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Intimate Partner Violence and Illicit Substance Use Among Sexual and Gender Minority Youth: The Protective Role of Cognitive Reappraisal

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Abstract

Sexual and gender minority youth (SGMY) disproportionately experience intimate partner violence (IPV) and report illicit substance use compared with cisgender heterosexual youth. Cognitive reappraisal strategies have been shown to decrease trauma-exposed individuals' likelihood of engaging in substance use. However, virtually no research has examined the relationship between various forms of IPV, including identity abuse, and illicit substance use, as well as the protective role of cognitive reappraisal among IPV-exposed SGMY. The current study addressed these limitations and examined cognitive reappraisal as a moderator of the associations between various IPV forms and illicit substance use among 149 SGMY (ages 18-25; 28.9% bisexual, 42.3% transgender or gender nonbinary, 45.0% racial and ethnic minority) between 2016 and 2017. Results indicated that many SGMY used cocaine in the past 6 months (24.8%), followed by hallucinogens (24.8%), stimulants (22.8%), and heroin (20.8%). More than half (62.4%) of SGMY experienced psychological abuse, 44.3% physical abuse, and 43.6% identity abuse in the past year. Cognitive reappraisal buffered the associations between two forms of IPV, identity abuse and physical abuse, and illicit substance use among SGMY, underscoring its importance for clinical intervention. Specifically, past year identity abuse and physical abuse were associated with greater illicit substance use only for SGMY with lower cognitive reappraisal, not for youth with higher cognitive reappraisal. This study adds to the burgeoning literature on identity, physical, and psychological forms of IPV and illicit substance use among SGMY. Our findings provide evidence that cognitive reappraisal strategies buffer the effect of identity abuse and physical abuse on illicit drug use among SGMY. These findings shed light on new avenues for clinical intervention that may help to reduce the prevalence of illicit substance use among IPV-exposed SGMY.

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Keywords

sexual minority youth; gender minority youth; cognitive reappraisal; intimate partner violence; illicit substance use

Illicit substance use, including nonprescription stimulants (e.g., methamphetamine), cocaine, hallucinogens, and heroin, among sexual and gender minority youth (SGMY) is a serious public health concern given their elevated risk compared with cisgender and heterosexual youth (Corliss et al., 2010). One nationally representative study suggested that sexual minority youth reported greater cocaine, crack, and injection drug use than heterosexual youth (Brewster & Tillman, 2012). Another population-based study indicated that transgender youth were more likely to use illicit substances compared with cisgender youth (Day, Fish, Perez-Brumer, Hatzenbuehler, & Russell, 2017). Illicit substance use has been linked to a host of short- and long-term consequences among SGMY, including impaired decision-making, violence exposure, poor school performance, risky sexual behavior, HIV transmission, and risk of addiction later in life (Dom, Sabbe, Hustijn, & Van Den Brink, 2005; Herrick, Matthews, & Garofalo, 2010; Solorio, Swendeman, & Rotheram-Borus, 2003). Indeed, SGMY experience rapid growth in illicit substance use from adolescence into emerging adulthood (Marshal, Friedman, Stall, & Thompson, 2009; Newcomb, Heinz, & Mustanski, 2012; Swann, Bettin, Clifford, Newcomb, & Mustanski, 2017), and these represent steeper growth trajectories than those of heterosexual youth (Marshal et al., 2009). Given the higher risk for illicit substance use among SGMY, more information is needed regarding psychosocial predictors and moderators of illicit substance use in this population.

Intimate Partner Violence (IPV) and Illicit Substance Use Among SGMY

IPV represents one social determinant that may contribute to SGMY's increased likelihood of using illicit substances compared with heterosexual youth (Stults, Javdani, Greenbaum, Kapadia, & Halkitis, 2015; Wong, Weiss, Ayala, & Kipke, 2010). Consistent evidence demonstrates that SGMY experience IPV at alarmingly higher rates than cisgender heterosexual youth (Guadalupe-Diaz & Anthony, 2017; Martin-Storey, 2015; Rhodes, McCoy, Wilkin, & Wolfson, 2009). For example, 42% of sexual minority female youth report IPV exposure compared with 16% of heterosexual female youth (Rhodes et al., 2009). Similarly, sexual minority male youth (20%-32%) report higher rates of IPV exposure compared with heterosexual male youth (6%; Rhodes et al., 2009). Furthermore, transgender youth report experiencing greater rates of physical, psychological, and sexual forms of IPV compared with sexual minority and heterosexual youth (Dank, Lachman, Zweig, & Yahner, 2014). Scholars have recently uncovered a form of IPV relevant to SGM populations, namely identity abuse, which includes targeting, discrediting, belittling, and devaluing a partner's SGM identity (Woulfe & Goodman, 2018). However, a dearth of research exists examining identity abuse among SGMY, because until recently, there has been no psychometrically validated measure assessing for SGM-specific identity abuse (Scheer & Poteat, 2018).

Research documents that negative outcomes (e.g., posttraumatic stress symptoms and poorer psychological, academic, and behavioral functioning) are more common for IPV-exposed SGM populations compared with IPV-exposed heterosexual populations (Dank et al., 2014; Walters, Chen, & Breiding, 2013). Consistent with the self-medication hypothesis (Cappell, Greeley, Blane, & Leonard, 1987), IPV-exposed individuals may use substances to cope with the negative sequelae of IPV (e.g., physical injury, psychological distress; Greenfield, Back, Lawson, & Brady, 2010). Despite findings on the prevalence of IPV among SGMY, few studies have examined the association between IPV exposure and illicit substance use specifically in this population (Bimbi, Palmadessa, & Parsons, 2008; Stults et al., 2015). However, most of these studies only examine physical victimization exposure, thereby failing to characterize psychological abuse or SGM-specific identity abuse exposure as risk factors for illicit substance use among SGMY. By investigating the relative influence of various forms of IPV (i.e., identity abuse, physical abuse, and psychological abuse) on SGMY's risk behavior, namely illicit substance use, intervention and prevention efforts can maximally address the unique experiences affecting this vulnerable population.

The Importance of Cognitive Reappraisal

Drawing on the stress and coping literature, not all IPV-exposed individuals engage in illicit substance use. For example, IPV-exposed individuals who utilize cognitive coping strategies to regulate emotions such as cognitive reappraisal (i.e., reframing one's appraisal of a stressful experience to reduce distress or change the intensity of the emotional response; Gross, 1998; Gross & John, 2003) may rely less on substances to manage negative affect associated with experiences of IPV such as self-blame or fear (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Babcock & DePrince, 2012; Messman-Moore, Walsh, & DiLillo, 2010). Indeed, cognitive reappraisal strategies activate the inhibitory control network—the network primarily involved in affect regulation and substance craving (Ballard et al., 2011; Cheetham, Allen, Yucel, & Lubman, 2010; Gross & John, 2003; Kraaij, Arensman, Garnefski, & Kremers, 2007). Thus, IPV-exposed individuals who can downregulate emotions by implementing cognitive reappraisal strategies may be better able to cope with the psychological distress resulting from IPV than those who report lower levels of cognitive reappraisal.

The protective role of cognitive reappraisal in buffering the effect of IPV exposure on illicit substance use is particularly important to examine among SGMY. Because SGMY experience stigma-related stressors resulting from having a minority sexual or gender identity (e.g., prejudice, internalized homophobia, rejection sensitivity, identity concealment), some may develop deficits in adaptive cognitive coping strategies to manage stress (Hendricks & Testa, 2012; Meyer, 2003; Newcomb & Feinstein, 2019). That is, some SGMY may turn to maladaptive coping behaviors, including using illicit substances, to manage stigma-related stress rather than engage in more adaptive emotion regulation strategies such as cognitive reappraisal (Hatzenbuehler, 2009). However, the protective role of cognitive reappraisal in buffering the effects of various IPV forms on illicit substance use in this population remains unknown.

The current investigation had two primary aims. First, we hypothesized that various forms of IPV severity, including identity abuse, physical abuse, and psychological abuse, and lower cognitive reappraisal would be associated with greater illicit substance use. Second, we hypothesized that various forms of IPV severity (i.e., identity abuse, physical abuse, and psychological abuse) would be more strongly associated with illicit substance use among SGMY with lower cognitive reappraisal relative to those with higher cognitive reappraisal.

Method

Participants and Procedures

Participants were 149 self-identified SGMY between the ages 18 and 25 (M = 21.52, SD = 2.05) who were selected from a larger study on trauma-informed care for IPV-exposed SGM populations (Scheer & Poteat, 2018). Eligibility criteria included being 18 or older and self-identifying as a SGM. Participants were recruited from SGM-specific listservs and social media platforms. Between 2016 and 2017, eligible participants completed the survey using a secure online data collection tool (Qualtrics). All potential participants received written instructions directing them to a link to access the survey website where they viewed the consent form and chose to participate in the study. Participants elected to be compensated for survey completion by entering themselves into a raffle to win one of fifteen US$10, ten US$20, or three US$50 Amazon gift cards. Study procedures were approved by Boston College's Institutional Review Board. In effort to detect and minimize Internet research fraud, all potential participants were assessed through external validation methods (e.g., checking data for same email addresses or fake addresses, as well as through computer information methods, i.e., IP addresses) as suggested by Teitcher et al. (2015).

Measures

Demographics.—Participants reported their sexual orientation (response options included the following: heterosexual, lesbian, gay, bisexual, queer, and other nonheterosexual identity), gender identity (response options included the following: cisgender woman, cisgender man, transgender woman, transgender man, gender nonbinary, and other), race or ethnicity (response options included the following: African American/Black, Asian/ Asian American, Hispanic/Latinx, Native Hawaiian/Pacific Islander, Native American/Alaska Native, Middle Eastern, White, biracial or multiracial, and other), relationship status (response options included the following: in a relationship and single), and education level (response options included the following: eighth grade or less, ninth to 11th grade, high school graduate or GED, vocational school, some college, college graduate, and graduate degree). Those who identified as heterosexual also identified as transgender and so were included in the analyses.

Illicit substance use.—Participants reported on the use of the following nonprescription, illicit substances in the past 6 months: cocaine, stimulants (e.g., methamphetamine), heroin, and hallucinogens. Response options range from 0 (*never*) to 5 (*every day*). A mean score was computed and higher scores represent greater illicit substance use. The internal consistency estimate was α = .97 for the current study.

Identity abuse.—Participants indicated exposure to identity abuse within the past year. Identity abuse was assessed with the 7-item Identity Abuse Scale (IA Scale; Woulfe & Goodman, 2018). An example item from the IA Scale is "The person questioned whether my sexual orientation or gender identity was 'real'." Response options for the IA scale ranged from 0 (*This has never happened/not in the past year*) to 6 (*More than 20 times in the past year*). A mean score was created to indicate reporting of any identity abuse within the past year. The internal consistency estimate for the IA Scale was strong (α = .90).

Physical abuse.—Participants indicated exposure to physical abuse within the past year. Physical abuse was assessed with the 6-item Conflict Tactics Scale-Short Form (CTS-2; Straus & Douglas, 2004). An example item from the CTS-2 is "The person pushed, shoved, or slapped me." The CTS-2 assesses victimization across four domains: assault, injury, psychological aggression, and sexual coercion. The current survey excluded the psychological aggression items and combined the four physical assault items and two sexual assault items to form one physical abuse scale, similar to other studies with IPV-exposed SGM populations (Scheer & Baams, 2019; Woulfe & Goodman, 2018). Response options for the past year CTS-2 ranged from 0 (*This has never happened/not in the past year*) to 6 (*More than 20 times in the past year*). A mean score was created to indicate reporting of any physical abuse within the past year. The internal consistency estimate for the CTS-2 was strong (α = .89).

Psychological abuse.—Participants indicated exposure to psychological abuse within the past year. Psychological abuse was assessed with the 14-item Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1999). An example item from the PMWI is "The person monitored my time and made me account for my whereabouts." We made several adjustments to this scale, including changing the reference time period and response options to match that of the IA Scale and the CTS-2, similar to other studies examining IPV among SGM populations (Woulfe & Goodman, 2018). In addition, we adjusted the wording of the measure so that it would apply to gender-diverse survivors and perpetrators. Accordingly, response options for past year PMWI ranged from 0 (*This has never happened/not in the past year*) to 6 (*More than 20 times in the past year*). A mean score was created to indicate reporting of any psychological abuse within the past year. For this investigation, the internal consistency estimate for the PMWI was strong (α = .95).

Cognitive reappraisal.—The 6-item cognitive reappraisal subscale of the Emotion Regulation Questionnaire (Gross & John, 2003) assessed cognitive reappraisal. Response options range from 1 (*strongly disagree*) to 7 (*strongly agree*). An example item from the cognitive reappraisal scale is "When I want to feel less negative emotion, I change what I'm thinking about." The internal consistency estimate for the current study was α = .87. Higher average scale scores represent greater cognitive reappraisal.

Data Analysis

Data analyses were conducted using SPSS version 24 (IBM Corporation, 2016). There was minimal to moderate missing data, ranging from 0.1% to 24.4% across the items. Little's (1988) missing completely at random test was not significant (χ^2 = 1,286.55,

df = 1,241, *p* = .18); therefore, the data were considered to be missing completely at random and expectation-maximization technique was implemented to impute the missing data (Tabachnick & Fidell, 2007).

Gender identity was treated as a dichotomous variable where 0 = *cisgender woman or man* and 1 = *transgender or gender nonbinary* (i.e., transgender woman, transgender man, gender nonbinary, and other) in tests of bivariate and regression analyses. Race or ethnicity was treated as a dichotomous variable where 0 = *White* and 1 = *racial and ethnic minority* in tests of bivariate and regression analyses. Finally, education level was treated as a dichotomous variable where 0 = *some college or less* and 1 = *college graduate or graduate degree* in tests of bivariate and regression analyses.

First, correlations among identity abuse, physical abuse, psychological abuse, cognitive reappraisal, illicit substance use, and demographic variables that have been linked to illicit substance use in the extant research among SGMY, including age, gender identity, race or ethnicity, education level, relationship status, were calculated to explore their bivariate associations. Next, to test the unique, independent effects of identity abuse, physical abuse, and psychological abuse and their separate interactions with cognitive reappraisal on illicit substance use, three moderation analyses were conducted utilizing the SPSS PROCESS Macro Version 3.00. Specifically, three linear regression models using 1,000 bootstrap resamples examined interactions between identity, physical, and psychological abuse (as independent variables in separate models as to conserve statistical power and avoid committing Type I error given the potential for multicollinearity between the abuse measures) and cognitive reappraisal on illicit substance use, as recommended by Hayes (2013) and Stuart et al. (2008). Similar model building approaches have been used in prior IPV research (Cunradi, Todd, Duke, & Ames, 2009; Duterte et al., 2008; Mattson, O'Farrell, Lofgreen, Cunningham, & Murphy, 2012). The PROCESS procedures use ordinary least squares regression and bootstrapping methodology, which confers more statistical power than standard approaches to statistical inference and does not rely on distributional assumptions (Hayes, 2013).

Next, following the methods suggested by Aiken, West, and Reno (1991), regression slopes were plotted at one standard deviation above and below mean levels of cognitive reappraisal and follow-up analyses were conducted to examine whether the slopes of the regression lines significantly differed from zero. Finally, we tested the moderation analyses again while controlling for demographic variables, including age, sexual orientation, gender identity, race or ethnicity, education level, and relationship status, given that these demographic characteristics are associated with substance use among SGMY (Heck et al., 2014; Marshal et al., 2009; Reisner, Greytak, Parsons, & Ybarra, 2015).

Results

Preliminary Analyses

Table 1 summarizes the demographic characteristics and prevalence of illicit substance use and IPV exposure of the sample. Participants identified their sexual orientation as bisexual (28.9%), followed by queer (22.1%), other nonheterosexual identity (21.4%), lesbian

(15.4%), gay (10.7%), and heterosexual (1.3%). As previously stated, all participants who identified as heterosexual also identified as transgender or gender nonbinary and so were included in the analyses. Participants identified their gender identity as cisgender woman (48.3%), followed by gender nonbinary (30.2%), cisgender man (9.4%), transgender man (5.4%), transgender woman (4.7%), and other (2.0%). About half of participants identified their race or ethnicity as White (51.7%) and as racial and ethnic minority (48.3%). In the past 6 months, SGMY used cocaine (24.8%), hallucinogens (24.8%), stimulants (22.8%), and heroin (20.8%). Almost half (43.6%) of SGMY experienced identity abuse, 44.3% physical abuse, and 62.4% psychological abuse.

Bivariate Associations of Study Variables and Relevant Demographic Variables

Table 2 presents the bivariate associations among study variables as well as basic descriptive statistics for each variable. Bivariate associations revealed significant relations among the IPV measures ($r = .61$, $p < .001$ to $r = .78$, $p < .001$). The IPV measures were not associated with cognitive reappraisal. Only physical abuse was associated with illicit substance use among SGMY ($r = .17$, $p < .05$). Cognitive reappraisal was negatively associated with illicit substance use ($r = -.20$, $p < .01$) among SGMY. Among the demographic associations, younger SGMY and SGMY who identified as racial and ethnic minority were more likely to report using illicit substances in the past 6 months ($r = -.16$, $p < .05$ to $r = .38$, $p < .001$). Transgender or gender nonbinary SGMY were more likely to report identity abuse ($r = .26$, $p < .001$) and physical abuse ($r = .24$, $p < .01$) compared to cisgender SGMY.

Linear Regression Predicting Illicit Substance Use

In our final analysis, three moderation models examined the main and interactive effects of identity abuse, physical abuse, and psychological abuse, separately (see Table 3). As a sensitivity analysis, we first ran the moderation models without entering demographic variables as covariates and then ran the same models after entering the demographic variables, namely, age, sexual orientation, gender identity, race or ethnicity, education level, and relationship status. The pattern of results obtained after entering the demographic covariates was consistent with our findings from the initial analyses that did not include the demographic covariates. Below are the results from the models after entering the demographic covariates given the empirical and theoretical support for the association between SGMY's illicit substance use and age, sexual orientation, gender identity, race or ethnicity, education level, and relationship status (Heck et al., 2014; Marshal et al., 2009; Reisner et al., 2015).

The first model containing identity abuse as an independent variable accounted for 25.0% of the variance in illicit substance use, $F(9, 139) = 5.18$, $p < .001$. A significant main effect was found for identity abuse, $b = .13$, $p < .01$, but not for cognitive reappraisal, $b = -.03$, $p = .52$. Furthermore, the interaction between identity abuse and cognitive reappraisal was significantly associated with less illicit substance use, $b = -.06$, $p < .05$. Simple slopes analysis revealed that identity abuse was significantly associated with more illicit substance use only for SGMY with lower cognitive reappraisal, $b = .19$, $SE = .06$, $p < .01$, not with higher cognitive reappraisal, $b = .04$, $SE = .05$, $p = .31$.

The second model containing physical abuse as an independent variable, accounted for 25.0% of the variance in illicit substance use, $F(9, 139) = 5.07$, $p < .001$. A significant main effect was found for physical abuse, $b = .15$, $p < .05$, but not for cognitive reappraisal, $b = -.04$, $p = .34$. Furthermore, the interaction between physical abuse and cognitive reappraisal was significantly negatively associated with less illicit substance use, $b = -.10$, $p < .01$. Simple slopes analysis revealed that physical abuse was significantly associated with more illicit substance use only for SGMY with lower cognitive reappraisal, $b = .26$, $SE = .09$, $p < .01$, not with higher cognitive reappraisal, $b = .03$, $SE = .06$, $p = .66$.

Finally, the third model containing psychological abuse as an independent variable accounted for 23.0% of the variance in illicit substance use, $F(9, 139) = 4.58$, $p < .001$. A significant main effect was found for psychological abuse, $b = .08$, $p < .05$, but not for cognitive reappraisal, $b = -.07$, $p = .13$. Furthermore, the interaction between psychological abuse and cognitive reappraisal was not significantly associated with illicit substance use, $b = -.02$, $p = .33$.

Discussion

There is little research examining the relationship between multiple forms of IPV (i.e., identity abuse, physical abuse, psychological abuse) and illicit substance use among SGMY and testing protective factors that may buffer against the negative effects of IPV on illicit substance use in this population. Addressing these limitations in the literature, our study provides important contributions that help to inform future research and interventions with IPV-exposed SGMY. Consistent with prior studies (e.g., Corliss et al., 2010; Martin-Storey, 2015; Rhodes et al., 2009), we found high levels of physical and psychological forms of IPV and illicit substance use in our sample of SGMY. We extend this literature by being one of the first studies to document high rates of identity abuse, an SGM-specific form of IPV, and the roles of identity, physical, and psychological abuse as risk factors for illicit substance use among SGMY. Notably, assessing identity abuse when working with SGMY could help identify individuals who may be particularly vulnerable to using illicit substances. Furthermore, school-based prevention and intervention efforts should work to promote awareness of the ways in which SGMY's experiences of stigma-related stressors (e.g., discrimination, internalized homophobia) may contribute to distinctive tactics used against them in dating relationships (Balsam & Szymanski, 2005; Meyer, 2003; Otis, Rostosky, Riggle, & Hamrin, 2006; Reuter, Newcomb, Whitton, & Mustanski, 2017; Scheer et al., 2018).

The present study also considered the role of cognitive reappraisal, a critical cognitive coping strategy, as a potential buffer of the association between various IPV forms (i.e., identity, physical, or psychological abuse) and illicit substance use among SGMY. Consistent with our hypotheses, one of the primary factors differentiating IPV-exposed SGMY who use illicit substances may be the degree to which cognitive reappraisal strategies are used. That is, we found that cognitive reappraisal buffered against the effects of identity abuse and physical abuse on illicit drug use, underscoring an important cognitive coping strategy that can be targeted in future clinical interventions and research. Specifically, the positive associations between identity and physical abuse and illicit substance use were only

found for SGMY who had lower levels of cognitive reappraisal; identity and physical abuse were not associated with illicit substance use for SGMY who had higher levels of cognitive reappraisal. Although cognitive reappraisal was associated with lower illicit substance use at the bivariate level, it did not emerge as a significant predictor of illicit substance use in the linear regression models. This reduction in statistical significance in the regression models might be attributable to reduced power resulting from the inclusion of a greater number of variables in the regression model or the overlap in variance among IPV, cognitive reappraisal, and demographic covariates.

Contrary to our expectation, the moderating role of cognitive reappraisal on the relationship between psychological abuse and illicit substance use was not supported. This finding may suggest that personal resources such as cognitive reappraisal may be less efficacious in countering the negative effect of psychological abuse on illicit substance use than other forms of abuse (i.e., identity and physical). As such, future research should explore whether other psychosocial factors (e.g., social support, mindfulness, distress tolerance) may be more relevant in influencing the impact of psychological abuse on illicit substance use among SGMY.

Limitations and Strengths

Our study's findings should be interpreted considering its limitations. Our study was cross-sectional; therefore, causal and temporal conclusions of associations cannot be made. For example, while IPV exposure was associated with greater illicit substance use, and cognitive reappraisal served as a buffer of the relationship between identity and physical partner abuse and substance use, we cannot rule out the possibility that an unmeasured mediating variable might further explain the relationships among IPV exposure, cognition, and maladaptive behavior in this sample of SGMY. Laboratory studies manipulating cognitive reappraisal would be useful in understanding how these strategies may serve as a protective factor for SGMY in coping with other stressors (e.g., stigma). Despite the gender, racial, and sexual orientation heterogeneity of our sample, we were not able to examine subgroup differences in our research questions due to the small sample size. Future research should also extend our findings by testing the associations for varying substances (i.e., illicit and licit) when examining predictors and moderators of substance use in this population. In addition, this study tested the unique, independent effects of identity abuse, physical abuse, and psychological abuse and their separate interactions with cognitive reappraisal on illicit substance use in three separate models. This approach allowed us to conserve statistical power and avoid committing Type I error given the potential for multicollinearity between the abuse measures. Future well-powered studies should test the effects of various IPV forms and their interactions with cognitive reappraisal on illicit substance use among SGMY. Finally, we examined illicit substances together and did not assess for levels of addiction severity for each substance. This limited our understanding of the associations between IPV and specific substances and did not allow for us to examine whether cognitive reappraisal strategies are more optimal for minimizing use of certain substances over others.

There are also several strengths of the present study. For example, this study was among the first to assess the past year prevalence of multiple IPV forms among SGMY,

including an SGM-specific identity-based measure of IPV (i.e., identity abuse; Woulfe & Goodman, 2018). In addition, this study addressed limitations of prior research by assessing the associations between various IPV forms and illicit substance use among SGMY, a substantially understudied population in the IPV literature, and examined cognitive reappraisal as a potential buffer of these associations. The linear regression models from this study illuminated for whom identity abuse and physical abuse is more likely to be associated with illicit substance use among SGMY (i.e., those with greater deficits in cognitive reappraisal), findings that could inform the development of effective cognitive-focused intervention efforts for IPV-exposed SGMY.

Research and Clinical Implications

Results from this study provide several directions for future research. Studies should examine other coping mechanisms that may mitigate the effects of IPV on illicit substance use, such as emotional clarity, cognitive restructuring, mindfulness, or acceptance techniques (Mendelson et al., 2010). Indeed, these techniques ultimately build self-efficacy for behavior change such as reduced illicit substance use among SGM populations (Pachankis, Rendina, Ventuneac, Grov, & Parsons, 2014). In addition, qualitative studies are needed to better understand how SGMY cope with experiences of IPV as well as the processes through which IPV affects engagement in illicit substances.

This study suggests that identity abuse, physical abuse, and psychological abuse in dating relationships represent key public health and clinical priorities among SGMY given their associations with illicit substance use in this population. Our findings also underscore the potential utility of targeting cognitive reappraisal in substance abuse prevention and intervention efforts for SGMY exposed to identity and physical partner abuse. Indeed, clinicians delivering SGM-affirmative evidence-based interventions that enhance stigma coping by improving cognitive strategies (e.g., cognitive reappraisal; Pachankis, 2015) can work to ensure the effectiveness of interventions for IPV-exposed SGMY. In addition, assessing for identity abuse, physical abuse, and psychological abuse among SGMY could identify those who may be particularly vulnerable to engaging in illicit substance use. Programs that support positive youth development may help IPV-exposed SGMY to identify, learn, and practice cognitive coping strategies, including cognitive reappraisal. Furthermore, health professionals and educators must be knowledgeable of the types of IPV most prevalent among SGMY and encourage open dialogues about these experiences in school- and community-based organizations (e.g., gender-sexuality alliances). Also, educators and school-based personnel need to ensure that they are teaching their students about IPV and healthy relationship dynamics among SGMY. Finally, IPV prevention programs should ensure their inclusivity of and effectiveness for SGMY.

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Biography

Jillian R. Scheer, PhD, is a T32 postdoctoral research fellow at the Center for Interdisciplinary Research on AIDS in the Yale School of Public Health. Dr. Scheer's research focuses on identifying the co-occurring epidemics (i.e., syndemics) surrounding sexual and gender minority individuals, with a focus on sexual assault and intimate partner violence.

Ethan H. Mereish, PhD, is an assistant professor in the Department of Health Studies at American University. His research focuses on understanding the effects of social, psychological, and cultural determinants of health for lesbian, gay, bisexual, and transgender individuals and racial/ethnic minorities as well as factors that promote their resilience.

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Table 1.

Sample Characteristics ($N = 149$).

Variable	*n* (%)
Sexual orientation identity	
Heterosexual	2 (1.3)
Lesbian	23 (15.4)
Gay	16 (10.7)
Bisexual	43 (28.9)
Queer	33 (22.1)
Other nonheterosexual identity	32 (21.4)
Gender identity	
Cisgender woman	72 (48.3)
Cisgender man	14 (9.4)
Transgender woman	7 (4.7)
Transgender man	8 (5.4)
Gender nonbinary	45 (30.2)
Other	3 (2.0)
Race or ethnicity	
African American/Black	4 (2.7)
Asian/Asian American	10 (6.7)
Hispanic/Latinx	4 (2.7)
Native Hawaiian/Pacific Islander	4 (2.7)
Native American/Alaska Native	2 (1.3)
Middle Eastern	10 (6.7)
Biracial or multiracial	33 (22.1)
White	77 (51.7)
Other	5 (3.4)
Education level	
Eighth grade or less	1 (.7)
9th-11th grade	2 (1.3)
High school graduate or GED	14 (9.4)
Vocational school	8 (5.4)
Some college	58 (38.9)
College graduate	61 (40.9)
Graduate degree	5 (3.4)
Relationship status	
In a relationship	103 (69.1)
Single	46 (30.9)
Illicit substance use	
Cocaine	37 (24.8)
Stimulants	34 (22.8)
Heroin	31 (20.8)

Variable	*n* (%)
Hallucinogens	37 (24.8)
Any past year IPV exposure	
Identity abuse	65 (43.6)
Physical abuse	66 (44.3)
Psychological abuse	93 (62.4)
	M (SD)
Age in years	21.5 (2.05)

Note. IPV = intimate partner violence.

Table 2.

Correlations Among the Study Variables Using the Full Sample of SGM Youth.

		1	2	3	4	5	6	7	8	9	10
1.	Age	—									
2.	Gender identity	.01	—								
3.	Race or ethnicity	−.10	.02	—							
4.	Relationship status	.09	.13	.07	—						
5.	Education level	.40***	−.01	−.16*	−.06	—					
6.	Identity abuse	−.16	.26***	−.07	−.02	−.12	—				
7.	Physical abuse	−.18*	.24**	.06	−.03	−.08	.78***	—			
8.	Psychological abuse	−.02	.10	−.02	.01	−.05	.73***	.61***			
9.	Cognitive reappraisal	.06	.13	−.09	.06	.09	−.03	.01	−.03	—	
10.	Illicit substance use	−.16*	−.04	.38***	−.03	−.15	.16	.17*	.16	−.20*	—
M (SD)		21.52 (2.05)	1.43 (0.50)	0.45 (0.50)	1.31 (0.46)	5.26 (1.22)	0.65 (1.20)	0.44 (0.87)	1.28 (1.57)	4.75 (1.17)	0.50 (0.65)

Note. Gender = dichotomous (0 = *cisgender*; 1 = *transgender or gender nonbinary*); race = dichotomous (0 = *White*; 1 = *racial and ethnic minority*); relationship status = dichotomous (0 = *in a relationship*; 1 = *single*); education level = dichotomous (0 = *less than college*; 1 = *college graduate or graduate school*); identity, physical, and psychological abuse = response options ranged from 0 = *this has never happened/not in the past year* to 6 = *more than 20 times in the past year*; cognitive reappraisal = response options ranged from 1 = *strongly disagree* to 7 = *strongly agree*); and illicit substance use (0 = *never*, 1 = *once a month*, 2 = *2 to 3 times a month*, 3 = *once a week*, 4 = *2 or more times a week*, and 5 = *every day*). SGM = Sexual and Gender Minority.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3.

Association Between Intimate Partner Violence and Past 6-Month Illicit Substance Use by Cognitive Reappraisal.

	b	*SE*	*t*	95% CI	R^2	*F*
Model 1					.25	5.16***
Identity abuse	.13	.04	2.88**	[.04, .22]		
Cognitive reappraisal	−.03	.05	−0.69	[−.12, .06]		
Identity Abuse × Cognitive Reappraisal	−.06	.03	−2.42*	[−.11, −.01]		
Age	−.03	.03	−1.91	[−.08, .02]		
Gender	−.03	.03	−1.08	[−.09, .03]		
Sexual orientation	−.02	.03	−0.41	[−.08, .05]		
Relationship status	−.04	.11	−0.35	[−.25, .17]		
Education	.07	.11	0.60	[−.15, .29]		
Race or ethnicity	.50	.10	5.10	[.31, .70]		
Model 2					.25	5.01***
Physical abuse	.15	.06	2.34*	[.03, .27]		
Cognitive reappraisal	−.04	.04	−0.99	[−.13, .04]		
Physical Abuse × Cognitive Reappraisal	−.10	.04	−2.78**	[−.17, −.03]		
Age	−.03	.03	−1.05	[−.08, .02]		
Gender	−.03	.03	−1.15	[−.09, .02]		
Sexual orientation	−.01	.03	−0.10	[−.07, .06]		
Relationship status	−.04	.11	−0.35	[−.25, .17]		
Education	−.01	.05	−0.14	[−.09, .08]		
Race or ethnicity	.44	.10	4.48	[.25, .64]		
Model 3					.23	4.55***
Psychological abuse	.08	.03	2.468*	[.02, .14]		
Cognitive reappraisal	−.07	.04	−1.57	[−.16, .02]		
Psychological Abuse × Cognitive Reappraisal	−.02	.03	−0.98	[−.07, .03]		
Age	−.04	.03	−1.34	[−.09, .02]		
Gender	−.01	.03	−.48	[−.07, .04]		
Sexual orientation	−.03	.03	−0.80	[−.09, .04]		
Relationship status	−.04	.11	−0.41	[−.26, .17]		
Education	.04	.11	0.35	[−.19, .26]		
Race or ethnicity	.48	.10	4.79	[.28, .68]		

Note. Gender = dichotomous (0 = *cisgender*; 1 = *transgender or gender nonbinary*); race = dichotomous (0 = *White*; 1 = *racial and ethnic minority*); relationship status = dichotomous (0 = *in a relationship*; 1 = *single*); education level = dichotomous (0 = *less than college*; 1 = *college graduate or graduate school*). CI = confidence interval.

* $p < .05$.

** $p < .01$.

*** $p < .001$.