressors and health disparities in sexual minorities, including but not limited to: substance use (Goldbach et al., 2014), psychological distress and suicidality (Lea, de Wit, & Reynolds, 2014), risky sexual behavior (Newcomb & Mustanski, 2011), and internalizing mental health problems (Newcomb & Mustanski, 2010). Research has also supported the notion that minority stress processes activate psychological processes that lead to adverse mental health outcomes. For example, minority-related discrimination has been found to disrupt the victim's perception of the world as meaningful and orderly and take away their sense of security (Garnets, Herek, & Levy, 1990). Additionally, experiences of discrimination have been associated with sleep disturbances and nightmares, headaches, diarrhea, uncontrollable crying, agitation and restlessness, increased use of drugs, and deterioration in personal relationships (Garnets et al., 1990).

Research has also shown that the effects of stigma can lead to hypervigilance and can disrupt social relationships (Meyer, 2013). Additionally, societal stigma often leads to concealment as a coping strategy, a process that has been empirically linked to additional stress, suppression of emotions, and isolation from one's community, all of which lead to worse health outcomes (Cole, Kemeny, Taylor, Visscher, & Fahey, 1996; Crocker & Major, 1989; Williams, Mann, & Fredrick, 2017). These psychological processes in part lead to the internalization of societal oppression, which has consistently been linked with a multitude of negative health outcomes (for a review, see Newcomb & Mustanski, 2010).

Hatzenbuehler (2009) developed a theoretical framework that expands on and adapts the minority stress framework. While the original minority stress framework conceptualized minority stress as a mediator between marginalized status and adverse health outcomes, the Psychological Mediation Framework (Hatzenbuehler, 2009) posits that general psychological processes present in everybody mediate the relation between minority stress and psychiatric morbidity in sexual minorities. It details how minority stressors directly lead to elevations in maladaptive psychosocial processes (e.g., negative cognitive appraisals, emotion dysregulation), which in turn explain health disparities in marginalized communities. In the example of depression, the Psychological Mediation Framework posits that experiences of minority stress lead to emotion dysregulation via an increase in negative affect, which in turn, leads to depression. In doing so, this framework explains the discrepancy in rates of depression between sexual minorities and heterosexuals. This is important because it provides further evidence of the unique role that minority stressors play in LGBT health.

Among the many health disparities documented in the LGBT community, the application of minority stress theory is particularly important to our understanding of two health disparities

that have an undeniable negative impact in the sexual minority community: problematic drinking and intimate partner violence. There is robust evidence that minority stress has a significant impact on problematic drinking (Lehavot & Simoni, 2011) and both IPV perpetration and victimization (Carvalho, Lewis, Derlega, Winstead, & Viggiano, 2011). Thus, understanding the interrelationships between these variables is of upmost importance, particularly given the deleterious effects IPV has on all aspects of health (Buller, Devries, Howard, & Bacchus, 2014; Lewis, Milletich, Kelley, & Woody, 2012). The present study aimed to advance this literature by focusing on the association between both racial and sexual minority stress and these two highly consequential health outcomes in sexual minorities.

Minority Stress and Problematic Drinking

Research has documented higher alcohol use problems in the LGBT community relative to the national population since the mid 1970's (Greenwood, & Gruskin, 2007; Lohrenz, Connelly, Coyne, & Spare, 1978). Recent meta-analytic reviews that include both adolescent and adult populations have shown that sexual minorities evidence higher rates of alcohol use, heavy drinking, and alcohol use disorder than heterosexuals (Allen & Mowbray, 2016; Marshal et al., 2008). Tragically, the discrepant use of alcohol in sexual minorities has wide-ranging health consequences, as alcohol use has been associated with poor academic outcomes, injuries, sexual assaults, overdoses, memory blackouts, changes in brain function, lingering cognitive deficits, and death (White & Hingson, 2013).

The link between minority stress and alcohol use has also been well-documented. Research has shown that sexual orientation harassment/discrimination is associated with higher alcohol use and problems (Goldbach et al., 2014; McCabe, Hughes, West, Veliz, & Boyd, 2019; Nawyn, Richman, Rospenda, & Hughes, 2000). Additionally, research has demonstrated that

minority stressors were associated with substance use (including alcohol use) above and beyond a major life stressor, such as bereavement (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008). A similar association has been found between more proximal minority stressors (internalized homophobia) and alcohol problems (Amadio, & Chung, 2004).

Some researchers have also linked minority stress with psychological mechanisms that have been shown to lead to problematic drinking. For example, research with both college and community samples has shown that alcohol expectancies about coping mediated the relation between sexual orientation and increased drinking (Dworkin, Cadigan, Hughes, Lee, & Kaysen, 2018; Fish & Hughes, 2018; Hatzenbuehler, Corbin, & Fromme, 2008). Other lines of research have shown that minority stressors are associated with a decrease in psychosocial resources, which in turn was associated with higher levels of substance use (Lehavot & Simoni, 2011). Minority stress is also associated with other psychological factors that are well-established correlates of problematic drinking (e.g., personality, negative affect) (Livingston, Christianson, & Cochran, 2016; Mereish, & Miranda Jr, 2019).

Although researchers have made great strides in understanding the relation between minority stress and problematic drinking, a fundamental limitation of this research base is that much of the literature has neglected to examine the effects of minority stressors associated with race and ethnicity (racial minority stressors). This is particularly problematic, as a plethora of research has consistently documented an association between racial discrimination and poor mental/physical health (for a review, see Paradies et al., 2015) and alcohol use in particular (for a review, see Gilbert, & Zemore, 2016). Because only a paucity of studies have examined the combined impact of racial and sexual minority stressors on health, there exists very limited etiological knowledge to develop evidence-based interventions to address problematic drinking

in these marginalized populations. A key goal of the current study was to address this limitation via the examination of the concurrent effects of both racial and sexual minority stressors on problematic drinking, thus providing a more valid model for how minority stress is related to problematic drinking.

Minority Stress and Intimate Partner Violence

Interpersonal violence is a significant cause and effect of a host of other health, behavioral, and social problems, including acquisition of sexually transmitted diseases (e.g., HIV), asthma, irritable bowel syndrome, diabetes, high blood pressure, alcohol and drug addiction, depression, suicide, school dropout, unemployment, and relationship difficulties (WHO, 2014). Thus, interpersonal violence is a major public health problem that sits at the intersection of many other health problems. Because of this, interpersonal violence has been studied as a causal factor for a range of outcomes, including mental health (e.g., depression, anxiety), physical health including both immediate injury and long-term physical health problems including cancer and diabetes (Campbell et al., 2002; Felitti et al., 1998; Gilbert et al., 2009), and behavioral health including drug use and delinquency (Widom, Schuck, & White, 2006). Interpersonal violence has also been studied as a consequence of poverty, sexual risk behavior, and relationship conflict, among others.

Similarly, research has consistently documented the negative health consequences of a particular type of interpersonal violence, intimate partner violence (IPV) (Bonomi, Anderson, Rivara, & Thompson, 2007; Campbell & Lewandowski, 1997). However, IPV within sexual minority relationships (IPV-SM) has received considerably less attention from researchers. This is particularly problematic, as research suggests that sexual minorities use and experience IPV at higher levels than their heterosexual peers (Edwards et al., 2015; Edwards, Sylaska, & Neal,

2015). IPV has also been shown to have deleterious health effects in sexual minority relationships. A recent meta-analysis on same-sex IPV and health outcomes revealed positive associations between IPV perpetration and victimization and substance use, HIV status, depressive symptoms, and risky sexual behaviors (Buller et al., 2014).

Despite its critical public health implications, there are a paucity of studies which examine the relation between minority stress and IPV-SM. One of the most comprehensive reviews on the topic so far delineated the links between specific types of minority stressors and IPV perpetration and victimization (Edwards et al., 2015). For example, the review found that being "out" was associated with an increased risk for physical and psychological IPV victimization in gay and bisexual men (as cited from Bartholomew, Regan, Oram, & White, 2008). Additionally, internalized homophobia was found to be uniquely associated with IPV perpetration (Bartholomew et al., 2008; Edwards & Sylaska, 2013). Relatedly, research has found that internalized homophobia and heterosexist discrimination were associated with physical and sexual IPV victimization in sexual minority women (Balsam & Szymanski, 2005), and the very expectations of heterosexist discrimination and prejudice were linked to both IPV perpetration and victimization (Carvalho et al., 2011).

The extant research shows compelling evidence for the association between minority stress and IPV-SM. However, this literature generally fails to account for the effect of racial minority stressors. This is a problem because there is evidence that racial minorities may experience higher levels of both IPV perpetration and victimization than Whites (Langhinrichsen-Rohling, Misra, Selwyn, & Rohling, 2012). Additionally, non-White sexual minorities have also been found to be at an increased risk for IPV victimization (Reuter, Newcomb, Whitton, & Mustanski, 2017; Whitton, Newcomb, Messinger, Byck, & Mustanski,

2019). Tragically, IPV victimization in sexual minorities of color has also been linked to a variety of negative health outcomes (Dyer et al., 2012). This suggests that there are mechanisms unique to non-white sexual minorities that also influence risk trajectories for IPV. Unfortunately, how these mechanisms interplay with risk processes regarding alcohol use in sexual minorities remains understudied. This study aimed to elucidate these mechanisms by examining how racial and sexual minority stressors concurrently impact the risk for IPV-SM victimization and perpetration.

Integration of Extant Literature

Research indicates that minority stress contributes to a syndemic of health disparities among sexual minorities, which in turn contributes to disproportionate rates of both alcohol use and intimate partner violence (Lewis et al., 2012). Given the vast intersection between violence and other health problems, understanding the pathways that link minority stress and both alcohol use and intimate partner violence is paramount to being able to develop interventions that ameliorate these myriad health disparities. Unfortunately, the majority of studies of LGBT couples – particularly those couples that tend to experience conflict – do not assess alcohol use. This is a problem because heavy alcohol use is a contributing cause of intimate partner violence perpetration (Parrott & Eckhardt, 2018) and increases risk of IPV victimization (Reed, Amaro, Matsumoto, & Kaysen, 2009). Similarly, IPV is also associated with alcohol use in sexual minorities (for a review, see Buller et al., 2014). Thus, understanding how the link between minority stress and both alcohol use and intimate partner violence functions within same-sex relationships is essential to developing valid and culturally sensitive IPV interventions.

Recent work has provided empirical support for a model linking together minority stress, alcohol use, and IPV perpetration (Lewis, Mason, Winstead, & Kelley, 2017). The authors found

that experiences of discrimination were associated with internalized homophobia, which in turn was associated with anger. The experience of anger was positively associated with alcohol use and relationship dissatisfaction, which were then associated with heightened levels of psychological IPV perpetration. In turn, psychological IPV perpetration was then positively associated with physical IPV perpetration. This is one of the most integrative models currently in the literature and it should be lauded for modeling the effects of both alcohol use and intimate partner violence in sexual minorities. However, it is still limited by only examining minority stress due to sexual orientation. The present study addressed this gap in the broader literature by integrating both sexual and racial minority stressors, and modelling their effects on problematic drinking as well as IPV perpetration and victimization.

Employing an Intersectional Framework: A Multiple Minority Stress Model

Intersectionality in social science research is a theoretical framework which posits that individuals with multiple marginalized identities (e.g., Black women) face unique challenges different from individuals with one or no marginalized identities (Crenshaw, 1991). For example, research has shown that while racial minority LGB individuals experience similar amounts of heterosexism as their White peers, they also experience significant amounts of racism, which affects their ability to cope (Meyer, Schwartz, & Frost, 2008). Additionally, recent literature documents that sexual minorities of color experience discrimination from *within* the sexual minority community, meaning they have fewer spaces where they can be truly safe from discrimination (Balsam, Molina, Beadnell, Simoni, & Walters, K., 2011). Although the theoretical framework of intersectionality originally focused on the marginalization of Black women at the intersection of race and gender, it has since been expanded to help organize

research and practice that seeks to understand how experiences relating to intersecting identities affect health (Bowleg, 2012).

In recent years, research has shown that individuals with multiple marginalized identities have worse health outcomes than individuals with only one marginalized identity (Kim, Jen, & Fredriksen-Goldsen, 2017; Pérez, Gamarel, van den Berg, & Operario, 2018; Rountree, Granillo, & Bagwell-Gray, 2016; Toomey, Huynh, Jones, Lee, & Revels-Macalinao, 2017). Some research has also examined the effects of minority stress within an intersectional framework. One study that analyzed data from 912 gay and bisexual Latino men in the United States showed that the combined effects of both discrimination due to race and sexual orientation explained a greater share of the variance in negative health outcomes than separately analyzing either form of discrimination (Díaz, Ayala, Bein, Henne, & Marin, 2001). Another study examined whether the number of social statuses to which discrimination was attributed predicted discrepancies in negative mental health outcomes. The results showed that people with three marginalized social statuses (e.g., Black sexual minority women) reported more negative mental health outcomes than people with two marginalized social statuses (e.g., Black sexual minority men or White sexual minority women) (Calabrese, Meyer, Overstreet, Haile, & Hansen, 2015).

Most research to date on intersectionality and minority stress has focused on broad mental and physical health outcomes; in contrast, very little research has examined how experiencing minority stress due to both race and sexual orientation affect specific health outcomes such as alcohol use and IPV-SM. In regards to alcohol use, some research has found that that Black and Hispanic sexual minorities experience more alcohol problems than their heterosexual counterparts (Cochran, Mays, Alegria, Ortega, & Takeuchi, 2007; Hughes, Matthews, Razzano, & Aranda, 2002). Additionally, studies indicate that discrimination based on

one's racial identity is a better predictor of problematic drinking than discrimination based on one's sexual minority identity (Bianchi, Zea, Poppen, Reisen, & Echeverry, 2004; Thoma, & Huebner, 2013). Similarly, research has found that sexual minority women of color are at greater risk for substance use problems compared to *both* heterosexual women of color and White sexual minority women (Mereish & Bradford, 2014). One of the most comprehensive studies on the topic found support for an integrative model that mapped the associations between minority stress, race, and problematic drinking. They found that Black Lesbian women endorsed higher rates of problematic drinking than White lesbian women (Lewis, Mason, Winstead, Gaskins, & Irons, 2016). However, other researchers have found little or no differences in problematic drinking between White and Black lesbians (Hughes, et al., 2006). These mixed results only highlight the need for more research on populations with multiple marginalized identities.

In the same vein, very few published studies have used an intersectional approach to examine the relation between minority stress and IPV-SM, despite evidence that non-White sexual minorities also evidence higher rates of IPV than White counterparts (Reuter et al., 2017; Whitton et al., 2019; Wu et al., 2015). For instance, one study found that discrimination based on racial identity and sexual minority identity were independently associated with a higher risk of IPV victimization (Finneran & Stephenson, 2014). A subsequent study reified these results, but also found that only discrimination based on sexual minority identity, and not racial identity, was associated with IPV perpetration (Stephenson & Finneran, 2017). These mixed results again signal the need to include all of these factors into a single, integrative model.

Weaknesses in the Rigor of Prior Research on Intersectionality

While the results of these studies provide great insight into how multiple oppressed identities affect health, there are also notable limitations. Firstly, even within studies employing

an intersectional approach, there is a tendency to use identity categories as predictors of negative health outcomes. While racial categories may capture much of the differences between people, the minority stress framework (Meyer, 1995, 2003) posits that it is the *experiences* associated with marginalized identities – *not the identities themselves* – that lead to negative health outcomes. Because of this, it is essential to move away from using racial categories as proxies of minority stress and, instead, measure the actual mechanisms (e.g., minority stress) that are accounting for the outcomes.

Secondly, most of the extant research on the topic utilizes an *additive approach* to multiple identities, which has been criticized for privileging some identities over others (Bowleg, 2008, 2012). Many researchers have historically hypothesized that with each marginalized identity a person possesses, there is an increase in the negative effects of minority stress. For example, an additive approach would hypothesize that black lesbian women would have more depression than black heterosexual women. While this is a parsimonious approach that intuitively fits nicely within the minority stress framework, additive approaches tend to conceptualize people's experiences as separate, independent, and unrelated to each other (Cuadraz & Uttal, 1999). Conversely, an intersectional approach would argue that experiences associated with marginalized identities are better understood in combination, as the category "Black" does not fully capture important differences between Black men and women" (Kertzner, Meyer, Frost, & Stirratt, 2009). Consistent with this, intersectionality scholars have called for more research attention on protective factors associated with the identities. Group identification specifically, has been found to buffer the effects of discrimination on LGB people of color (LGB POC) (Ramirez-Valles, Fergus, Reisen, Poppen, & Zea, 2005).

Despite the limitations, scholars have argued that additive models offer valuable information about the experiences of multiply marginalized people, and thus can be consistent with an intersectional framework (Reisen, Brooks, Zea, Poppen, & Bianchi, 2013; Else-Quest, & Hyde, 2016). Similarly, multiple scholars have advocated for a "both/and" approach to studies wishing to incorporate an intersectional framework (Bowleg, 2008, Shileds, 2008); that is, incorporate *both* additive *and* intersectional approaches to quantitative data analysis. Consistent with this, researchers have also advocated for the use of more complex structural equation models to examine the unique and shared effects of multiple identities and experiences (DeBlaere, Brewster, Sarkees, & Moradi, 2010). Despite the ongoing debate on best practices in intersectional methodology, the literature on intersectionality in sexual minorities of color highlights both the complexity of using an intersectional framework and how considering intersectionality has the potential to add new information that reframes the way researchers conceptualize traditional risk mechanisms. This process is essential if we are to develop efficacious interventions.

The Proposed Study

Primary Hypotheses. In light of the aforementioned gaps in the literature, the aim of the current study was to utilize an intersectional approach to examine models that integrate the concurrent effects of both racial and sexual minority stressors on three outcomes: problematic drinking, IPV perpetration, and IPV victimization. Specifically, this study (a) modeled a "Multiple Minority Stress" factor which incorporates both racial and sexual minority stressors, and then (b) modeled its association with problematic drinking, IPV perpetration, and IPV victimization. This approach allowed for the examination of how minority stress due to one's racial and sexual identity uniquely impacts the three outcomes, after accounting for their shared

variances. **As such, the primary hypothesis was that multiple minority stress will be positively associated with problematic drinking, IPV perpetration, and IPV victimization** (see Figure 1).

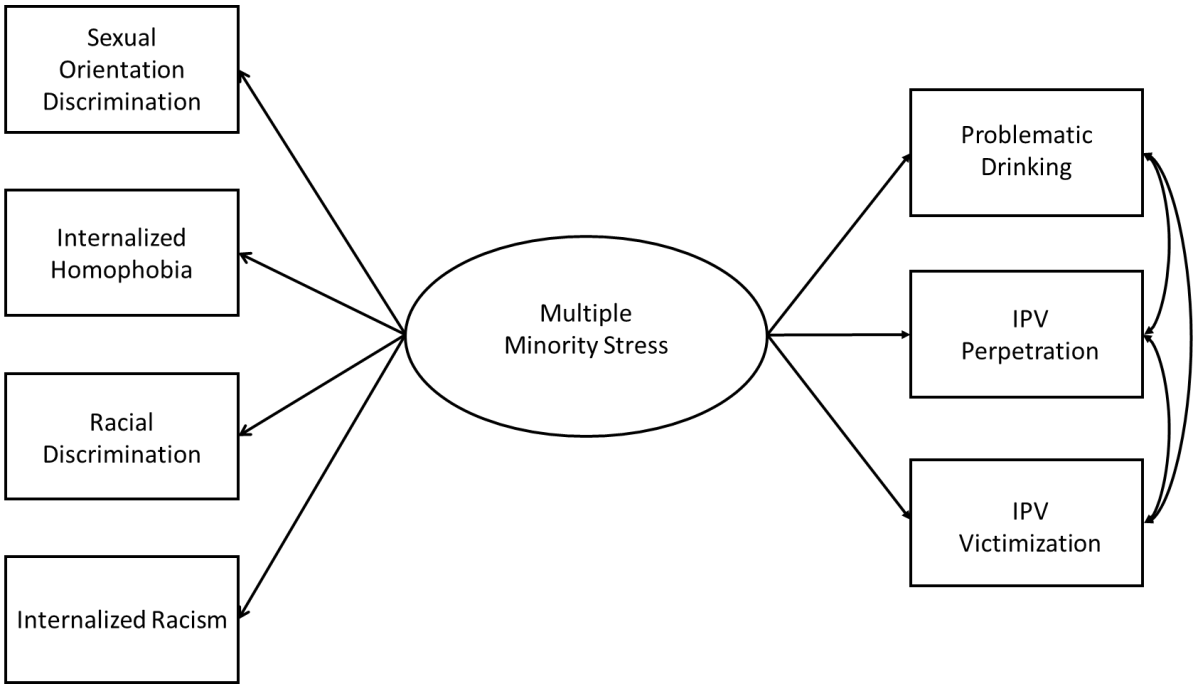

Figure 1. Hypothesized model of multiple minority stress, problematic drinking, IPV perpetration and IPV victimization.

Additionally, because of the dearth of rigorous studies that simultaneously examine the effects of racial and sexual minority stress on health outcomes, we also incorporated an additive approach that modeled how each minority stressor was **uniquely** associated with the three outcomes. Although this additive approach is subject to limitations of past research on intersectionality reviewed above (e.g., unable to estimate parameters for the effects of multiple minority stress on outcomes), the information gained from examination of unique effects may yield valuable information about the multiple oppressive experiences of LGB POC. Specifically, this explicated model provided valuable information on the relative strength of the associations

between sexual versus racial minority stressors on these outcomes. Although there is not enough literature to inform more specific hypotheses about the relative strength of certain paths, minority stress theory would suggest that minority stressors lead to negative health outcomes. **Thus, we hypothesized that sexual and racial minority stressors will be positively associated with problematic drinking, IPV perpetration, and IPV victimization** (see Figure 2).

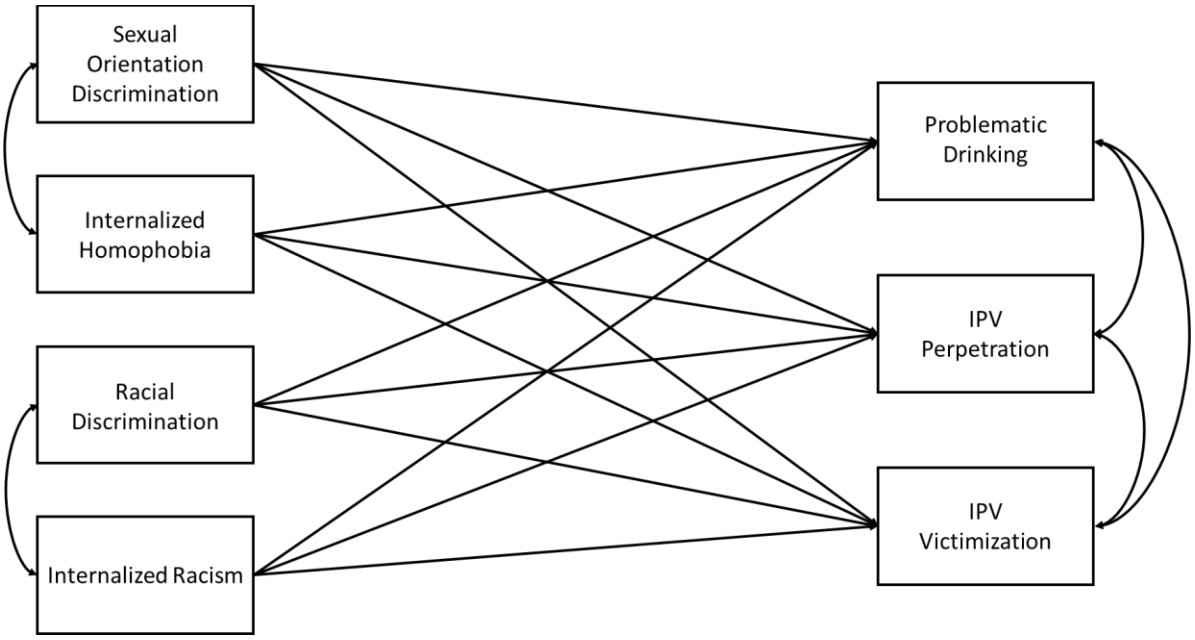

Figure 2. Hypothesized model of four minority stressors, problematic drinking, IPV perpetration and IPV victimization.

Finally, it is well-established that alcohol use is a proximal antecedent to IPV perpetration and victimization (Parrott & Eckhardt, 2018). Consistent with this literature, prior work with lesbian women indicates that minority stressors are associated with IPV perpetration and victimization via higher levels of alcohol use (Lewis, et al., 2017). Additionally, this model incorporated results from preliminary studies suggesting that discrimination could be an antecedent to internal minority stress (Feinstein, Goldfried, & Davila, 2012; Graham, West, Martinez, & Roemer, 2016). Given this literature, the present study tested a model that specified

indirect pathways between discrimination, internalized minority stress, problematic drinking, and IPV perpetration and victimization. **Specifically, it was hypothesized that discrimination would be associated with IPV perpetration and victimization through an indirect sequential pathway comprised of internalized minority stress and problematic drinking** (see Figure 3).

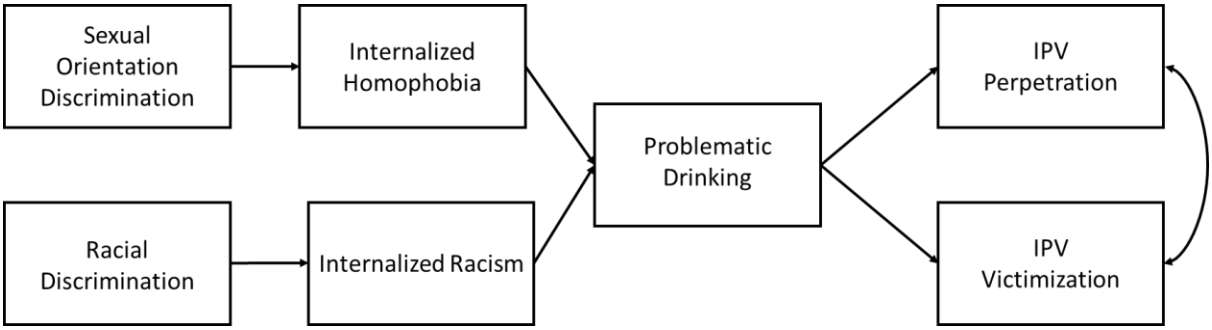

Figure 3. Indirect pathways from external minority stress and IPV through internal minority stress and alcohol use.

Exploratory Analyses

Because there is a paucity of rigorous research that examines sexual and racial minority stressors concurrently, the present study tested the incremental validity of including multiple types of minority stressors by also analyzing the relative model fit of two additional separate models. One model examined the effects of sexual minority stressors (sexual orientation discrimination and internalized homophobia) on the outcomes (see Figure 4), and another model examined the effects of racial minority stressors on the outcomes (see Figure 5). Then, analyses were conducted to determine whether constricting the model to include both sexual and racial minority stressors (Figure 2) demonstrated relatively better fit than models examining them separately.

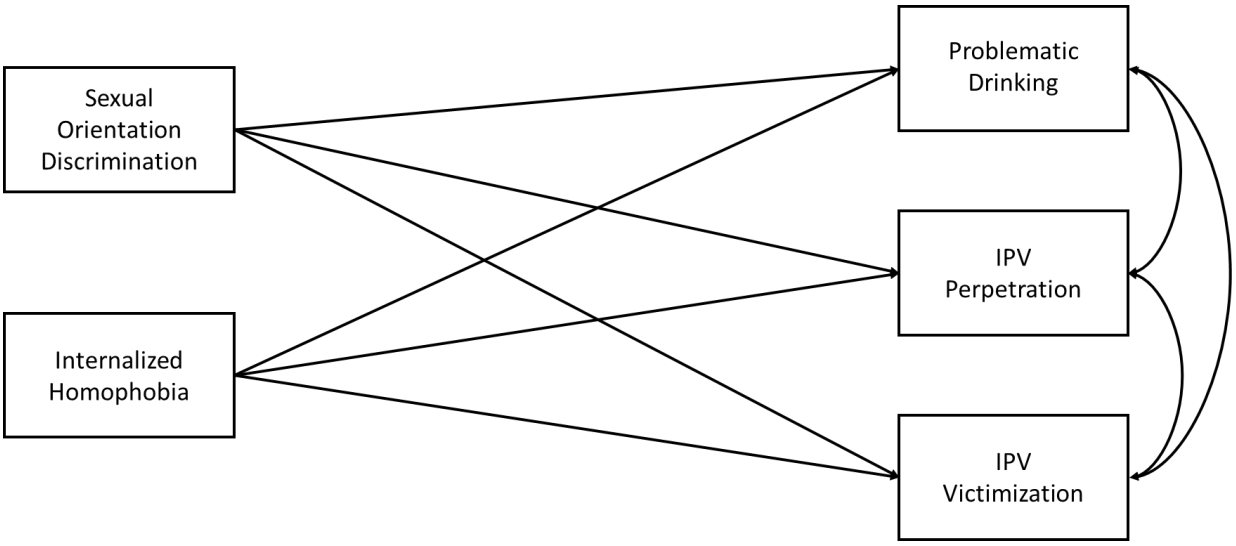

Figure 4. Hypothesized model of sexual minority stress, problematic drinking, and IPV.

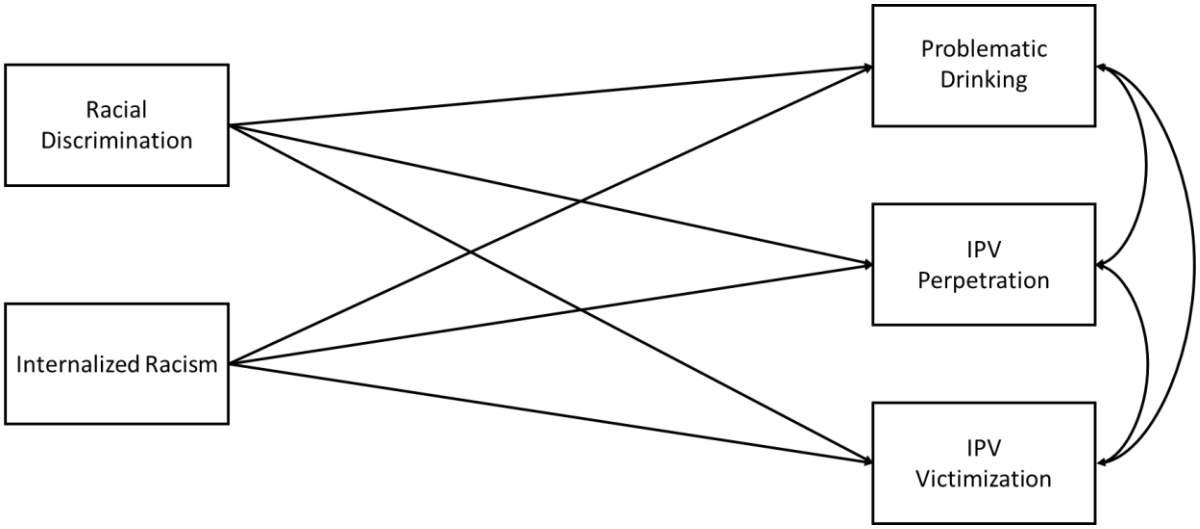

Figure 5. Hypothesized model of racial minority stress, problematic drinking, and IPV.

Additionally, this study examined how associations in these models changed between three different forms of aggression: physical, psychological, and sexual. After the initial analyses, all models were recomputed separately for these three forms of aggression to examine how minority stressors affect different forms of IPV.

Methods

Participants

A Monte Carlo simulation power analysis was conducted in Mplus version 8.1 (Muthén & Muthén, 1998-2017). To estimate the number of participants needed to have 80% power to detect significant effects on the three primary outcome variables utilizing the four predictor variables, data were simulated using conservative social science estimates of effect size (Goldbach et al., 2014; Carvalho et al., 2011; $d = .20$). The simulations were replicated 100,000 times to stabilize the effects and were estimated utilizing a robust maximum likelihood estimator, which accounts for non-normality and missing data. These simulations estimated that 198 participants were necessary to obtain significant effects ($p =< .05$) of each predictor on each outcome simultaneously in one model.

All participants were collected using Prime Panels from CloudResearch (https://www.cloudresearch.com/products/prime-panels/). Research has shown that data collected form online platforms (such as Mturk and Facebook) tend to be as reliable and of similar quality to data collected from traditional samples (Buhrmester, Kwang, & Gosling, 2016; Kosinski, Matz, Gosling, Popov, & Stillwell, 2015). In order to be contacted for participation by the panel service, participants had to meet the following eligibility criteria: 1) identify as a sexual minority, 2) identify as cisgender, 3) identify as an ethnic or racial minority, 4) be 18 years or older, 5) report consuming alcohol an average of at least two times per month during the past 12 months, and 6) report being in a romantic relationship for at least one month within the past year, where they saw their partner face-to-face at least 2 days per week. This method resulted in 349 eligible participants, which suggested we were highly powered to detect the hypothesized effects.

Materials

Demographics Questionnaire. Participants were asked to specify their age, education level, race, ethnicity, sex assigned at birth, gender identity, sexual orientation, and income. Additionally, participants reported on their current relationship status and length of current relationship.

Intimate partner violence (IPV). IPV perpetration and victimization were assessed with the Sexual and Gender Minority Conflict Tactics Scale (SGM CTS-2; Dyar et al., 2019), which is a modified version of the Conflict Tactics Scale 2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996), validated for sexual minority populations. The SGM CTS-2 contains 78 items that measure a range of behaviors that may be used during disagreements within intimate relationships. Participants are instructed to indicate on a seven-point scale how many times they have perpetrated or experienced the listed behaviors over the past 6 months using the following scale: 0 *(never*), 1 (*once*), 2 (*twice*), 3 (*3-5 times*), 4 (*6-10 times*), 5 (*11-20 times*), 6 (*more than 20 times*), and 7 (*not in the past 6 months, but it did happen before*).

For the purposes this study, total perpetration and total victimization as well as subscale (physical, psychological, sexual) scores were computed using the "variety" scoring method. This method codes each item as 0 if it did not occur in the past year, and 1 if it did occur, regardless of frequency. The individual item scores are then summed to create subscales. This scoring method has been found to produce good internal consistency and reduce non-normality (Shorey, Brasfield, Febres, Cornelius, & Stuart, 2012). Cronbach's alpha's for the total and subscale scores ranged between .83 and .97, which was consistent with the validation study ($\alpha = .92$).

Problematic drinking. Problematic drinking was assessed with the Alcohol Use Disorder Identification Test (AUDIT, (Babor, Biddle-Higgins, Saunders, & Monteiro, 2001). The AUDIT

is a 10-item Likert-type scale developed to measure harmful patterns of alcohol consumption. Participants rate items on a 0 to 4 scale. A sum score was computed across the 10-items, with higher scores indicative of greater problematic drinking. Sample items include "how often during the past year have you failed to do what was normally expected of you because of drinking," and "How often do you have a drink containing alcohol." The AUDIT displayed high internal consistency in the current sample ($\alpha = .89$).

Sexual Orientation Discrimination. Sexual orientation discirmination reflects participant's external sexual minority stress, and was assessed with the Sexual Orientation Discrimination scale developed by Krieger, Smith, Naishadham, Hartman, and Barbeau, (2005) and adapted for sexual orientation discrimination by McCabe et al. (2019). This self-report measure assesses nine settings where respondents may have experienced discrimination because they were assumed to be a sexual minority (i.e., at school, applying for a job, at work, getting housing, getting medical care, getting service in a store or restaurant, getting credit, bank loans, or a mortgage, on the street, and from the police). Responses range from 0 ("Never") to 3 ("Very Often"), with higher scores reflecting higher levels of sexual orientation discrimination, and by extension higher levels of sexual minority stress. A mean score was computed from the nine domains. Alpha reliability has ranged from .80 to .89 in recent studies (McCabe et al., 2017; Ruan et al., 2008) and was .90 in the current sample. This scale very closely mirrors the Experiences of Discrimination measures for racial discrimination (see below).

Internalized Homophobia. Internalized homophobia reflects participant's internal sexual minority stress, and was assessed with the Revised Internalized Homophobia scale (IHP-R). The IHP-R is a 5 item Likert-type scale developed to measure respondents' attitudes towards their own sexual orientation (Herek, Gillis, & Cogan, 2009). Item responses range from 1 ("Disagree

Strongly") to 5 ("Agree Strongly"), with higher scores reflecting higher levels of internalized homophobia. Sample items include "I wish I weren't lesbian/bisexual [gay/bisexual]" and "I have tried to stop being attracted to women [men] in general." Internal reliability for the 5-item IHP-R scale was .90 for men and α = .91 from women in the current sample.

Racial Discrimination. Racial discrimination reflects participant's external racial minority stress, and was assessed with the Experiences of Discrimination scales developed by Krieger et al. (2005). Items assess the frequency in which respondents experienced discrimination because of their racial/ethnic identity in nine domains (see above). Responses range from 0 ("Never") to 3 ("Very Often"), with higher scores reflecting higher levels of racial discrimination. A mean score was computed from all nine domains, and reliability was α = .85 in the current sample, which is fairly consistent with the standardization sample (.74-.86).

Internalized Racism. Internalized racism reflects participant's internal racial minority stress, and was measured with the Appropriated Racial Oppression Scale (AROS, Campón & Carter, 2015). The AROS is a 24-item, Likert scale that assesses internalized racism in people of color on a scale from 1 ("Strongly Disagree") to 7 ("Strongly Agree"). Some example items include "There have been times when I have been embarrassed to be a member of my race" and "I don't really identify with my racial group's values and beliefs." A mean score was computed across the 24 items, with higher mean scores indicative of higher levels of internalized racism. The mean score displayed good internal consistency α = .96, which is slightly better than the consistency reported in the standardization sample (α = .70-.86).

Group Identification. Because increased group identification has the potential to attenuate the relationship between minority stress and problematic drinking /intimate partner violence, we included group identification as a covariate in hypothesized models. Group

identification was measured using the Collective Self-Esteem Scale (CSES, Luhtanen, & Crocker, 1992). The CSES is a 16-item Likert-type scale that assesses group membership and identification. Responses range from 1 (“Strongly Disagree”) to 7 (“Strongly Agree”) and feature items such as “the social groups I belong to are an important reflection of who I am.” The 16 items were averaged to create a mean score, with higher scores reflecting a stronger identification with social groups. The study sample displayed good internal consistency (α = .81), which is consistent with the standardization sample (α = .85-.88).

Procedures

All participation was entirely online. Respondents were first directed to an informed consent page, where they could indicate their consent to participate in the study. They then completed an eligibility screener to ensure they meet study inclusion criteria. Eligible participants were directed to the questionnaire battery which contained demographics questions and validated measures of racial and sexual minority stress, intimate partner violence, and problematic drinking. Participants took an average of 82 minutes to complete the survey, and were compensated for their time by the platform through which they entered the survey.

Analytic Plan

To test all hypothesized models, we used Structural Equation Modeling (SEM) using Mplus v8.1 (Muthén & Muthén 1998-2017). This method allowed for estimation of multiple effects on the outcomes while controlling for measurement error. It also allows us to estimate a latent factor for the first model (Multiple Minority Stress). Missing data was handled through full information maximum likelihood estimation. The model fit for all models was evaluated using the recommended cutoffs of .95 for CFI, .06 for RMSEA, and .08 for SRMR (Hu & Bentler, 1999). For models with acceptable fit, significance testing will be done using a robust estimator

(MLR), which is robust to non-normality and missing data. Because indirect effects are inherently non-normal, we examined the direct and indirect pathways in Model 3 using 95% bias-corrected confidence intervals generated from 5,000 bootstrap samples. Lastly, collective self-esteem was included as a covariate in each model. This was done to account for the effect of group identification on the impact of minority stressors.

For secondary analyses of forms of aggression, separate scores for physical, psychological, and sexual aggression perpetration and victimization were computed from the SGM-CTS. All models were then recomputed separately for each of the three forms of IPV perpetration and each of the three forms of IPV victimization.

Results

Participant demographics are displayed in Table 1. On average, participants were approximately 31.4 years old and had an income between $40 and $50 thousand per year. More than half of the participants identified as Black of African American, and most participants identified as bisexual.

Table 1. *Demographics of Sample*

Variable	***n***	**%**
Race/Ethnicity*		
American Indian or Alaska Native	31	8.9
Asian	66	18.9
Black or African American	183	52.4
Hispanic of Latinx	104	29.8
Native Hawaiian or Pacific Islander	13	3.7
White	38	10.9
None of the above	15	4.3
Sex assigned at Birth		
Female	196	56.2
Male	153	43.8
Gender Identity*		

Man	151	43
Woman	199	57
Sexual Orientation*		
Bisexual	208	59.6
Gay or Lesbian	135	38.7
Heterosexual or Straight	2	0.6
Pansexual	22	6.3
None of the above	2	0.6
Current Relationship Status*		
Single	85	24.4
Dating Casually	125	35.8
Seriously Dating/Serious Relationship(s)	107	30.7
Engaged	6	1.7
Married/Domestic Partnership	65	18.6
None of the above	5	1.4
Education		
Less than High school	5	1.4
High School Graduate/G.E.D.	102	29.2
Associates Degree/Certification	61	17.5
Bachelor's Degree	124	35.5
Master's Degree	45	12.9
Doctorate	12	3.4
Income		
$0-$5,000	10	2.9
$5,000-$10,000	11	3.2
$10,000-$20,000	27	7.7
$20,000-$30,000	34	9.7
$30,000-$40,000	38	10.9
$40,000-$50,000	35	10
$50,000-$60,000	45	12.9
$60,000-$70,000	56	16
$70,000+	93	26.6

Note. * indicates participates could select all that apply. This resulted in total percentages larger than 100.

Descriptive statistics and correlations are displayed in Table 2. Less than 1.5% of data were missing. 82.8% of the sample reported engaging in at least one act of IPV perpetration, while 83.9% reported experiencing at least one act of victimization. Participants reported an

average of 6.90 acts of IPV perpetration and 7.23 experiences of IPV victimization in the past year. Additionally, 80.7% of participants reported engaging in bidirectional violence (committing both perpetration and victimization), 5.2% reported unidirectional violence, and 14.1% reported not engaging in perpetration or experiencing victimization.

Table 2. *Correlations and descriptive statistics among study variables*

Measure	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Drinking (AUDIT)	1							
2. Internalized Racism (AROS)	.37*	1						
3. Internalized Homophobia	.45*	.60*	1					
4. Experiences of Discrimination: Race	.20*	.22*	.24*	1				
5. Experiences of Discrimination: Sexual Orientation	.34*	.33*	.35*	.67*	1			
6. IPV Perpetration	.53*	.51*	.52*	.29*	.44*	1		
7. IPV Victimization	.54*	.50*	.53*	.30*	.44*	.96*	1	
8. Collective Self Esteem	-.27*	-.46*	-.47*	-.09	-.18*	-.27*	-.29*	1
Mean	10.28	2.76	1.99	.68	.44	6.90	7.23	4.73
SD	8.19	1.36	1.09	.67	.67	8.69	8.88	.858
Min	0	1	1	0	0	0	0	1
Max	40	7	5	3	3	31	31	7.00

Note. * indicates significant at $p < .05$.

Primary Hypotheses

Model 1. One latent factor was constructed (Multiple Minority Stress) using four indicators: sexual orientation discrimination, internalized homophobia, racial discrimination, and internalized racism. The measurement model demonstrated poor fit ($\chi^2(2) = 114$, $p < .01$, CFI = .58, RMSEA = .40, SRMR = .12) which precluded further examination of associations between the latent factor and the outcomes. Further exploratory analyses are discussed below.

Model 2. Standardized and unstandardized estimates are shown in Table 3.

Table 3. *Standardized and unstandardized path estimates for Model 2*

Path	β	B	β 95% CI
Sexual Orientation Discrimination→Alcohol Use	**.23**	**2.80**	**[.09, .37]**
Sexual Orientation Discrimination→IPV Perpetration	**.27**	**3.49**	**[.13, .40]**
Sexual Orientation Discrimination→IPV Victimization	**.26**	**3.43**	**[.13, .39]**
Internalized Homophobia→ Alcohol Use	**.32**	**2.37**	**[.20, .44]**
Internalized Homophobia→ IPV Perpetration	**.27**	**2.17**	**[.15, .39]**
Internalized Homophobia→IPV Victimization	**.29**	**2.32**	**[.16, .41]**
Racial Discrimination→ Alcohol Use	-.06	-.71	[-.20, .08]
Racial Discrimination→ IPV Perpetration	-.01	-.07	[-.12, .10]
Racial Discrimination→ IPV Victimization	.01	.09	[-.10, .12]
Internalized Racism→Alcohol Use	.11	.70	[-.01, .24]
Internalized Racism →IPV Perpetration	**.26**	**1.64**	**[.14, .37]**
Internalized Racism→ IPV Victimization	**.25**	**1.61**	**[.13, .36]**

Note. Bold indicates significant at $p < .05$. Collective self-esteem was covaried with all predictors.

Significant relationships with small to moderate effect sizes were found for all predictor paths except for racial discrimination, which was not significantly associated with any of the three outcomes. Additionally, internalized racism was not associated with alcohol use, but was associated with IPV perpetration and victimization. The model explained 25% of the variance in drinking, and 39% of the variance in both IPV perpetration and victimization. Given that IPV perpetration and victimization exhibited unusually high covariance with each other (β = .90), the robustness of the effects was tested by running all of the models without perpetration and/or victimization. The effects remained consistently robust for all models, suggesting estimates for perpetration and victimization are valid.

Model 3. We examined direct and indirect pathways from external minority stressors (i.e., sexual orientation discrimination, racial discrimination) and internal minority stressors (i.e., internalized homophobia, internalized racism) on IPV perpetration and victimization through problematic drinking. Figure 6 displays the conceptual model, while Table 4 displays standardized estimates with bootstrapped and bias-corrected confided intervals.

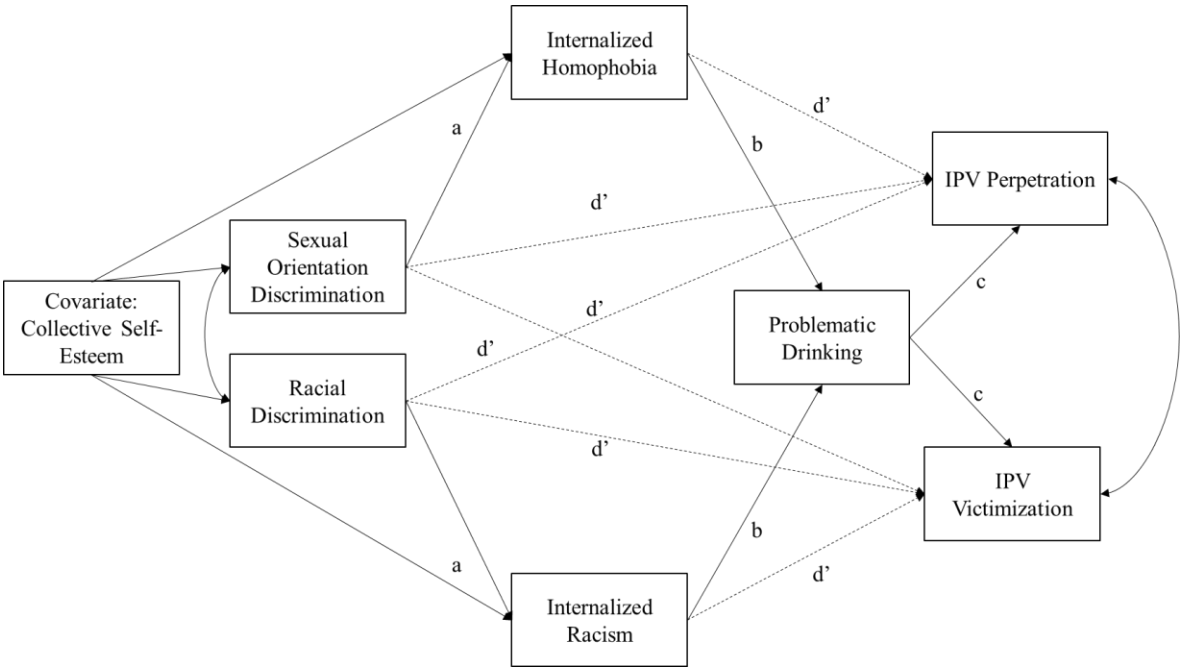

Figure 6. *Conceptual figure for Model 3 with direct and indirect paths specified.* $^{a, b,}$ *and* ^{c} *indicate indirect pathways, while* $^{d'}$ *indicates direct pathways*

Table 4. *Standardized and unstandardized path estimates for Model 3.*

	Internal Minority Stress		Problematic Drinking		IPV Perpetration			IPV Victimization		
Predictor	**β**	95% CI	**β**	95% CI	**β**	Indirect	95% CI	**β**	Indirect	95% CI
Sexual Orientation Discrimination	.36[a]	[.24, .44]	--	--	.21[d']	.11	[.06, .17]	.20[d']	.11	[.07, .18]
Racial Discrimination	.22[a]	[.10, .33]	--	--	.01[d'] (n.s.)	.06	[.03, .12]	.03[d'] (n.s.)	.06	[.03, .11]
Internalized Homophobia	--	--	.37[b]	[.25, .49]	.19[d']	.12	[.07, .18]	.21[d']	.12	[.07, .17]
Internalized Racism	--	--	.16[b]	[.03, .29]	.24[d']	.05	[.01, .10]	.22[d']	.05	[.01, .09]
Problematic Drinking	--	--	--	--	.31[c]	--	[.22, .41]	.31[c]	--	[.22, .41]

Note. [a, b,] and [c] indicate indirect pathways, while [d'] indicates direct pathways. (n.s.) indicates $p > .05$. Collective self-esteem was covaried with predictors.

All indirect paths (a, b, and c) were significantly and positively associated with the serial outcomes. Specifically, results indicated that external minority stress was positively related to internal minority stress, which was related to problematic drinking, which was then related to IPV perpetration and victimization. Moreover, the direct (*d'*) relationship between sexual orientation discrimination and IPV perpetration and victimization was mediated by increases in internalized homophobia and problematic drinking. Similarly, the direct relationships between both internalized homophobia and internalized racism and IPV were mediated by problematic drinking. Conversely, the direct relationships (*d'*) between racial discrimination and IPV perpetration and victimization were not statistically significant. The sexual minority stress variables (sexual orientation discrimination and internalized homophobia) displayed relatively stronger estimates of total indirect effects (.11, .12) than racial minority stress variables (.06, .05), suggesting larger effect sizes of mediation between sexual minority stress variables and IPV perpetration and victimization through internalized minority stress and problematic drinking.

Models 4 and 5. Estimates of comparative model fit (AIC & BIC) are displayed in Table 5.

Table 5. *AIC/BIC values for models containing only sexual minority stress, racial minority stress, or both.*

Model	AIC	BIC
Model 4: Sexual Minority Stress	7108.39	7200.91
Model 5: Racial Minority Stress	7353.18	7445.70
Model 2: Both Minority Stressors	8638.05	8793.11

Results indicated that a model of sexual minority stress (Model 4) fit the data better than one containing only racial minority stress (Model 5) or one containing both sexual and racial

minority stress (Model 2). Further comparisons of model fit are described below in "exploratory analyses."

Exploratory Analyses

Model 1a. Because the proposed intersectional construct of multiple minority stress (hypothesized Model 1) demonstrated poor model fit, exploratory analyses were conducted to examine if the addition of alternative measures of minority stressors and measurement structures would produce acceptable intersectional constructs of minority stress—consistent with an intersectional approach. Specifically, exploratory, post-hoc analyses tested whether the addition of five alternative measures of minority stress would reveal a better fitting model. The additional measures included the Daily Heterosexist Experiences Questionnaire (Balsam, Beadnell, & Molina, 2013), the Measure of Gay-Related Stress (Lewis, Derlega, Berndt, Morris, & Rose, 2002), the Internalized Stigma Questionnaire (Puckett, Newcomb, Ryan, Swann, Garofalo, & Mustanski, 2017), the Racism and Life Experiences Scale (Harrell, Merchant, & Young, 1997), and the LGBT People of Color Microaggressions Scale (Balsam et al., 2011). All nine minority stress indicators were included in an initial model, which was subsequently trimmed by removing poor fitting indicators until a tenable model was reached. Because collective self-esteem also negatively impacted the fit of the model, it was removed from the final model. Results revealed a two-factor model which displayed adequate fit (see Table 6). The two factors largely represented a nomothetical distinction between external and internal minority stressors and included both measures of sexual and racial minority stress.

Table 6. *Model fit indices.*

Model Name	χ^2	df	*p*	CFI	RMSEA	SRMR
Multiple Minority Stress (One Factor)	114	2	<.01	.58	.40	.12
Two Factor: Internal and External Minority Stress	81.53	28	<.01	.95	.07	.05

These two latent factors were then regressed onto the three outcomes. Results indicated that both internal and external minority stress were associated with problematic drinking, IPV perpetration, and IPV victimization, with external minority stress consistently exhibiting higher predictive power (see Figure 7). Similar to Model 2, the estimates for perpetration and victimization were robust when one outcome was removed. The model explained 30% of the variance in problematic drinking and 42% of the variance in IPV perpetration and victimization.

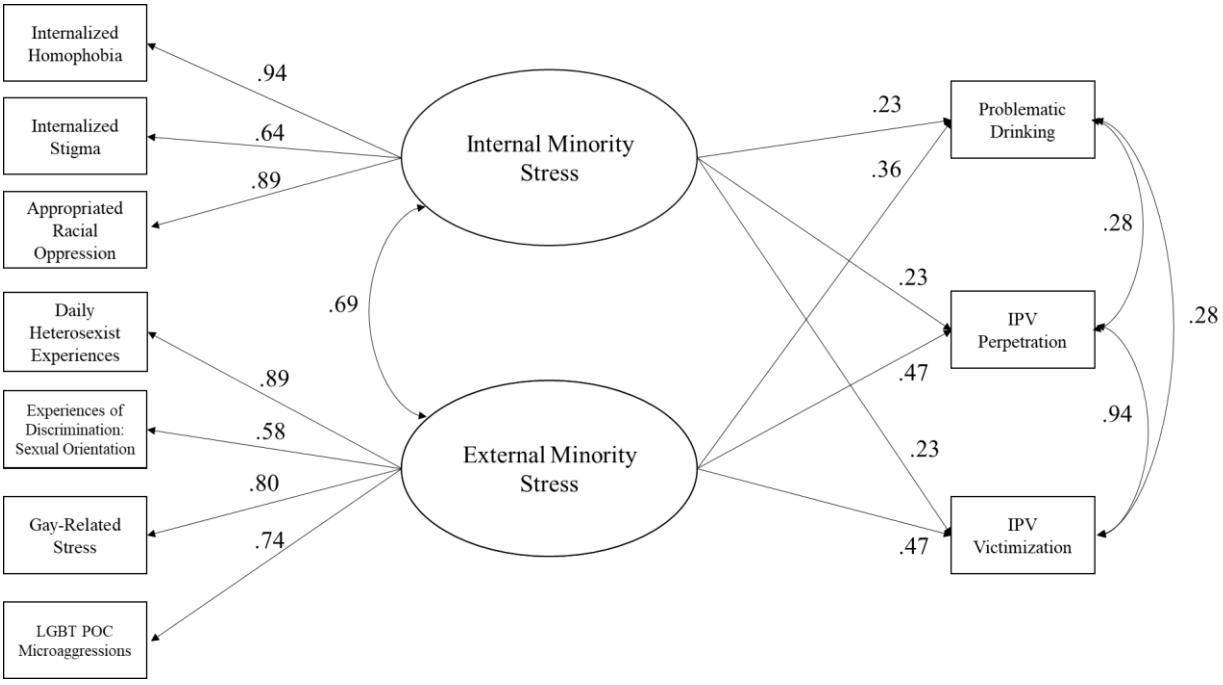

Figure 7. *Standardized estimates for two-factor model of multiple minority stress, problematic drinking, IPV perpetration, and IPV victimization.*

Forms of Aggression. Lastly, analyses sought to examine how minority stressors were differentially associated with the different forms of aggression. To do so, models 1a, 2 and 3 were replicated with physical, psychological, and sexual IPV perpetration and victimization substituted for the IPV outcomes (See Figures 8-10, and Tables 7-12 in appendix B). Table 13 also displays qualitative descriptions of associations for all forms of IPV.

Table 7. *Qualitative descriptions of relationship strength between minority stressors and outcomes.*

Minority Stressor	Moderate-Strong Relationship	Weak Relationship	No Relationship
Internal Minority Stress	Problematic Drinking Total Perpetration Total Victimization Physical Perpetration Physical Victimization Sexual Perpetration Sexual Victimization		Psychological Perpetration Psychological Victimization
External Minority Stress	Problematic Drinking Total Perpetration Total Victimization Physical Victimization Physical Perpetration Psychological Perpetration Psychological Victimization Sexual Perpetration Sexual Victimization		
Sexual Orientation Discrimination	Problematic Drinking Total Perpetration Total Victimization Internalized Homophobia Physical Perpetration Physical Victimization Sexual Perpetration Sexual Victimization	Psychological Perpetration Psychological Victimization	
Internalized Homophobia	Problematic Drinking Total Perpetration Total Victimization Physical Perpetration Physical Victimization Sexual Perpetration Sexual Victimization		Psychological Perpetration Psychological Victimization
Racial Discrimination	Internalized Racism	Psychological Perpetration Psychological Victimization	Problematic Drinking Total Perpetration Total Victimization Physical Perpetration Physical Victimization Sexual Perpetration Sexual Victimization

Internalized Racism	Total Perpetration Total Victimization Physical Perpetration Physical Victimization Psychological Perpetration Psychological Victimization Sexual Perpetration Sexual Victimization	Problematic Drinking

As seen in Table 13, there were many notable differences in the associations between the minority stressors and the different forms of IPV. Notably, external minority stress emerged as the most prolific predictor of negative outcomes, as it demonstrated moderate to large associations with all variables. In contrast, racial discrimination emerged as the least prolific predictor, as it was only moderately associated with internalized racism, and weakly associated with psychological perpetration and victimization.

Discussion

This study makes several notable contributions to the existing research on sexual minority health disparities. Firstly, this study was the first (to our knowledge) to model intersectional constructs inclusive of minority stressors related to race and sexual orientation. This approach was guided by an intersectional framework and revealed consistently stronger magnitudes of relationships than additive models. Secondly, this study elucidated the direct and indirect pathways between both sexual and racial minority stressors on IPV perpetration and victimization, through problematic drinking. This reifies not only the concomitant relationship between problematic drinking and IPV, but also the necessity to examine multiple domains of oppression when modeling these health outcomes in LGB POC. Third, this study examined the relative model fit of models including both racial and sexual minority stressors, versus models containing only one or the other. Lastly, this study also elucidated how minority stressors

differentially impact physical, sexual, and psychological perpetration and victimization. Collectively, results speak to the multidimensional nature of IPV and reveal how different minority stressors impact different domains of health in LGB POC.

Model 1: Intersectional constructs of minority stress

Results indicated that the originally hypothesized Model 1 ("Multiple Minority Stress") exhibited poor fit for the current sample. Informed by an intersectional framework, exploratory analyses further explored possible intersectional constructs of minority stress. Results supported a modified version of Model 1, which included sexual and racial minority stressors that coalesced onto two latent factors (internal and external minority stress). Both internal and external minority stress were associated with problematic drinking and most forms of IPV perpetration and victimization, with external minority stress consistently emerging as the strongest predictor of all outcomes. Crucially, modelling latent variables which included both sexual and racial minority stressors revealed stronger and more robust associations with the outcomes than when sexual and racial minority stressors were conceptualized separately (see Table 13); this suggests that the shared elements between sexual and racial minority stressors are essential determinants of LGB health. These findings bolster the case for incorporating the principles of intersectionality into research, as constructs guided by an intersectional framework exhibited relatively stronger predictive power on these behavioral health outcomes than examining minority stressors individually. These findings also elucidate the benefits of using advanced statistical techniques (e.g. SEM) to model shared elements between oppressive experiences, as these methods can produce more sophisticated information about how multiple oppressive experiences impact the health of LGB POC.

Given the relatively good fit of exploratory Model 1a, these results also suggests that there is a nomothetical distinction between internal and external minority stressors, which is consistent with the extant literature (Velez, Moradi, & DeBlaere, 2015). To date, this is the only study which has examined constructs of internal and external minority stress which include both racial and sexual minority stressors. Importantly, our analytic plan allowed us to detail the divergent relationships between internal and external minority stress and the outcomes. Although both internal and external minority stress were fairly consistent predictors of problematic drinking and forms of IPV perpetration and victimization, external minority stress in particular exhibited relatively stronger relationships with all outcome variables. In contrast, internal minority stress was not associated with psychological perpetration or victimization. One possible explanation for this discrepancy may be that the highly acute and salient nature of external minority stress more drastically depletes the inhibitory capacity necessary to regulate alcohol use and the proclivity to react to partner conflict with the use violence. While some research has found similar results (Balsam & Szymanski, 2005), more research in required to examine how internal and external minority stress—inclusive of multiple domains of oppression—differentially predict psychological perpetration and victimization.

Model 2: An additive approach to sexual and racial minority stressors

In addition to the intersectional constructs described above, this study also took an additive approach to conceptualization and data analysis. When minority stressors were examined independent of each other, results revealed consistently weak to moderate relationships with the outcomes. One notable exception was racial discrimination, which was only weak related to psychological perpetration and victimization, and exhibited no significant relationship with problematic drinking or other forms of perpetration/victimization.

These results are consistent with patterns seen in other studies which examine multiple domains of oppression, where only one domain of oppression exhibits statistical significance (Szymanski & Meyer, 2008; Szymanski & Gupta, 2009; DeBlaere, Brewster, Bertsch, DeCarlo, Kegel, & Presseau, 2014). Crucially, the lack of statistical significance in regards to the relationship between racial discrimination and problematic alcohol use and IPV does not imply that racial discrimination is not an important element of LGB health disparities. Instead, these findings suggest that the construct of perceived discrimination in LGB POC reflects an aggregate of racist, sexist, heterosexist, and other experiences of discrimination, an aggregate that is not always captured in additive models. This position is supported by the relative strength of relationships between an intersectional construct of external minority stress observed in Model 1a—which captures the shared variance between racial and sexual orientation discrimination—and the outcomes. All of this suggests that intersectional approaches to modelling multiple minority stress tap into more holistic experiences of oppression, potentially providing more valid information than traditional additive models. Moreover, the construct of external minority stress included a measure of LGBT people of Color specific microaggressions (Balsam et al., 2011), which tapped into other second-order intersectional constructs (racism from LGBT community, heterosexism from ethnic community). This farther bolsters the notion that not only is racial discrimination an important element of LGB health, but should be included in constructs containing multiple domains of oppression to truly elucidate sources of LGB health disparities.

Model 3: Direct and indirect effects of sexual and racial minority stress

To our knowledge, this is also the first study to directly examine the direct and indirect pathways form sexual and racial minority stressors on IPV perpetration through problematic drinking. Results from Model 3 revealed significant partial mediation effects of external and

internal minority stressors on IPV perpetration and victimization through problematic alcohol use. These direct and indirect effects largely followed patterns of significance and magnitude displayed in other study analyses (Model 2). Specifically, external minority stress (both sexual and racial) was related to internal minority stress, which was then related to problematic drinking, which predicted IPV perpetration and victimization.

For sexual minority stress, internalized homophobia and alcohol use partially mediated the relationship between sexual orientation discrimination and IPV perpetration/victimization. Additionally, problematic drinking also partially mediated the relationship between internalized homophobia and IPV perpetration and victimization, controlling for sexual orientation discrimination. For racial minority stress, racial discrimination was not directly related with any outcomes except for internalized racism and psychological perpetration/victimization. Similar to the pathways revealed for sexual minority stress, however, problematic drinking did partially mediate the relationship between internalized racism and IPV perpetration/victimization.

Moreover, sexual minority stressors yielded on average larger indirect effects on IPV outcomes than racial minority stressors, which largely follows the pattern discussed above. These results additionally reify that alcohol use is an important mediator in the relationships between sexual minority stress and internalized racism on IPV perpetration and victimization, which is consistent with studies examining sexual minority stress and IPV (Lewis et al., 2017). Lastly, these results provide further evidence of links between external and internal minority stress as well as how these two constructs relate to behavioral outcomes. These findings contribute to a literature which has been characterized by mixed results (Velez et al., 2015). Taken together, these findings elucidate the pathways through which both sexual and racial minority stressors are related to IPV and highlight the need to study multiple domains of oppression concurrently.

Models 4 and 5: Incremental validity

This study also examined the incremental validity of including both racial and sexual minority stressors in the same model. The results indicated that a model including only sexual minority stressors exhibited better fit for these data than one including only racial minority stressors, or both. These results were unexpected, though they likely reflect the overall pattern of overlap between racial and sexual minority stress seen in this study and in the broader literature. These results again highlight the benefits of incorporating intersectional approaches to quantitative analyses, as Model 1a provided stronger and more robust estimates of minority stressors than additive models. Moreover, when analyzed individually, all final models presented in this study exhibited good to adequate fit; this suggests that the superior fit of the sexual minority stress only model may reflect the limitations of using the AIC and BIC as indices of relative fit (Merkle, You, & Preacher, 2016), as opposed to an actual superiority of fit.

Forms of aggression analyses

The final set of analyses included re-examining all models with physical, sexual, and psychological IPV perpetration outcomes. To our knowledge, this is also the first study that has explicitly examined the relationship between minority stressors and IPV perpetration and victimization across physical, psychological, and sexual forms of aggression. Doing so revealed crucial differences between the forms of aggression. Specifically, psychological perpetration and victimization diverged from other forms of aggression, and exhibited mostly weak to null relationships with minority stressors (with the exceptions of external minority stress and internalized racism). This suggests that psychological aggression may be nomothetically distinct from other forms of aggression, and thus exhibits different factors of risk. Future studies should consider examining psychological perpetration and victimization apart from other forms of

aggression, especially in the context of minority stress. As discussed above, external minority stress and internalized racism emerged as the most consistent predictors of all forms of aggression. This again bolsters the position that examining associations among multiple domains of oppression provides richer, more sophisticated, and more valid information than solely examining a single domain of oppression.

Limitations and Future Directions

Although this study provided much-needed information on minority stress (racial, sexual minority, and their shared elements) across both intersectional and additive approaches, and multiple forms of aggression, there some notable limitations. Firstly, and most glaringly, the study scope was limited to examination of minority stress across sexual and racial domains of oppression, thus neglecting to account for experiences of oppression related to gender, religion, socioeconomic status, disability, and immigration status, among others. The intersectional constructs described here would be strengthened from the inclusion of as many domains of oppression as possible. Unfortunately, including the number of minority stressors necessary in quantitative models to truly do justice to the experiences of LGB POC would require sample sizes that would be cost and time prohibitive. Despite this, we were surprised by how efficiently we were able to collect 349 LGB POC through a panel service, and future studies should consider the use of panel services to collect large samples of multiply-marginalized populations to study a variety of domains of oppression concurrently. Moreover, advanced statistical techniques such as planned missingness (Graham, Taylor, Olchowski, & Cumsille, 2006) could help lower the required sample sizes to run these analyses.

Second, this study utilized a cross-sectional design, and thus falls victim to all of the limitations of cross-sectional research. Future studies should incorporate longitudinal designs to

solidify the temporal relationships between internal/external minority stress, problematic drinking, and forms of IPV perpetration and victimization. Additionally, temporal examination of these constructs should strive to incorporate mediational path analysis of hypothesized mechanisms of problematic drinking and aggression (e.g. alcohol expectancies, anger, impulsivity, etc.). This would further the field by establishing robust temporal associations, and provide mechanistic targets for theory and intervention to help ameliorate LGB health disparities.

Third, the current sample exhibited high covariation between perpetration and victimization measures on all forms of aggression (between .80 and .94). At first glance, this may suggest that the present sample consisted of a higher-than-average proportion of individuals with a history of bidirectional IPV. However, this high covariation between perpetration and victimization is consistent with other research on IPV in sexual minority communities (Lewis et al., 2017) and heterosexual couples (Sprunger, Eckhardt, & Parrott, 2015), suggesting that the study sample reflects the highly inter-related nature of perpetration and victimization. Further research should examine levels of bidirectional IPV across numerous subgroups to further shed light on factors contributing to the inter-relatedness of perpetration and victimization.

Lastly, we posit here that SEM could help model intersectional constructs that are inclusive of multiple domains of oppression. While we make a distinction between intersectional and additive approaches in data analysis, we acknowledge that SEM shares many of the same limitations as additive approaches in regards to incorporating a truly intersectional framework. Specifically, our approach pooled together experiences related to singular identities, which can appear to counter the principles of intersectionality, which posit that individual's identities cannot be conceptualized in isolation of their other identities. Although we agree that our

approach contains additive elements, we maintain that it adds valuable information about LGB POC's experiences with multiple domains of oppression above and beyond traditional additive approaches. By modeling both the shared and unique elements of racial and sexual minority stressors, we incorporate a more complete picture of LGB POC's lived experiences; thus capitalizing on a "both/and" approach.

Because of these reasons, we maintain that our approach of modelling intersectional constructs is important to truly understanding LGB health. However, we also acknowledge that it is one approach among many that have been employed to elucidate health disparities in LGB people of color. Of note, more constructionist approaches common in qualitative methods have served as the cornerstone of intersectionality research, because they can offer more holistic information about LGB health than traditional quantitative approaches. Both constructivist and positivist approaches should continue to be explored and modified, particularly in the context of mixed methods designs, in the aim of providing more complete sophisticated information about LGB health. Consistent with these aims, future research should continue to experiment with advanced statistical techniques such as SEM and mixture modeling to provide more full and complete information about LGB health disparities, while also being guided by the principles of intersectionality.

Moreover, the theoretical underpinnings of SEM and confirmatory factor analysis as approaches conceptualize latent factors as naturally residing *within* individuals. Under this lens, latent constructs that contain external minority stressors (experiences of discrimination) attribute the cause of the minority stressors to be something within the individual. This can appear to be *victim-blaming*, as some might immediately notice the external minority stress indicators and conclude that an argument is being made that LGB people of color are "making up" their

experiences of oppression. Even worse, conclusions drawn under this lens may shift the focus of intervention away from systemic factors of racism and heterosexism, and towards individuals (e.g. attempts to stop LGB people of color from "perceiving" discrimination). Despite this, we posit that latent factors of external minority stressors nomothetically represent not simply constructs *within* individuals, but individual characteristics (sexual orientation, race, etc.) that make individuals targets of discrimination. Incorporating this conceptualization shifts blame away from individuals, maintains established definitions and theories of latent factors, and allows for the examination of internal states as well as their interconnectedness with systemic factors. Future research should continue to expand theories of structural models to make space for systemic factors in conjunction of individual ones.

Conclusion

The current study provides empirical support for a conceptual model defined by intersectional constructs of minority stress and their relation to problematic drinking and IPV. Crucially, this study delineates the multitude of benefits of incorporating an intersectional approach to quantitative research, while also taking a "both/and" approach via inclusion of additive models. This approach elucidates multiple permutations of relationships between sexual and racial minority stressors (both external and internal) and prominent health outcomes in LGB POC communities. This approach could be replicated with other domains of oppression, maximizing the potential for researchers to gain critical knowledge in the fight to ameliorate LGB health disparities. Additionally, this approach also highlights the differential relationships between minority stressors and different forms of IPV. This has the potential to provide a crucial first step to translating research into clinical practice by tailoring preventative intervention to individuals' unique experiences of minority stressors.

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APPENDICES

Appendix A: Measures

Demographics Form

Age: _____

Years of Education including kindergarten: _____

How do you describe your race and/or ethnicity? (select all that apply)
___ American Indian or Alaska Native
___ Asian
___ Native Hawaiian or Other Pacific Islander
___ Black or African American
___White
___ Hispanic or Latino

How do you describe your gender identity?
_____Male
____Female
_____Transgender
____Do Not Identify as Male, Female, or Transgender

How would you describe your sexual orientation?
____Heterosexual or straight
____Gay or lesbian
____Bisexual
____Not Listed (please specify): _____

Are you currently in a relationship?

___Yes

___No

(if yes) How long have you been in this relationship?

_____years_____months

What is the gender identity of your current partner?
_____Male
____Female
_____Transgender
____Does Not Identify as Male, Female, or Transgender

(if no) How long ago was your most recent relationship?

____More than a year ago

____Between a year and 6 months ago

____Between 3 and 6 months ago

____Between 1 and 3 months ago

____Less than a month ago

How long did your most recent relationship last?:_____years___months

What is the gender identity of your most recent partner?

_____Male

____Female

_____Transgender

____Does Not Identify as Male, Female, or Transgender

(if current partner) On average, how many days per week do you see your current partner in person:

_____ 0 days per week
_____ 1 day per week
_____ 2 days per week
_____ 3 days per week
_____ 4 days per week
_____ 5 days per week
_____ 6 days per week
_____ 7 days per week

What is your average yearly income? (please check one).

___$0-$5,000
___$5,000-$10,000
___$10,000-$20,000
___$20,000-$30,000
___$30,000-$40,000
_____$40,000-$50,000
_____$50,000-$60,000
_____$60,000-$70,000
_____$70,000+

AUDIT

Instructions: Circle a response that best applies to you for each question.

1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have 6 or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	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?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse while drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
9. Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year

Appropriated Racial Oppression Scale

***Instructions*: This questionnaire is designed to measure people's social attitudes, beliefs, feelings and behaviors concerning race. There are no right or wrong answers---everyone's experience is different. We are interested in YOUR experiences with race. Be as honest as you can in your responses.**

1 Strongly Disagree	**2 Disagree**	**3 Disagree somewhat**	**4 Neutral**	**5 Agree Somewhat**	**6 Agree**	**7 Strongly Agree**

1. There have been times when I have been embarrassed to be a member of my race	1	2	3	4	5	6	7
2. I wish I could have more respect for my racial group	1	2	3	4	5	6	7
3. I feel critical about my racial group	1	2	3	4	5	6	7
4. Sometimes I have a negative feeling about being a member of my race	1	2	3	4	5	6	7
5. In general, I am ashamed of members of my racial group because of the way they act	1	2	3	4	5	6	7
6. When interacting with other members of my race, I often feel like I don't fit in	1	2	3	4	5	6	7
7. I don't really identify with my racial group's values and beliefs	1	2	3	4	5	6	7
8. I find persons with lighter skin-tones to be more attractive	1	2	3	4	5	6	7
9. I would like for my children to have light skin	1	2	3	4	5	6	7
10. I find people who have straight and narrow noses to be more attractive	1	2	3	4	5	6	7
11. I prefer my children not to have broad noses	1	2	3	4	5	6	7
12. I wish my nose were narrower	1	2	3	4	5	6	7
13. Good hair (i.e. straight) is better	1	2	3	4	5	6	7
14. Because of my race, I feel useless at times	1	2	3	4	5	6	7
15. I wish I were not a member of my race	1	2	3	4	5	6	7
16. Whenever I think a lot about being a member of my racial group, I feel depressed	1	2	3	4	5	6	7
17. Whites are better at a lot of things than people of my race	1	2	3	4	5	6	7
18. People of my race don't have much to be proud of	1	2	3	4	5	6	7
19. It is a compliment to be told "You don't act like a member of your race."	1	2	3	4	5	6	7
20. When I look in the mirror, sometimes I do not feel good about what I see because of my race	1	2	3	4	5	6	7
21. I feel that being a member of my racial group is a shortcoming	1	2	3	4	5	6	7
22. People of my race shouldn't be so sensitive about race/racial matters	1	2	3	4	5	6	7
23. People take racial jokes too seriously	1	2	3	4	5	6	7
24. Although discrimination in America is real, it is definitely overplayed by some members of my race.	1	2	3	4	5	6	7

EOD Racial Discrimination

Instructions: This next section is going to ask about how you and others like you are treated, and how you typically respond.

If you feel you have been treated unfairly, do you usually: (please select the best response)

1. Accept it as a fact of life
2. Try to do something about it

If you have been treated unfairly, do you usually: (please select the best response)

1. Talk to other people about it
2. Keep it to yourself

Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations ***because of your race, ethnicity, or color?***

(1) At school?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(2) Getting hired or getting a job?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(3) At work?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times

(4) Getting housing?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(5) Getting medical care?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(6) Getting service in a store or restaurant?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(7) Getting credit, bank loans, or a mortgage?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(8) On the street or in a public setting?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(9) From the police or in the courts?

a. Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

Worry Questions

(1) When you were a child or teenager (up to age 18), how much did you worry about people in your racial/ethnic group experiencing unfair treatment because of **their race, ethnicity, or color?**

a. Most of the time
b. Some of the time
c. Rarely or never

(2) When you were a child or teenager (up to age 18), how much did you worry about your experiencing unfair treatment because of **your race, ethnicity, or color**?

a. Most of the time
b. Some of the time
c. Rarely or never

(3) In the last year, how much did you worry about people in your racial/ethnic group experiencing unfair treatment because of **their race, ethnicity, or color?**

a. Most of the time
b. Some of the time
c. Rarely or never

(4) In the last year, how much did you worry about your experiencing unfair treatment because of

your race, ethnicity, or color?

a. Most of the time
b. Some of the time
c. Rarely or never

Global Questions

(1) How often do you feel that racial/ethnic groups who are not white, such as African Americans and Latinos, are discriminated against? (choose the number that best represents how you feel)

a) Never
b) Rarely
c) Sometimes
d) Often

(2) How often do you feel that you, personally, have been discriminated against because of **your race, ethnicity, or color?** choose the number that best represents how you feel)

a. Never
b. Rarely
c. Sometimes
d. Often

Filed Complaint

Have you ever filed a formal complaint because of **racial** discrimination?

1. Yes
2. No

Day to day unfair

treatment

In your day-to-day life, how often have any of the following things happened to you due to your **race or ethnicity**?

(1) You have been treated with less courtesy than other people
a Four or more times b. Two or three times c. Once d. Never

(2) You have been treated with less respect than other people
a Four or more times b. Two or three times c. Once d. Never

(3) You have received poorer service than other people at restaurants or stores
a Four or more times b. Two or three times c. Once d. Never

(4) People have acted as if they think you are not smart

a Four or more times b. Two or three times c. Once d. Never

(5) People have acted as if they are afraid of you

a Four or more times b. Two or three times c. Once d. Never

(6) People have acted as if they think you are dishonest
a Four or more times b. Two or three times c. Once d. Never

(7) People have acted as if they're better than you are
a Four or more times b. Two or three times c. Once d. Never

(8) You have been called names or insulted
a Four or more times b. Two or three times c. Once d. Never

(9) You have been threatened or harassed
a Four or more times b. Two or three times c. Once d. Never

(10) You have been followed around in stores
a Four or more times b. Two or three times c. Once d. Never

EOD Sexual Orientation Discrimination

Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations ***because of your sexual orientation?***

(1) At school?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(2) Getting hired or getting a job?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(3) At work?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(4) Getting housing?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(5) Getting medical care?

aYes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(6) Getting service in a store or restaurant?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(7) Getting credit, bank loans, or a mortgage?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(8) On the street or in a public setting?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

(9) From the police or in the courts?

a Yes b. No

(If yes) How many times did this happen?

1. Once
2. Two or three times
3. Four or more times

Worry Questions

(1) When you were a child or teenager (up to age 18), how much did you worry about LGBT people experiencing unfair treatment because of their sexual orientation?

a. Most of the time
b. Some of the time
c. Rarely or never

(2) When you were a child or teenager (up to age 18), how much did you worry about you experiencing unfair treatment because of **your sexual orientation**?

a. Most of the time
b. Some of the time
c. Rarely or never

(3) In the last year, how much did you worry about LGBT people experiencing unfair treatment because of **their sexual orientation?**

a. Most of the time
b. Some of the time
c. Rarely or never

(4) In the last year, how much did you worry about you experiencing unfair treatment because of **your sexual orientation?**

a. Most of the time
b. Some of the time
c. Rarely or never

Global Questions

(1) How often do you feel that LGBT people are discriminated against? (choose the number that best represents how you feel)

a) Never
b) Rarely
c) Sometimes
d) Often

(2) How often do you feel that you, personally, have been discriminated against because of **your sexual orientation?** choose the number that best represents how you feel)

a. Never
b. Rarely
c. Sometimes
d. Often

Filed Complaint

Have you ever filed a formal complaint because of homophobic discrimination?

1. Yes
2. No

Day to day unfair

treatment

In your day-to-day life, how often have any of the following things happened to you due to your **sexual orientation**?

(11) You have been treated with less courtesy than other people
a Four or more times b. Two or three times c. Once d. Never

(12) You have been treated with less respect than other people
a Four or more times b. Two or three times c. Once d. Never

(13) You have received poorer service than other people at restaurants or stores
a Four or more times b. Two or three times c. Once d. Never

(14) People have acted as if they think you are not smart
a Four or more times b. Two or three times c. Once d. Never

(15) People have acted as if they are afraid of you
a Four or more times b. Two or three times c. Once d. Never

(16) People have acted as if they think you are dishonest
a Four or more times b. Two or three times c. Once d. Never

(17) People have acted as if they're better than you are
a Four or more times b. Two or three times c. Once d. Never

(18) You have been called names or insulted
a Four or more times b. Two or three times c. Once d. Never

(19) You have been threatened or harassed
a Four or more times b. Two or three times c. Once d. Never

(20) You have been followed around in stores
a Four or more times b. Two or three times c. Once d. Never

Response to Unfair treatment

How did you respond to this/these experience(s)? Please tell me if you did each of the following things.

(1) Tried to do something about it
a. Yes b. No

(2) Accepted it as a fact of life
a. Yes b. No

(3) Worked harder to prove them wrong
a. Yes b. No

(4) Realized that you brought it on yourself
a. Yes b. No

(5) Talked to someone about how you were feeling
a. Yes b. No

(6) Expressed anger or got mad
a. Yes b. No

(7) Prayed about the situation
a. Yes b. No

For which of the following reasons have you experienced discrimination? (Check all that apply)

1. Your ancestry or national origins
2. Your gender
3. Your race
4. Your age
5. Your religion
6. Your height or weight
7. Your shade of skin color
8. Your sexual orientation
9. Your education or income level
10. A physical disability
11. Other

REVISED INTERNALIZED HOMOPHOBIA SCALE (IHP-R) SCALE

(Men's Version)

Instructions: For each of the following below, please circle a number that best indicates how the statement applies to you. Answer according to the following scale:

1 - disagree strongly 2 - disagree slightly 3 - do not agree or disagree 4 - agree slightly

5 - agree strongly

1. I have tried to stop being attracted to men.	1	2	3	4	5
2. If someone offered me the chance to be completely heterosexual, I would accept the chance.	1	2	3	4	5
3. I wish I weren't gay/bisexual/queer.	1	2	3	4	5
4. I feel that being gay/bisexual/queer is a personal shortcoming for me.	1	2	3	4	5
5. I would like to get professional help in order to change my sexual orientation from gay/bisexual/queer to straight.	1	2	3	4	5

REVISED INTERNALIZED HOMOPHOBIA SCALE (IHP-R) SCALE

(Women's Version)

Instructions: For each of the following below, please circle a number that best indicates how the statement applies to you. Answer according to the following scale:

1 - disagree strongly 2 - disagree slightly 3 - do not agree or disagree 4 - agree slightly 5 - agree strongly

1. I have tried to stop being attracted to women.	1	2	3	4	5
2. If someone offered me the chance to be completely heterosexual, I would accept the chance.	1	2	3	4	5
3. I wish I weren't lesbian/bisexual/queer.	1	2	3	4	5
4. I feel that being lesbian/bisexual/queer is a personal shortcoming for me.	1	2	3	4	5
5. I would like to get professional help in order to change my sexual orientation from lesbian/bisexual/queer to straight.	1	2	3	4	5

SGM-CTS2

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences.

Thinking of your relationship with your current or most recent partner, please indicate how many times you did each of these things in the past 6 months, and how many times my partner did them in the past 6 months.

Response Options:
0, Never | 1, Once | 2, Twice | 3, 3-5 times | 4, 6-10 times | 5, 11-20 times | 6, More than 20 times | .001, Not in the past 6 months, but it did happen before

1. I showed my partner I cared even though we disagreed.
2. My partner showed care for me even though we disagreed.
3. I explained my side of a disagreement to my partner.
4. My partner explained their side of a disagreement to me.
5. I swore at my partner.
6. My partner did this to me.
7. I threw something at my partner that could hurt.
8. My partner did this to me.
9. I twisted my partner's arm or hair.
10. My partner did this to me.
11. I had a sprain, bruise, or small cut because of a fight with my partner.
12. My partner had a sprain, bruise, or small cut because of a fight with me.
13. I showed respect for my partner's feelings about an issue.
14. My partner showed respect for my feelings about an issue.
15. I refused to use the safe sex methods that my partner requested to use (e.g., a condom, dental dam, etc.).
16. My partner refused to use the safe sex methods that I requested to use.
17. I pushed or shoved my partner.
18. My partner did this to me.

19. I used a knife or gun on my partner.

20. My partner did this to me.

21. I passed out from being hit on the head by my partner in a fight.

22. My partner passed out from being hit on the head in a fight with me.

23. I called my partner names, *insulted them, or treated my partner disrespectfully in front of others*.

24. My partner did this to me.

25. I punched or hit my partner with something that could hurt.

26. My partner did this to me.

27. I destroyed something belonging to my partner.

28. My partner did this to me.

29. I went to a doctor because of a fight with my partner.

30. My partner went to a doctor because of a fight with me.

31. I choked my partner.

32. My partner did this to me.

33. I shouted or yelled at my partner.

34. My partner did this to me.

35. I slammed my partner against a wall.

36. My partner did this to me.

37. I said I was sure we could work out a problem.

38. My partner was sure we could work out a problem.

39. I needed to see a doctor because of a fight with my partner, but I didn't.

40. My partner needed to see a doctor because of a fight with me, but they didn't.

41. I beat up my partner.

42. My partner did this to me.

43. I grabbed my partner.

44. My partner did this to me.

45. I used force (like hitting, holding down, or using a weapon) to make my partner have sex.

46. My partner did this to me.

47. I stomped out of the room or house or yard during a disagreement.

48. My partner did this to me.

49. I insisted on having sex when my partner did not want to (but did not use physical force).

50. My partner did this to me.

51. I slapped my partner.

52. My partner did this to me.

53. I had a broken bone from a fight with my partner.

54. My partner had a broken bone from a fight with me.

55. I suggested a compromise to a disagreement.

56. My partner suggested a compromise to a disagreement.

57. I burned or scalded my partner on purpose.

58. My partner did this to me.

59. I accused my partner of being a lousy partner.

60. My partner accused me of this.

61. I did something to spite my partner.

62. My partner did this to me.

63. I threatened to hit or throw something at my partner.

64. My partner did this to me.

65. I felt physical pain the next day because of a fight we had.

66. My partner still felt physical pain the next day because of a fight we had.

67. I kicked my partner.

68. My partner did this to me.

69. I used threats to make my partner have sex.

70. My partner did this to me.

71. I agreed to try a solution my partner suggested.

72. My partner agreed to try a solution I suggested.

73. My partner had sex with me when I was unable to consent because I was so high, drunk, or passed out.

74. *I did this to my partner.*

Appendix B: Forms of Aggression Figures and Tables

Physical IPV

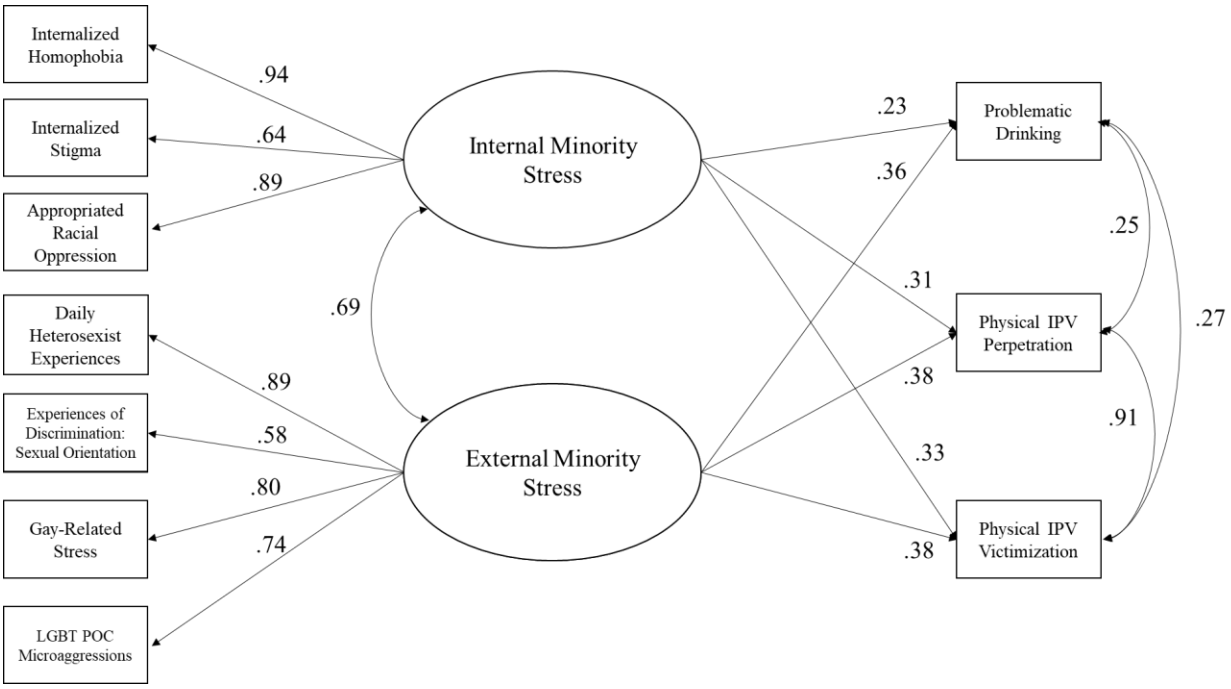

Figure 8. *Standardized estimates for two-factor model of multiple minority stress, problematic drinking, physical perpetration, and physical victimization.*

Table 8. *Standardized and unstandardized path estimates for Model 2 (physical IPV)*

Path	β	B	β 95% CI
Sexual Orientation Discrimination→Alcohol Use	**.23**	**2.80**	**[.08, .37]**
Sexual Orientation Discrimination→Physical Perpetration	**.26**	**1.41**	**[.12, .40]**
Sexual Orientation Discrimination→Physical Victimization	**.27**	**1.51**	**[.14, .40]**
Internalized Homophobia→ Alcohol Use	**.32**	**2.37**	**[.19, .44]**
Internalized Homophobia→ Physical Perpetration	**.33**	**1.10**	**[.22, .45]**
Internalized Homophobia→Physical Victimization	**.35**	**1.21**	**[.24, .47]**
Racial Discrimination→ Alcohol Use	-.06	-.70	[-.19, .08]
Racial Discrimination→ Physical Perpetration	-.05	-.26	[-.16, .07]
Racial Discrimination→ Physical Victimization	-.05	-.25	[-.15, .06]
Internalized Racism→Alcohol Use	.11	.70	[-.01, .24]
Internalized Racism →Physical Perpetration	**.21**	**.55**	**[.09, .32]**
Internalized Racism→ Physical Victimization	**.21**	**.59**	**[.10, .32]**

Table 9. Direct and total indirect effects of minority stressors on physical perpetration and victimization through internal minority stress and alcohol use.

	Physical Perpetration			Physical Victimization		
Predictor	**β**	Indirect	95% CI	**β**	Indirect	95% CI
Sexual Orientation Discrimination	.21[d']	.13	[.08, .19]	.22[d']	.14	[.09, .21]
Racial Discrimination	-.04[d'] (n.s.)	.05	[.02, .10]	-.03[d'] (n.s.)	.05	[.02, .10]
Internalized Homophobia	.27[d']	.10	[.06, .16]	.29[d']	.11	[.06, .17]
Internalized Racism	.18[d']	.04	[.01, .09]	.19[d']	.05	[.01, .10]

Note. Indirect [a], [b], and [c] paths are displayed in Table 4. (n.s.) indicates $p > .05$. Collective self-esteem was covaried with predictors.

Psychological IPV

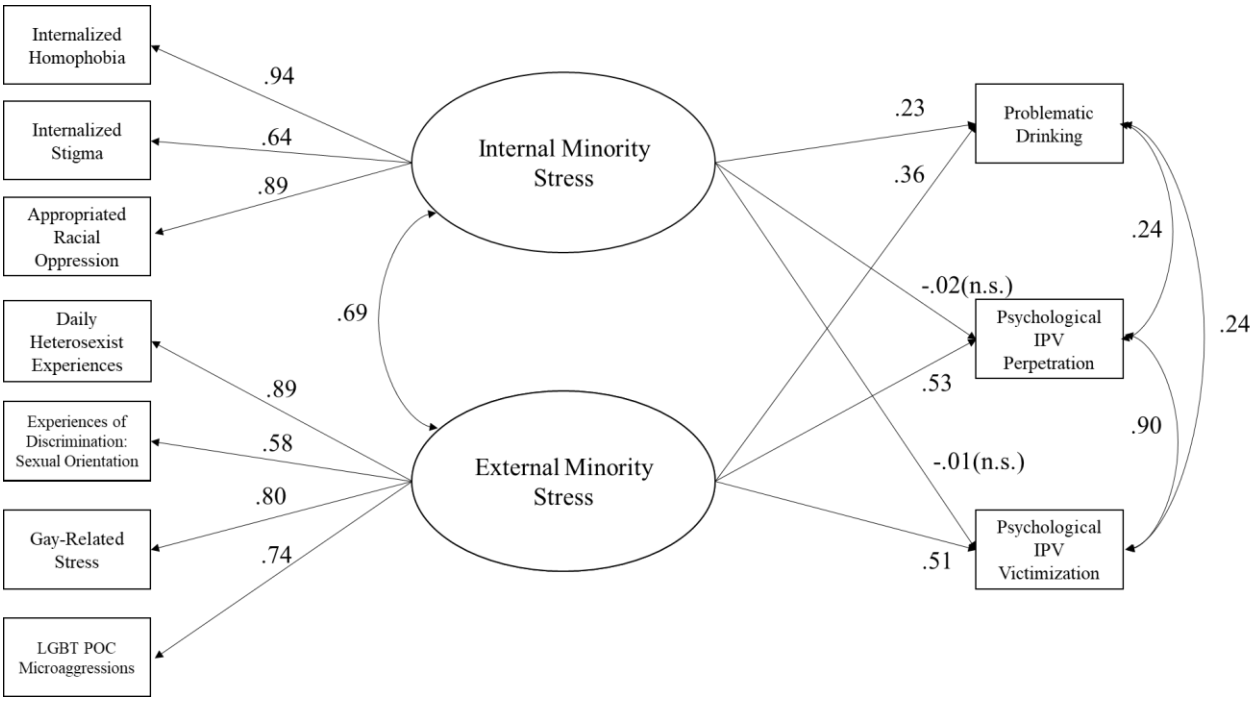

Figure 9. *Standardized estimates for two-factor model of multiple minority stress, problematic drinking, psychological perpetration, and psychological victimization.*

Table 10. *Path estimates for minority stressors on Psychological perpetration and victimization*

Path	**β**	**B**	**β 95% CI**
Sexual Orientation Discrimination→Psychological Perpetration	**.17**	**.66**	**[.04, .30]**
Sexual Orientation Discrimination→Psychological Victimization	**.16**	**.62**	**[.03, .30]**
Internalized Homophobia→ Psychological Perpetration	.06	.15	[-.07, .20]
Internalized Homophobia→Psychological Victimization	.10	.22	[-.04, .23]
Racial Discrimination→Psychological Perpetration	**.13**	**.49**	**[.01, .25]**
Racial Discrimination→Psychological Victimization	**.14**	**.50**	**[.01, .26]**
Internalized Racism →Psychological Perpetration	**.27**	**.51**	**[.14, .40]**
Internalized Racism→ Psychological Victimization	**.22**	**.41**	**[.09, .36]**

Note. Estimates for minority stressors on problematic drinking are displayed in Table 3. Bold indicates significant at $p < .05$. Collective self-esteem was covaried with all predictors.

Table 11. *Direct and total indirect effects of minority stressors on psychological perpetration and victimization through external minority stress and alcohol use.*

	Psychological Perpetration			Psychological Victimization		
Predictor	**β**	Indirect	95% CI	**β**	Indirect	95% CI
Sexual Orientation Discrimination	.11$^{d'}$ (n.s.)	.03 (n.s.)	[-.02, .08]	.10$^{d'}$ (n.s.)	.04 (n.s.)	[-.01, .10]
Racial Discrimination	.15$^{d'}$	.06	[.03, .12]	.16$^{d'}$	.05	[.02, .11]
Internalized Homophobia	-.03$^{d'}$ (n.s.)	.11	[.07, .17]	<.01$^{d'}$ (n.s.)	.11	[.07, .17]
Internalized Racism	.24$^{d'}$	.05	[.01, .10]	.19$^{d'}$	.05	[.01, .10]

Note. Indirect ^{a}, ^{b}, and ^{c} paths are displayed in table 4. $_{(n.s.)}$ indicates $p > .05$. Collective self-esteem was covaried with predictors.

Sexual IPV

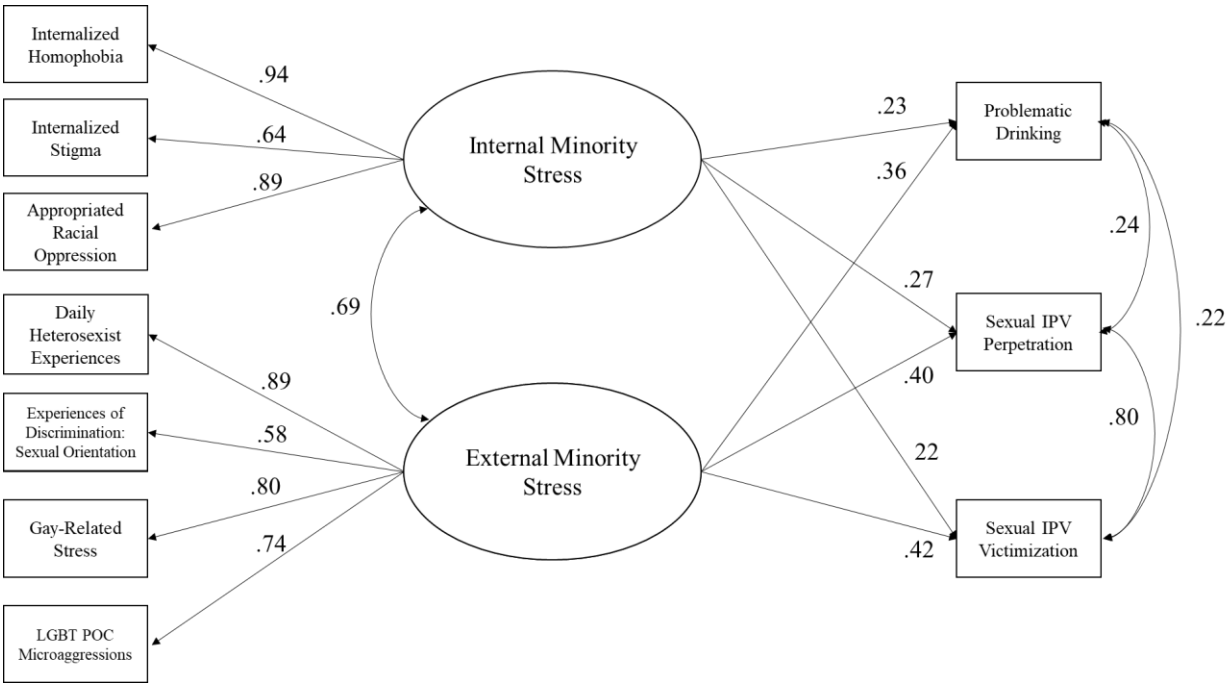

Figure 10. Standardized estimates for two-factor model of multiple minority stress, problematic drinking, sexual perpetration, and sexual victimization.

Table 12. Path estimates for minority stressors on sexual perpetration and victimization

Path	β	B	β 95% CI
Sexual Orientation Discrimination→Sexual Perpetration	**.28**	**.63**	**[.15, .42]**
Sexual Orientation Discrimination→Sexual Victimization	**.22**	**.51**	**[.09, .35]**
Internalized Homophobia→Sexual Perpetration	**.26**	**.36**	**[.15, .38]**
Internalized Homophobia→Sexual Victimization	**.24**	**.34**	**[.12, .37]**
Racial Discrimination→Sexual Perpetration	-.07	-.16	[-.18, .04]
Racial Discrimination→Sexual Victimization	-.02	-.04	[-.13, .10]
Internalized Racism→Sexual Perpetration	**.27**	**.30**	**[.16, .39]**
Internalized Racism→ Sexual Victimization	**.27**	**.31**	**[.15, .39]**

Note. Estimates for minority stressors on problematic drinking are displayed in Table 3. Bold indicates significant at $p < .05$. Collective self-esteem was covaried with all predictors.

Table 13. *Direct and total indirect effects of minority stressors on sexual perpetration and victimization through external minority stress and alcohol use.*

	Sexual Perpetration			Sexual Victimization		
Predictor	**β**	Indirect	95% CI	**β**	Indirect	95% CI
Sexual Orientation Discrimination	.24[d']	.10	[.05, .16]	.17[d']	.10	[.04, .15]
Racial Discrimination	-.06[d'] (n.s.)	.07	[.02, .11]	<-.01[d'] (n.s.)	.06	[.02, .11]
Internalized Homophobia	.19[d']	.10	[.05, .15]	.10[d']	.17	[.05, .14]
Internalized Racism	.26[d']	.04	[<.01, .08]	.26[d']	.04	[<.01, .08]

Note. Indirect [a], [b], and [c] paths are displayed in table 4. (n.s.) indicates $p > .05$. Collective self-esteem was covaried with predictors.