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Intimate Partner Violence Experiences of Sexual and Gender Minority Adolescents and Young Adults Assigned Female at Birth

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Abstract

Sexual and gender minority youth, especially those assigned female at birth, are at risk for intimate partner violence (IPV) due to minority stressors. With a sample of 352 sexual and gender minority youth assigned female at birth (age 16-32), we aimed to describe IPV in this population, including the prevalence, directionality, frequency, co-occurrence, and demographic correlates of various IPV types. Rates of past-6-month IPV were high, with victimization and perpetration of minor psychological IPV most common (64-70%); followed by severe psychological, minor physical, and coercive control (20-33%); and severe physical and sexual IPV (10-15%). For cyber abuse and IPV tactics leveraging anti-sexual minority stigma, victimization (12.5% and 15%, respectively) was more common than perpetration (8% and 6%, respectively). Most IPV was bidirectional and occurred 1-2 times in 6 months, although frequency varied considerably. Latent class analyses revealed that half of participants reported no or minimal IPV; one-third experienced multiple forms of psychological IPV (including coercive control); and 10-15% reported psychological, physical, sexual, and cyber abuse. Racial minority youth had higher rates of most IPV types than White participants. We hope study findings will inform policies and interventions to prevent IPV among gender and sexual minority youth assigned female at birth.

Keywords

intimate partner violence; dating violence; sexual minorities; gender minorities; LGBT

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Young people who identify as sexual minorities (i.e., as lesbian, gay, bisexual, queer or any other non-heterosexual identity) and/or gender minorities (i.e., as a gender that does not match their biological sex assigned at birth) frequently experience violence, discrimination, and harassment based on their stigmatized identities (Herek, 2009; Herek & McLemore, 2013). As described by minority stress theory, these experiences, along with diminished community and family supports, place sexual and gender minorities (SGM) at risk for a wide range of negative social and health outcomes (Meyer, 2003). A small but growing body of research suggests that one such outcome is intimate partner violence (IPV; e.g., Dank, Lachman, Zweig, & Yahner, 2014; Luo, Stone, & Tharp, 2014; Olsen, Vivolo-Kantor, & Kann, 2017).

Although IPV is prevalent among all adolescents and young adults (e.g., Breiding, Chen, & Black, 2014; Kann et al., 2016), rates are particularly high among those who identify as SGM. Studies based on U.S. probability samples estimate that 17–43% of SGM adolescents experienced physical violence from a dating partner in the last year, compared to 6–10% of heterosexual adolescents (Kann, 2011; Luo et al., 2014; Olsen et al., 2017). SGM teens also experience high rates of sexual (15–23%) and psychological (59%) IPV victimization, which are considerably greater than rates observed in heterosexual teens (4–12% for sexual abuse; 37% for psychological abuse; Dank et al., 2014; McLaughlin, Hatzenbuehler, Xuan, & Conron, 2012; Olsen et al., 2017). These disparities appear to continue into young adulthood. Compared to heterosexual college students, SGM students are at 2–3 times higher risk for psychological abuse and physical violence and five times the risk for sexual victimization by a romantic partner (Porter & Williams, 2011; Rhodes, McCoy, Wilkin, & Wolfson, 2009). SGM young adults are also more likely than their heterosexual counterparts to have been in a recent intimate relationship that was emotionally, physically, or sexually abusive (Blosnich & Bossarte, 2012).

Among SGM young people, those who are assigned female at birth (FAB) may be most at risk for IPV. In samples of U.S. sexual minority adolescents, those who identified as female reported higher lifetime rates of physical IPV victimization (Martin-Storey, 2015) and higher rates of past-year sexual IPV victimization (Olsen et al., 2017) than those who identified as male. Further, in a sample of SGM young adults (age 22–23) that included both cisgender and transgender individuals, those who were assigned female at birth (FAB) were more likely to have experienced verbal and physical IPV within the last 6 months than those who were assigned male at birth (MAB; Reuter, Newcomb, Whitton, & Mustanski, 2017). In a longitudinal study of SGM youth, FAB participants were consistently at higher risk for physical (but not sexual) IPV victimization than MAB participants across adolescence and young adulthood (ages 16–25; Whitton, Newcomb, Messinger, Byck, & Mustanski, 2019).

The elevated rates of IPV among FAB SGM youth are especially concerning in light of its widespread negative effects on health and wellbeing. Research suggests that IPV victimization increases young women's risk for poor academic outcomes, substance use, mental health problems, suicidal ideation, and a range of physical health conditions including asthma, headaches, and chronic pain (Exner-Cortens, Eckenrode, & Rothman, 2013; Smith et al., 2017). These risks may be exacerbated by an SGM identity: Among female IPV victims, those who identify as SGM are more likely to be injured, require

medical care, and have post traumatic stress disorder (PTSD) symptoms than those who are heterosexual (Walters, Chen, & Breiding, 2013). This may be because SGM victims often have fewer protective resources (e.g., social supports from families and schools; Eisenberg & Resnick, 2006; Safren & Heimberg, 1999) that can buffer youth from adverse consequences of IPV (Beeble, Bybee, Sullivan, & Adams, 2009). Further, certain unique stressors (e.g., internalized heterosexism) faced by SGM youth due to their minority status may exacerbate negative reactions to IPV (Carvalho, Lewis, Derlega, Winstead, & Viggiano, 2011).

Clearly, IPV among FAB SGM youth represents a pressing public health concern. To inform policy and intervention efforts, a better understanding of IPV in this population is needed. Ultimately, it will be important to identify mechanisms behind the higher rates of IPV in SGM youth than heterosexual young people, clarify the unique risk factors for IPV among SGM youth, and explore why consequences of IPV may be more negative for SGM than heterosexual youth. A crucial first step, however, is to better characterize the IPV experienced by this population. To date, very little research has examined IPV among SGM populations, especially youth (Messinger, 2014). Existing IPV research based on heterosexual samples is limited in what it can tell us about IPV among SGM young people, because the pervasive societal stigma against non-heterosexuality creates fundamental differences in the romantic and sexual experiences of SGM versus heterosexual youth (Mustanski, 2015). Consequently, it is likely that similar differences exist in IPV experiences. Indeed, research on adults suggests that SGM youth experience patterns of IPV and specific forms of IPV that differ from those experienced by heterosexuals (Messinger, 2014).

A small empirical literature on IPV in SGM youth has recently developed; however, it has several notable limitations. Researchers have largely focused on documenting differences in IPV prevalence between SGM and heterosexual youth, rather than exploring the nature of IPV within the SGM population. Though some qualitative studies have begun to describe SGM youth's perceptions of IPV (e.g., Bermea, Rueda, & Toews, 2018; Gillum & DiFulvio, 2012), our current knowledge remains limited regarding the types, frequency, and directionality of IPV experienced by SGM youth. Many studies have only assessed physical abuse (reviewed by Longobardi & Badenes-Ribera, 2017) despite indications that most IPV between dating partners is psychological (Halpern, Young, Waller, Martin, & Kupper, 2004) and that sexual IPV, coercive control, and cyber abuse (i.e., abuse via technology, social media, and cell phones) may also be common (Dank et al., 2014). In addition, researchers rarely have assessed the unique types of IPV that SGM youth experience as a result of their stigmatized identities, though sexual minority college students have expressed that stigma from society and individuals is central to their IPV experiences (Gillum & DiFulvio, 2012). In a study of adult lesbian and bisexual women, around one-third reported experiencing IPV tactics that involve leveraging the societal stigma against SGM to control or cause psychological harm (Balsam & Szymanski, 2005). Such SGM-specific IPV tactics include threats to disclose the victim's SGM identity without their consent (i.e., "outing"), shaming them for their SGM identity, questioning their SGM identity (e.g., accusations of not being a "real" lesbian), and isolating them from the local SGM community (e.g., Balsam & Szymanski, 2005; Freedner, Freed, Yang, & Austin, 2002). Research is needed to

comprehensively assess the wide variety of IPV experiences that SGM youth might encounter, to better understand which types of IPV are most commonly experienced, and to identify which types of IPV commonly co-occur within SGM relationships.

Most quantitative studies of IPV in SGM youth have used one or two item measures that assess for the presence (vs. absence) of IPV, leaving unanswered questions about the frequency and severity of their IPV experiences. Most SGM IPV research has focused on victimization only. Consequently, little is known about the perpetration of IPV by SGM youth, though there are some indications that, like victimization, it occurs more often than among heterosexual youth (Dank et al., 2014; Rhodes et al., 2009). There is also very little data regarding the unidirectionality versus bidirectionality of IPV in SGM youth's relationships. We were only able to locate two relevant studies, both of which suggested that bidirectionality may be common: Reports of victimization and perpetration in participants' current same-sex relationships were moderately to strongly correlated for psychological, physical, and sexual IPV (*r*s = .42-.86; Edwards & Sylaska, 2013; Lewis, Mason, Winstead, & Kelley, 2017). If research were to indicate a high degree of bidirectionality IPV in SGM relationships, it would mirror an increasing recognition that most IPV in heterosexual couples is bidirectional (O'Leary & Slep, 2012). The recent calls for a greater focus on the role of dyadic interactions in understanding, preventing, and treating violence in different-gender dating relationships (Langhinrichsen-Rohling & Capaldi, 2012) would appear to be relevant for SGM youth and young adults as well.

The existing literature also lacks attention to potential within-group differences in the IPV experiences of SGM youth. Currently, we do not know whether the prevalence or co-occurrence of various types of IPV differ along demographic dimensions, including age, race, specific sexual identity, gender identity, or gender of partner. Age differences have been identified in the broader IPV literature (Capaldi, Knoble, Shortt, & Kin, 2012), with rates of IPV increasing across adolescence and then declining through young adulthood (Kim, Laurent, Capaldi, & Feingold, 2008; Shortt et al., 2012). However, IPV among SGM youth may follow different age-related patterns, in part because many adolescents delay engaging in sexual and romantic activities due to lack of available dating partners during adolescence (Macapagal, Greene, Rivera, & Mustanski, 2015). IPV perpetration (but not victimization) rates have shown more stability from age 15 to 17 years among sexual minority compared with heterosexual adolescents (Reuter, Sharp, & Temple, 2015). Similarly, rates of sexual and physical IPV did not show reliable decreases from adolescence to young adulthood in a longitudinal study of SGM youth (Whitton et al., 2019).

It is important to determine whether there are racial differences in FAB SGM IPV experiences, as part of broader efforts to understand how co-occurring social identities may intersect to impact sexual minority health (Institute of Medicine, 2011). SGM people of color experience discrimination, microaggressions, and harassment based on both their sexual and racial minority identities (Balsam, Molina, Beadnell, Simoni, & Walters, 2011; Grant et al., 2011), which some speculate may increase vulnerability to IPV perpetration and victimization (Poon, 2000; Waldron, 1996). Findings from one longitudinal study of SGM youth are consistent with this possibility: Participants who identified as Black were 3–4 times more likely than White participants to experience verbal, physical, or any type of IPV

victimization (Reuter et al., 2017), and although rates of physical IPV victimization declined from mid-adolescence to young adulthood for White youth, they remained stable for Black, Latino, and multiracial youth (Whitton et al., 2019). However, because most research on IPV in SGM youth has used samples lacking in racial and ethnic diversity, more research is needed.

It is also possible that IPV experiences differ by specific sexual identity, defined in the current study as self-identified sexual orientation. Though often considered a homogenous group, FAB SGM youth identify with a variety of sexual identities (e.g., lesbian, bisexual, pansexual, queer, etc.). Compared to gay and lesbian youth, those who identify as bisexual have reported higher rates of physical IPV victimization (McLaughlin et al., 2012), sexual abuse (Whitton et al., 2019), threats of being outed (Freedner et al., 2002), and involvement in a relationship that was emotionally, physically, or sexually abusive (Blosnich & Bossarte, 2012). However, other studies show no differences between bisexual and gay or lesbian adolescents on physical (Martin-Storey, 2015; Whitton et al., 2019) or sexual IPV (McLaughlin et al., 2012). Further research is needed to clarify these inconsistencies and to examine a wider range of sexual identities, including queer and pansexual, about which little is known. It is also important to investigate differences by gender identity, given suggestions from the limited existing literature that gender minority status may raise risk for IPV. In a study of adolescents (ages 12–19 years), those who identified as transgender reported the highest rates of physical, psychological, cyber, and sexual IPV victimization and perpetration (Dank et al., 2014). Further, within an SGM sample, transgender youth reported more physical, sexual, and verbal IPV victimization than cisgender sexual minorities (Reuter et al., 2017; Whitton et al., 2019).

We also know little about whether IPV in FAB SGM youth differs by partner gender. Though it is often assumed that SGM women only have female partners, one-fourth of lesbians report relationships with men (Diamond & Savin-Williams, 2000). This number is likely much higher among the 40% of SGM women who identify as bisexual (Pew Research Center, 2013). There is some speculation that the higher rate of IPV seen in bisexual than in lesbian women is largely due to a greater risk for victimization from male than female partners. Consistent with this notion, adult bisexual women have reported more physical, psychological, coercive, and sexual victimization by their male than their female partners (Balsam, Rothblum, & Beauchaine, 2005; Messinger, 2011). However, this difference was not observed in a sample of bisexual adolescent girls (Freedner et al., 2002), indicating the need for more research. Further, no studies to date have explored IPV in relationships with gender minority partners (i.e., those who identify as transgender, genderqueer, non-binary, etc.), although many sexual minority women report sexual or romantic partnerships with them (Mereish, Katz-Wise, & Woulfe, 2017).

The Current Study

In this study, we aimed to broaden our knowledge about the IPV experiences of young, female assigned at birth sexual and gender minorities (FAB SGM). Using a large sample of FAB SGM youth (i.e., adolescents and young adults ages 16–32 years) with considerable diversity in terms of race/ethnicity, gender identity, and sexual orientation identity, we aimed

to address several limitations of the existing literature. First, in contrast to most research on IPV among SGM adults, which even excludes youth under 18 years old (Longobardi & Badenes-Ribera, 2017), we focused on late adolescence and young adulthood, when rates of IPV peak (Capaldi et al., 2012). Second, we assessed a wide range of IPV behaviors, including minor and severe psychological IPV, coercive control, minor and severe physical IPV, injury, sexual IPV, cyber abuse, and SGM-specific IPV. For each type of IPV, we assessed both victimization and perpetration and explored the extent to which it was bidirectional versus unidirectional. To enrich our understanding of FAB SGM IPV experiences, we assessed not only the presence of each type of IPV, but also the frequency with which it occurred and the extent to which it tended to co-occur with other types of IPV. Finally, to address the field's lack of knowledge about demographic risk factors for IPV among young FAB SGM, we explored whether IPV experiences differed by race, age, specific sexual identity, gender identity, or partner gender.

Methods

Participants and Procedures

Participants were drawn from FAB400, an ongoing cohort study of 488 female-assigned-at-birth sexual and gender minority (FAB SGM) youth, which includes sexual minority women, transgender men, and non-binary FAB youth. FAB400 employs a merged cohort accelerated longitudinal design (Galbraith, Bowden, & Mander, 2017), and includes two cohorts: (1) a late adolescent cohort recruited for FAB400 in 2016–2017 (N=400; 16–20 years old at baseline); and (2) a young adult cohort comprised of FAB SGM participants from Project Q2 (Mustanski, Garofalo, & Emerson, 2010), a longitudinal study of SGM youth that began in 2007 (N= 88; 23–32 years old at the FAB400 baseline assessment). Inclusion criteria for FAB400 and Project Q2 were virtually identical, requiring participants to be 16–20 years old at enrollment, speak English, and either identify with a sexual or gender minority label, report same-sex attractions, or report same-sex sexual behavior. (The age range of the FAB 400 young adult cohort is wider than expected because three participants were younger than16 years old and three were older than 20 years old at Q2 enrollment, which was not discovered until age verification became possible through identification checks during follow-up. Because this paper is not a developmental analysis and we only use data from FAB400 baseline, we retained these participants in the analytic sample.) To enroll in FAB400, participants were also required to have been assigned female at birth.

Each cohort was recruited using used an incentivized snowball sampling approach. Participants were recruited directly from various venues (i.e., SGM community organizations, health fairs, high school/college groups) and online social media advertisements (45% of the sample); enrolled participants could refer up to five peers to the study (55% of the sample). Participants were paid $10 for each peer they successfully recruited into the cohort. To determine if it were necessary to account for clustering due to recruitment chain, we calculated design effects, which quantify the extent to which the sampling error deviates from what would be expected if individuals were randomly assigned to clusters. The design effect for each IPV variable was less than the recommended cutoff of

2.0 (Muthen & Satorra, 1995), indicating that the small amount of non-independence present within recruitment chains would have a negligible effect on the Type I error rate. Therefore, we did not account for clustering in analyses.

In 2016–2017, all 488 participants completed the FAB400 baseline assessment, followed by additional assessments at 6-month intervals. Participants were paid $50 for each assessment. The study protocol was approved by the Institutional Review Board (IRB) at a midwestern university with a waiver of parental permission for participants under 18 years of age under 45 CFR 46, 408(c) (Mustanski, 2011). Participants provided written informed consent, and a federal certificate of confidentiality was obtained to safeguard participant confidentiality.

For the present study, we used data from the baseline assessment. At that interview, participants were asked to report on up to three sexual and/or romantic partnerships occurring in the last 6 months, one of which they designated as the most significant (i.e., "… the person that you spent the most time with, were most serious about, or who had the biggest effect on you"). For this paper, we selected the 352 participants who indicated having a romantic relationship with their most significant partner in the last 6 months, to be consistent with procedures used in most studies of IPV (see Capaldi et al., 2012). Demographic information for the full (N = 488) and analytic (N = 352) samples is presented in Table 1. Of note, this sample is diverse in race/ethnicity, gender identity, sexual orientation identity, and household income.

Measures

Sexual and gender identity.—To capture participants'sexual identity they were asked, "Which of the following commonly used terms best describes your sexual orientation?" with the options: gay, lesbian, bisexual, queer, unsure/questioning, straight/heterosexual, pansexual, asexual, and not listed (please specify). To assess gender identity, participants responded to the question, "What is your current gender identity?" with the following options: male, female, transgender, gender non-conforming, genderqueer, non-binary, and not listed (please specify). Gender identity was used to assign participants, all assigned female at birth, to one of two groups: (1) cisgender women (self-identified as female) or (2) gender minorities (participants who identified with any other gender identity).

Race/Ethnicity.—Participants were asked to select the category that best described their race from the following options: American Indian or Alaskan Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White, or Other (please specify); they were allowed to select more than one response. Participants also indicated whether they identified as Hispanic or Latino/Latina/Latinx, defined as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race." As recommended by the National Institutes of Health (2001), responses to these two items were used to categorize participants by race/ethnicity. All those who selected a Latinx ethnicity were classified as Latinx regardless of selected race. All others were classified based on the race they selected: Black, White, or Other (due to low numbers, we combined American Indian or Alaskan Native, Asian, Native Hawaiian or Other Pacific Islander, Other, and multiracial).

Partner gender identity.—Participants were asked to indicate their most significant partner's sex assigned at birth (male or female) and gender identity (using the same options listed for participant gender identity). These variables were used to categorize partners into one of three groups: (1) cisgender woman (assigned female at birth and identified as female); (2) cisgender man (assigned male at birth and identified as male); or (3) gender minority, which included individuals who identified as transgender, genderqueer, non-binary, gender non-conforming, or another gender identity (e.g., gender fluid), and those who did not identify with the sex they were assigned at birth (e.g., assigned male at birth and identified as female).

Psychological, Physical, and Sexual IPV.—The SGM Conflict Tactics Scale 2 (SGM-CTS2; Dyar, Messenger, Newcomb, Byck, Dunlap, & Whitton, under review) is a newly developed version of the CTS2 (SGM-CTS2; Dyar et al., under review; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), adapted to be culturally appropriate for SGM populations. Adaptations aimed to eliminate implicit assumptions of heterosexuality, increase inclusiveness of language for gender minorities (including non-binary genders), and improve the applicability of the sexual IPV items for the sexual activities of SGM. The SGM CTS2 is composed of 74 items and includes all subscales of the original CTS2 (which had 78 items), though the number of items differed in some cases. Subscales include minor psychological IPV (four items); severe psychological IPV (four items); minor physical IPV (five items); severe physical IPV (seven items); injury (six items); sexual IPV (five items). Each item, which describes a specific IPV behavior or event, is asked first about perpetration (e.g., "I slapped [partner name]") and second for victimization (e.g., "[partner name] slapped me") in the participant's most significant current or recent relationship. For each item, participants indicated how frequently the given event had occurred on a scale of 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*). Because we were interested in the past 6 months only, responses of 7 were recoded as 0. This response scale was also used for the measures of Coercive Control, SGM-Specific IPV, and Cyber Abuse (below).

Responses to these items were used to calculate two sets of scores: presence of victimization or perpetration of each type of IPV in the past 6 months, and frequency of any IPV types that were present. A given type of IPV was considered to be present if the participant endorsed any of the behaviors on the subscale (i.e., if the sum of subscale items was greater than 0); it was considered absent if the participant reported that every behavior on the subscale had never occurred in the last 6 months (i.e., if the sum of subscale items was 0). Next, for each type of IPV victimization or perpetration coded as present for a given participant, the frequency with which it had occurred was calculated by averaging the responses to each item on the subscale. These same procedures were used to calculate frequency and presence scores for the other three measures of IPV.

A psychometric evaluation of the SGM-CTS2 (Dyar et al., under review), which used the same sample as the present paper, showed the same factor structure as the CTS2, and evidence of construct validity (i.e., each IPV scale was associated as expected with couple conflict, jealousy, low relationship quality, and antisocial behavior). Internal reliability was acceptable for all subscales of the CTS-2 other than sexual IPV perpetration and

victimization (see Table 2), which was likely related to low endorsement and the small number of items (and consistent with the original CTS-2 sexual IPV scale; Straus et al., 1996). McDonald's omega (ω), a less biased estimate of internal consistency when scales have few items and are skewed (Dunn, Baguley, & Brunsden, 2014), was greater than .76 for each subscale (Dyar et al., under review).

Coercive Control.—The Coercive Control Scale was created by drawing five items from the Coercive Behaviors Scale (Frankland & Brown, 2014) and three items from the 2010 National Intimate Partner and Sexual Violence Survey (Black et al., 2011), which were adapted to improve cultural sensitivity for SGM participants (Dyar et al., under review). Example items include: "[Partner name] monitored my time and made me account for my whereabouts" and "[Partner name] made decisions for me that should have been mine to make, such as the clothes I wear, things I eat, or friends I have." For each of the eight items, a parallel item assessing perpetration was created. This measure has demonstrated evidence of construct validity via associations with related constructs (e.g., psychological IPV, couple conflict, jealousy, low relationship quality) and high internal consistency (ω = .94 for victimization and .92 for perpetration; Dyar et al., under review).

SGM-Specific IPV.—Dyar and colleagues (under review) developed the SGM-Specific IPV Tactics Scale to capture the unique types of IPV FAB-SGM individuals can experience as a result of their stigmatized identities. It includes five items capturing SGM-specific IPV victimization and five parallel items assessing perpetration. Example victimization items include: "[Partner name] threatened to out me to my friends, family, or other people in my life if I didn't do what they wanted" and "[Partner name] forced or coerced me into public displays of affection (e.g., hand holding, kissing, etc.) that they knew I wasn't comfortable with." This measure has demonstrated evidence of construct validity via positive associations with other types of IPV, couple conflict, and jealousy, as well as high internal consistency (ω = .89 for victimization and .96 for perpetration; Dyar et al., under review).

Cyber Abuse.—The Cyber Abuse Scale contains four items (each asked for both victimization and perpetration, for a total of 8 items). Two were drawn directly from the 16-item Cyber Dating Abuse measure (Zweig, Dank, Yahner, & Lachman, 2013) and two others were developed based on other items from that scale, combining content from similar items and clarifying language. Example items include: "[Partner name] pressured me to send a sexual or naked photo of myself" and "[Partner name] wrote mean or embarrassing things about me on social media." This measure has demonstrated evidence of convergent validity via associations with other types of IPV in samples of heterosexual and sexual minority youth and high internal consistency (α = .90; Zweig et al., 2013).

Results

Less than .02% of all items for all cases were missing. Considering individual cases, 2 individuals (.4%) had missing data and 99.6% of cases had no missing data. One participant was missing data on partner gender and another was missing data on both injury subscales, SGM-specific IPV perpetration, and cyber abuse victimization. No item had more than .3% missing data. Missing data were handled using pairwise deletion (i.e., individuals with

missing data were excluded from analysis of variables on which they were missing data). All analyses were conducted in SPSS version 23 except for the latent class analysis, which were conducted using Mplus version 7. Data can be accessed by emailing the first author.

Presence, Directionality, and Frequency of IPV Victimization and Perpetration

First, we calculated the proportion of individuals who reported that each type of IPV was present in their relationship in the last 6 months (reported in Table 2). Approximately 3/4 of the sample reported experiencing at least one type of IPV victimization and 3/4 reported at least one type of IPV perpetration (i.e., any type of IPV). Minor psychological IPV victimization and perpetration were the most common forms of IPV, reported by around 2/3 of participants. Sizeable minorities of the sample (21 – 33%) reported victimization and/or perpetration of severe psychological IPV, minor physical IPV, and coercive control. Rates of other forms of IPV ranged from 6–16%. For each type of IPV, rates of victimization and perpetration were similar.

Next, for relationships in which a given type of IPV was present, we examined its directionality (i.e., unidirectional vs. bidirectional). For each IPV type, we selected participants who reported that either victimization or perpetration of that type had occurred. Then, we calculated the proportion these participants reporting: 1) perpetration only, 2) victimization only, or 3) perpetration and victimization (indicating bidirectionality). Results (shown in Table 3) revealed that most participants' experiences of minor and severe psychological IPV, minor and severe physical IPV, injury, and coercive control were bidirectional. Rates of bidirectionality were highest for minor psychological IPV; 86% of participants who reported that this type of IPV was present in their relationship had both perpetrated and been victimized by minor psychological tactics. Similarly, 55–67% of the severe psychological IPV, minor and severe physical IPV, injury, and coercive control reported by our participants was bidirectional between partners. In contrast, for sexual IPV and cyber abuse, rates of mutual and unidirectional (victim only) patterns of IPV were present at similar proportions. SGM-specific IPV was unique in that the majority of participants who reported it indicated that they were victimized using this type of IPV but did not perpetrate it.

Then, we assessed the frequency with which each type of IPV occurred in relationships where it was present. As shown in Table 4, mean frequencies of each IPV type were below 2 for both victimization and perpetration. Because the response options of 0, 1, and 2 represent *never*, *once*, and *twice* within the past 6 months, respectively, these results indicate that each type of IPV tended to occur relatively infrequently. Minor psychological victimization and perpetration were most frequent; the mean scores of 1.62 and 1.57 reveal that, in relationships where minor psychological IPV was present, each minor psychologically abusive behavior on the subscale occurred on average between one and two times in the past 6 months. Other than major psychological victimization, the average frequencies of all other types of IPV were < 1.0, indicating they occurred, on average, less than once in the past 6 months. However, standard deviations were relatively large and scores covered the majority of the scale range for most IPV types. According to this pattern, most participants who experienced IPV did so infrequently, but a small proportion of the sample experienced more

frequent IPV. For example, some participants experienced minor psychological victimization more than 20 times; and major psychological, minor physical, injury, SGM specific, and cyber abuse were each experienced by some participants up to 6–10 times in the past 6 months.

Co-Occurrence of Types of IPV

Next, we explored the extent to which different types of IPV co-occur within the relationships of FAB SGM youth. First, we calculated the number of types of IPV victimization and perpetration each relationship included (Figure 1). Nearly half (47%) of relationships included more than one type of IPV victimization and 31% included more than two types. The distribution for the co-occurrence of different types of IPV perpetration was very similar.

To identify common patterns of co-occurring IPV experiences, we conducted two latent class analyses (McCutcheon, 1987)— one for IPV victimization and one for IPV perpetration. Variables representing the occurrence of each of the 9 types of IPV victimization (or perpetration) were used to identify latent classes of IPV victimization (or perpetration). Individuals with similar patterns of responses on the 9 IPV victimization variables were grouped together using posterior membership probabilities. We used a model-building approach, in which we started by estimating a model with one class and added one class at a time until lower Bayesian Information Criterion (BIC) values, lower sample size-adjusted BIC (adjusted BIC) values, significant Lo-Mendell-Rubin (LMR) likelihood ratio tests, and parametric bootstrapped likelihood ratio tests (BLRT) indicated a preference for the model with one less class than the current model (Dziak, Lanza, & Tan, 2014; Lo, Mendell, & Rubin, 2001; Nylund, Asparouhov, & Muthén, 2007; Tofighi & Enders, 2008; Yang, 2006). Higher entropy values indicate greater distinguishability of latent classes and precision with which individuals are categorized into classes (Ramaswamy, DeSarbo, Reibstein, & Robinson, 1993). Based on simulation studies, our LCAs were adequately powered (> .80; Dziak et al., 2014; Nylund et al., 2007).

IPV Victimization LCA.—Model fit statistics for one-, two-, three-, and four-class models are presented in Table 5. BIC, adjusted BIC, LMR, and BLRT suggested a 3-class solution. Figure 2 shows the 3-class solution based upon participants' probability of having experienced each of the nine types of IPV victimization. Class 1 (no/low IPV), which comprised 52.5% of the sample (n = 185), was characterized by a moderate risk for experiencing minor psychological IPV and low probabilities of experiencing any other type of IPV. Class 2 (psychological IPV) was characterized by high risk for minor psychological victimization, moderate risk for severe psychological and coercive control victimization, and low risk for all other types of IPV victimization. Class 2 comprised 32.1% of the sample (n = 113). Class 3 (high IPV) was characterized by high risk for experiencing minor and severe psychological victimization, minor physical victimization, and coercive control; and moderate risk for experiencing severe physical IPV, injury, and cyber abuse. Class 3 comprised 15.3% of the sample (n = 54).

IPV Perpetration LCA.—Similarly, BIC, adjusted BIC, LMR, and BLRT suggested a 3-class solution (Table 5; Figure 2). The three classes of IPV perpetration were very similar to the three IPV victimization classes. Class 1 (no/low IPV) was characterized by moderate risk of perpetrating minor psychological IPV and low risk for all other types of IPV (53.4% of the sample; $n = 188$). Class 2 (psychological IPV) was characterized by high risk for perpetrating minor psychological IPV, moderate risk for perpetrating severe psychological IPV and coercive control, and low risk for all other types of IPV (36.0%; $n = 127$). Class 3 (high IPV) was at high risk for perpetrating minor and severe psychological IPV, minor and severe physical IPV, and coercive control and moderate risk for causing injury or perpetrating sexual IPV (10.5%; $n = 37$).

Demographic Characteristics Associated with IPV Experiences

To assess for demographic differences in IPV victimization and perpetration experiences, we took two approaches. First, we ran multivariate logistic regressions in which presence (vs. absence) of each type of IPV was simultaneously predicted by four demographic variables: age, race/ethnicity (White [reference group], Black, Latinx, Other), sexual identity (lesbian [reference group], bisexual, queer, pansexual, other), and participant gender identity (cisgender woman = 0; gender minority = 1; Table 6). Given the high degree of overlap between sexual identity and partner gender, we did not include them as predictors in the same models. To examine partner gender's associations with IPV risk, we conducted a second set of multivariate logistic regressions in which each type of IPV was predicted by age, race/ethnicity, gender identity, and partner gender (cisgender woman [reference group], cisgender man, gender minority). We also explored the possibility of including cohort as a demographic correlate, but cohort and age were highly correlated ($r = .93$, $p < .001$), so only age was entered as a predictor. Power for these analyses was >.80 to detect moderate effects ($OR = 3.5$) for even the rarest types of IPV when the comparison group had $n \geq 50$ and for all comparison groups when the type of IPV was reported by ≥10% of the sample. Power was >.80 to detect small effects ($OR = 2.5$) when the type of IPV was reported by ≥ 15% of the sample and the comparison group had $n \geq 50$.

Results (Table 6), indicated many racial differences, but few other demographic differences in the probability of IPV. Controlling for other demographic factors, Black participants were at 2–3 higher risk than White participants for minor and severe psychological, minor physical, sexual, and coercive control victimization. Even more striking, Black participants' risks for minor and severe psychological, minor and severe physical, sexual, and coercive control perpetration were 3–6 times higher than for White participants. Results were similar, but not as strong, for Latinx participants: their rates of severe psychological and coercive control victimization were about 2.5 times higher than those of White participants, and their rates of perpetrating severe psychological IPV, minor physical IPV, and coercive control were 3–4.5 times higher. Other minority racial groups were only at greater risk for perpetrating severe psychological IPV. Age was positively associated with risk of being injured by a partner, but no other types of IPV. Results revealed only one difference by sexual identity: Bisexual and pansexual individuals were at greater risk for SGM-specific victimization compared to lesbians. There were no differences between cisgender female and gender minority participants in occurrence of any type of IPV. Finally, the only

difference in IPV occurrence by partner gender was that, compared to participants with cisgender female partners, those with gender minority partners were at greater risk for perpetrating coercive control and SGM-specific IPV.

Second, we examined whether demographic factors predicted the pattern of SGM's IPV experiences, as defined by the three latent classes for IPV victimization and perpetration, using multinomial logistic regressions with Class 1 (no/low IPV) as the reference group (Table 7). Power for detecting differences was > .80 for small effects ($OR = 2.5$) when the comparison group's $n \geq 50$. Power was > .80 to detect moderate effects ($OR = 3.5$) for all analyses. Results largely echoed findings from the analyses predicting each IPV type, showing elevated risk for more severe IPV experiences in racial/ethnic minority participants. Black participants were at 2.5–3 times higher risk of being in the psychological IPV victimization or perpetration groups, over 4 times higher risk for being in the high IPV victimization group, and over 18 times higher risk for being in the high IPV perpetration group compared to White participants. The same pattern of results emerged for Latinx individuals, although the odds ratios were somewhat smaller (2.28 and 12.52, respectively). No other demographic differences emerged.

Sensitivity Analyses

Twenty dyads (who reported on the same relationship) were present in the analytic sample. To determine whether the non-independence of data within these dyads affected the results, we conducted sensitivity analyses after randomly removing one partner from each dyad ($n = 332$). The results were virtually identical to those using all 352 participants. The percentage reporting each type of IPV differed by less than .5% (e.g., 63.9% reported minor psychological IPV victimization vs. 63.6% in the main analyses) and the percent reporting bidirectional or unidirectional IPV differed by less than 0.5%. The average frequency of IPV experiences differed only slightly across the two sets of analyses (mean differences < .05). The co-occurrence of IPV was also nearly identical and the LCA yielded the same three-class solution. Odds ratios for demographic factors predicting types of IPV remained very similar in size, but five moved from significance at $p < .05$ to trending ($p < .10$), likely due to reductions in power: In the reduced sample, Black participants were at marginally greater risk for coercive control victimization ($OR = 1.91$, $p = .07$) and severe physical IPV perpetration ($OR = 4.38$, $p = .06$); individuals of Other races were at marginally higher risk for severe psychological IPV perpetration ($OR = 2.29$, $p = .08$); and bisexual ($OR = 2.12$, $p = .09$) and pansexual ($OR = 2.66$, $p = .07$) individuals were at marginally higher risk for SGM-specific IPV victimization.

Discussion

The results of this study paint a rich picture of the IPV experiences of young, female-assigned-at-birth sexual and gender minority (FAB SGM) adolescents and young adults. Beyond replicating the high rates of physical and sexual IPV victimization previously documented in this population (e.g., Dank et al., 2014; Olsen et al., 2017), findings indicate that other forms of IPV victimization are also prevalent, rates of perpetration are high, bidirectional IPV between partners is common, many relationships include more than one

type of IPV, and the frequency of IPV events varies widely across individuals. Further, among FAB SGM youth, those with minority racial and ethnic identities are at greatest risk for a range of IPV experiences. Together, these findings significantly extend the existing literature, advancing our understanding of IPV among this marginalized and understudied group in a number of ways.

Rates and Directionality of IPV

Results suggest that FAB SGM youth experience high rates of victimization by intimate partners across a range of specific types of IPV. Echoing findings from representative samples of female sexual minority adolescents (e.g., Martin-Storey, 2015; Olsen et al., 2017), sizeable numbers of our participants experienced minor physical, major physical, and sexual IPV victimization within the last 6 months. These rates of physical and sexual abuse in our sample were higher than those observed among heterosexual youth, underscoring how FAB SGM youth are a group at risk for being physically and sexually abused by dating partners. Minor psychological IPV was reported by two-thirds of participants and severe psychological abuse by one-third, highlighting the importance of including psychological IPV in our understanding of SGM's victimization experiences. Although psychological abuse is often perceived to be less severe than other forms of IPV, some data suggests that it actually may have more negative effects than physical IPV on mental health (Hellemans, Loeys, Buysse, Dewaele, & De Smet, 2015; Pepper & Sand, 2015). It is possible, then, that the higher rates of psychological victimization among SGM versus heterosexual youth (e.g., Dank et al., 2014) may contribute to their relatively higher risk for mental health problems (Marshal et al., 2011).

We also observed that several other forms of IPV victimization, which have received less attention by researchers, were common. Coercive control was reported by close to one-third of the FAB SGM youth and young adults in our sample, echoing findings from samples of lesbian and bisexual adult women (Walters et al., 2013). Having a sexual or gender minority identity may raise an individual's vulnerability to being manipulated and controlled by an intimate partner. Although rates of cyber abuse were lower than has been found in previous studies (38%; Dank et al., 2014), this was likely due to our selection of only the 8 items from their 32-item Cyber Abuse scale that assessed unambiguously harmful technology-based behaviors. Nevertheless, the present findings suggest it is a relatively common form of IPV that warrants further research and attention in IPV prevention efforts. Finally, the finding that 15% of participants experienced SGM-specific IPV in the last 6 months highlights the importance of including this unique type of IPV in future studies of IPV among SGM youth.

Rates of perpetration were very similar to rates of victimization across all types of IPV, suggesting that FAB SGM youth are also at high risk for abusing their romantic partners. As with victimization, 74% of participants reported perpetrating any IPV, with minor psychological IPV perpetration most common. Rates of severe and highly specific forms (SGM-specific IPV and cyber abuse) of IPV were lower (5–10%) but still quite notable, especially considering the 6-month time frame for reporting. The observed rates of perpetration may have been inflated by participants misreporting playful behavior or self-

defense as IPV (Lehrner & Allen, 2014), especially since women are more likely than men to over-report perpetration (Ackerman, 2018). Nevertheless, these rates are higher than those observed in heterosexual female youth (e.g., Dank et al., 2014), who are also susceptible to over-reporting. SGM individuals may experience higher rates of common risk factors for perpetrating IPV (e.g., child abuse; Capaldi et al., 2012), as well as additional unique risk factors related to their minority identity, such as the disempowerment associated with identity concealment and internalized stigma (Edwards & Sylaska, 2013).

The high rates of perpetration observed in our sample also reflect another key study finding: bidirectional IPV is very common. In the majority of relationships where psychological IPV, physical IPV, injury, or coercive control was present, it was perpetrated by both partners. The only exceptions to this pattern were for sexual IPV and cyber abuse, for which bidirectional IPV and unidirectional victimization were equally common, and for SGM-specific IPV, for which unidirectional victimization was most common. Perhaps FAB SGM are more reluctant to report perpetrating these IPV tactics, or are less aware of having performed behaviors on these subscales (e.g., that their partner perceived them as having insisted on sex or public displays of affection). IPV in different-sex relationships has been conceptualized as largely dyadic in nature (Langhinrichsen-Rohling & Capaldi, 2012), with one partner's aggression depending upon the other's aggression (Shortt et al., 2012); the current findings suggest it may also be dyadic in SGM relationships. However, some bidirectional IPV actually represents intimate terrorism by one partner and self-defense by the other. To distinguish this type of IPV from situational couple violence, the context of control in which it develops must be considered (e.g., Badenes-Ribera, Bonilla-Campos, Frias-Navarro, Pons-Salvador, & Monterde-i-Bort, 2016).

Co-Occurrence of Different IPV Types

We also found that different types of IPV commonly co-occur within relationships, and may do so in predictable clusters. About 50% of relationships included no IPV or just one type (typically minor psychological), while the other half included two or more forms of IPV and a third included three or more. The LCA results indicate that about half the participants' relationships were characterized by no IPV or minor psychological IPV only. Given that many of the behaviors included on the minor psychological scale of the CTS are arguably non-abusive—though admittedly ineffective—conflict resolution strategies (e.g., stomped out of the room or house or yard during a disagreement), this group of participants can generally be considered to have reported no substantive IPV. The two other latent classes suggest that there may be two types of relationships in which IPV is present. In many relationships (1/3 of this sample), the IPV consists of minor psychological aggression and includes destructive conflict behaviors (e.g., yelling and leaving an unfinished discussion,), severe psychological abuse (e.g., name-calling, threats of violence, property destruction), and coercive control (e.g., controlling or limiting access to money, making it difficult to see friends or family). In a smaller set of relationships (10–15% of this sample), physical aggression (often leading to injury), sexual coercion or violence, and cyber abuse are likely to be present with psychological IPV. Future research is needed to replicate these clusters, and to explore whether there are distinct risk factors and consequences of each type of abusive relationship.

Studies assessing only one or two types of IPV (typically physical and/or and sexual IPV) may give an incomplete picture of youth's IPV experiences. When possible, researchers should attempt to assess the wide range of IPV types and explore whether multiple types are present. If time prohibits full measures of every IPV type, a good strategy may be to use multi-item measures of the most prevalent types along with 1–2 items to screen for the less common types.

Frequency of IPV Experiences

We found a wide range of how frequently IPV occurred. On average, specific events of minor psychological IPV (victimization or perpetration) and major psychological victimization occurred 1–2 times over a 6 month period, while all other types of IPV occurred less than once in that time frame. The infrequency of IPV events is similar to that observed in two samples of adult women in same-sex relationships (Balsam & Szymanski, 2005; Craft, Serovich, McKenry, & Lim, 2008) and consistent with recent findings that female LGB teens experienced physical and sexual IPV victimization an average of 0.51 and 0.62 times, respectively, in the past 12 months (Olsen et al., 2017). However, the frequency of IPV events differed dramatically across relationships. Some participants were victimized by minor psychological IPV more than 20 times and perpetrated minor psychological IPV 11–20 times in the past 6 months., while some youth experienced victimization or perpetration of major psychological, minor physical, injury, SGM-specific, and cyber abuse up to 6–10 times in the past 6 months. Because it is likely that experiencing one abusive event is quite different from experiencing such events on a weekly basis, researchers should consider not only presence, but also frequency of IPV. To be clear, the harmfulness of certain acts of IPV, especially those that are severe or occur in the context of unilateral control, is not solely determined by their frequency (e.g., Badenes-Ribera et al., 2016). Nevertheless, it would be useful to explore if, within specific types of IPV, greater frequency is associated with worse social and health outcomes.

Demographic Differences in IPV Among Young FAB SGM

Across types of IPV, Black youth reported the highest rates of victimization and perpetration (2–6 times the rates in White youth), followed by Latinx youth, whose IPV rates were 2.3–4.5 times higher than those of White youth. Moreover, both Black and Latinx participants were 2–4 as likely as Whites to be in a relationship characterized by either severe psychological IPV or multiple types of IPV victimization, and over 12 times as likely to be in a high IPV perpetration relationship. These results and findings from a mixed-gender sample of SGM youth (Reuter et al., 2017; Whitton et al., 2016) and adult sexual minority women (Balsam & Szymanski, 2005) suggest that having a minority racial status may increase risk for IPV among SGM. From an intersectionality persepective (Cole, 2009; Institute of Medicine, 2011), the stigma, prejudice, and discrimination that SGM youth of color face, based on both their race/ethnicity and their sexual minority identity, may intersect to increase their vulnerability to IPV (Meyer, Dietrich, & Schwartz, 2008). Further, because of racism within the SGM community, homonegativity within racial/ethnic communities, and both racism and homonegativity within the mainstream community (e.g., Greene, 1996), sexual minority people of color may lack social support, an important protective factor against IPV (Capaldi et al., 2012). Targeted interventions and policies to prevent IPV in

SGM youth of color, which attend to the multiple sources of minority stress they experience, are needed (Moradi et al., 2010).

There was a striking lack of differences between other demographic subgroups of FAB SGM youth. Sexual identity (i.e., self-identified sexual orientation) was unrelated to risk for any type of IPV other than SGM-specific victimization, which was higher in bisexual and pansexual than lesbian participants, possibly reflecting the stigma associated with having attractions to more than one gender (Brewster & Moradi, 2010). Non-monosexual individuals commonly report experiencing invalidation of their sexual identity and negative stereotypes (e.g., that they are sexually promiscuous) from both heterosexual and gay or lesbian people (e.g., Brewster & Moradi, 2010). It was surprising, however, that there were not similar differences on sexual IPV, given that bisexuals have reported higher rates of sexual victimization than lesbians in young (Freedner et al., 2002; Whitton et al., 2019) and adult samples (Walters et al., 2013). However, the current findings replicate others suggesting that bisexual adolescents are not at higher risk than gay or lesbian youth for physical IPV (Freedner et al., 2002) or of experiencing any IPV victimization (including physical, sexual, or emotional abuse; Reuter et al., 2015). Perhaps the heightened risk for physical and other forms of IPV associated with bisexuality in women (Walters et al., 2013) does not emerge until adulthood (Blosnich & Bossarte, 2012). Future research is needed to explore this possibility.

The lack of differences in IPV by partner gender was also unexpected, given past evidence that bisexual women are victimized more frequently by male than female partners (Balsam et al., 2005; Messinger, 2011). The current results—along with similar findings from another adolescent sample (Freedner et al., 2002)—suggest they are not, at least among young urban FAB SGM youth and young adults. However, participants did report perpetrating more SGM-specific IPV and coercive control against gender minority partners than against cisgender female partners. This finding raises the possibility that FAB gender minority youth are vulnerable to some forms of IPV, and highlights the importance of assessing partner gender inclusively, beyond binary categories of male and female.

It was also surprising that gender minority participants were not at greater risk than cisgender female youth for any form of IPV. In past research, transgender youth were at markedly greater risk than cisgender sexual minority youth for all forms of IPV victimization (Dank et al., 2014; Whitton et al., 2019). Given the high proportion of gender non-binary, rather than transgender, participants in this sample, these findings may indicate that the elevated rates of IPV for transgender youth do not extend to other gender minority groups (e.g., non-conforming, genderqueer, non-binary). Future research with large numbers of both groups is needed to clarify these questions.

Study Limitations

There are several limitations of the study. First, the non-probability sample limits the extent to which findings can be viewed as representative of the general population of FAB SGM youth. Because many participants were recruited via SGM-focused events or social media connections, they may be more embedded in the LGBT community and more likely to be “out” than the average FAB SGM youth, which might reduce their vulnerability to some

forms of IPV (e.g., threats of outing; social isolation). Because all participants were recruited from Chicago, findings may not reflect FAB SGM individuals' experiences in other regions, especially those less accepting of non-heterosexuality. However, the present sample was community-based and more representative than samples drawn from courts, shelters, or clinics, which overestimate IPV prevalence. Second, although the proportion of White, Black, and Latinx participants closely matched the demographic composition of Chicago, enhancing generalizability and allowing for comparisons between these racial/ethnic groups, other racial/ethnic minority groups (Asian, multiracial) were too small for reliable comparisons. Third, our sample included only SGM youth assigned female at birth; other studies are needed to gather a similarly detailed picture of the IPV experiences of SGM youth assigned male at birth. Fourth, we were unable to directly test whether the observed rates of IPV among our FAB SGM participants were higher than in heterosexual cisgender youth, because we did not have a comparison group with those demographic characteristics. Fifth, low internal consistency of the sexual IPV scales, which was likely due to low endorsement of some items and small numbers of items, may have limited our ability to detect associations between these scales and other variables.

We did not assess factors, beyond demographic characteristics, that may raise the risk for IPV in FAB SGM youth. The high rates of IPV observed in this study highlight the need for future research aimed at identifying risk factors unique to SGM individuals, such as minority stressors (e.g., internalized stigma, experiences of rejection) and relationship-specific factors (e.g., relationship marginalization, power imbalances between partners, consensual non-monogamy). Finally, our analyses focused on the IPV experiences of FAB SGM youth, with no attention to the positive aspects of their romantic partnerships. It is important not to conclude that romantic relationships are largely associated with negative outcomes in this population, especially in light of evidence that romantic involvement can be protective against psychological distress (Whitton, Dyar, Newcomb, & Mustanski, 2018b) and heavy alcohol consumption (Whitton, Dyar, Newcomb, & Mustanski, 2018a) for some SGM young people.

Practice Implications

Study findings highlight the urgency for prevention and intervention efforts to address IPV among FAB SGM youth. This may require significant changes in existing IPV services, which are largely ill-informed about SGM IPV and about sexual minority people more generally: 70% of service providers lack training in culturally competent SGM-related services, 91% lack funding and staffing for services to sexual minority victims, and many fail to identify same-sex violence as IPV (Ciarlante & Fountain, 2010). SGM IPV victims are often denied access to domestic violence shelters (National Coalition of Anti-Violence Programs, 2012) and shelters that do grant them access often do not adequately protect them from their same-gender batterers (Bornstein et al., 2006). Not surprisingly, SGM women have reported feeling marginalized and unsupported by what they described as the inadequate, incompetent, and often homophobic responses of the domestic violence service system (Alhusen et al., 2010). To address these issues, we recommend that agencies and individual practitioners who provide IPV services seek to build cultural competency in work with SGM people through formal trainings, continuing education, and consultation with

local LGBT organizations. At a minimum, practictioners should be aware that IPV can and does occur in same-sex relationships—at significant costs to the victims—and professionals should engage in efforts to increase the inclusivity of their services.

Efforts to prevent and treat IPV among FAB SGM people are likely to be most effective if they address the common risk factors shared by all people as well as the unique risks associated with a sexual or gender minority identity, including discrimination (Lewis et al., 2017), internalized stigma (Carvalho et al., 2011), and lack of family and community support (Eisenberg & Resnick, 2006). The observed rates of SGM-specific IPV tactics, grounded in societal stigma, suggest that IPV screening assess for these tactics. Further, IPV services should include education about how any use of an individual's SGM status by a partner to shame, criticize, isolate, or control them is a form of relationship abuse that should be taken seriously by victims and by service providers. Anti-IPV programming for SGM people of color, who our findings show are at particularly high risk for IPV, must also attend to the multiple sources of minority stress they experience due to having more than one minority identity (Meyer, 2003).

The vast majority of IPV in our sample was bidirectional between partners, suggesting that SGM IPV is often a dyadic process in which both partners engage in verbal or physical aggression during an escalated conflict (Langhinrichsen-Rohling & Capaldi, 2012). IPV prevention and intervention programs for SGM youth may therefore be most effective if they focus on promoting healthy relationship skills, including constructive conflict resolution strategies, rather than solely on treating perpetrators. This approach might be particularly helpful in reducing minor psychological aggression, which is the most common form of IPV (this study; Halpern et al., 2004) and is largely composed of destructive behaviors enacted during couple conflicts (e.g., shouting or yelling, swearing, stomping out of the room). However, a minority of relationships were characterized by more severe psychological IPV, by multiple types of IPV (including psychological, physical, and sexual abuse), or by unidirectional IPV. Therefore, practitioners must assess for a broad range of IPV behaviors and attend to the context in which they occur in order to appropriately conceptualize and address them.

Conclusions

This study significantly extends the nascent literature on IPV among FAB SGM adolescents and young adults by providing an in-depth exploration of this population's IPV experiences. We hope that the high rates of IPV perpetration and victimization observed in this sample, particularly among FAB SGM youth of color, will spur additional research aimed at identifying factors that increase the risk for IPV in this population. In particular, future studies are needed to elucidate how stressors based on having a minority sexual, gender, and/or racial identity (e.g., discrimination and internalized stigma; Lewis et al., 2017) may contribute to IPV. We also hope these results will be used to advocate for policies and interventions targeted specifically at preventing IPV among FAB SGM people, particularly those who also identify with a racial minority identity. Given the negative effects of IPV on health and mental health (Exner-Cortens et al., 2013; Smith et al., 2017), reducing rates of IPV in this at-risk group might help to reduce the significant health disparities they face.

Finally, the detailed information about the prevalence, frequency, and directionality of a wide range of IPV types reported by our participants can be used to educate SGM youth, their parents, teachers, peers, and service providers about the IPV experienced by this understudied population.

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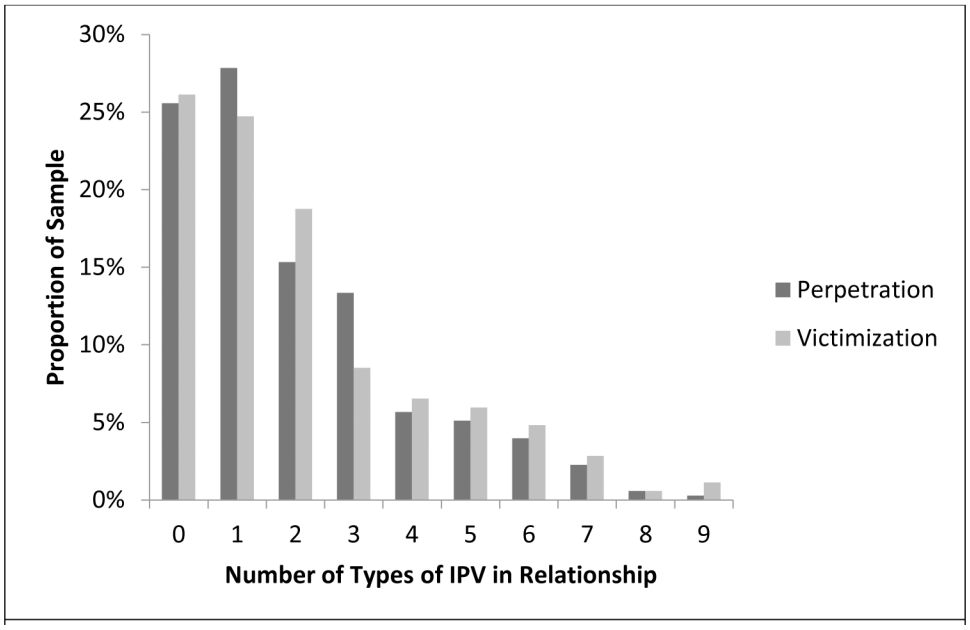

Figure 1.
Number of types of Intimate Partner Violence victimization and perpetration present in each relationship.

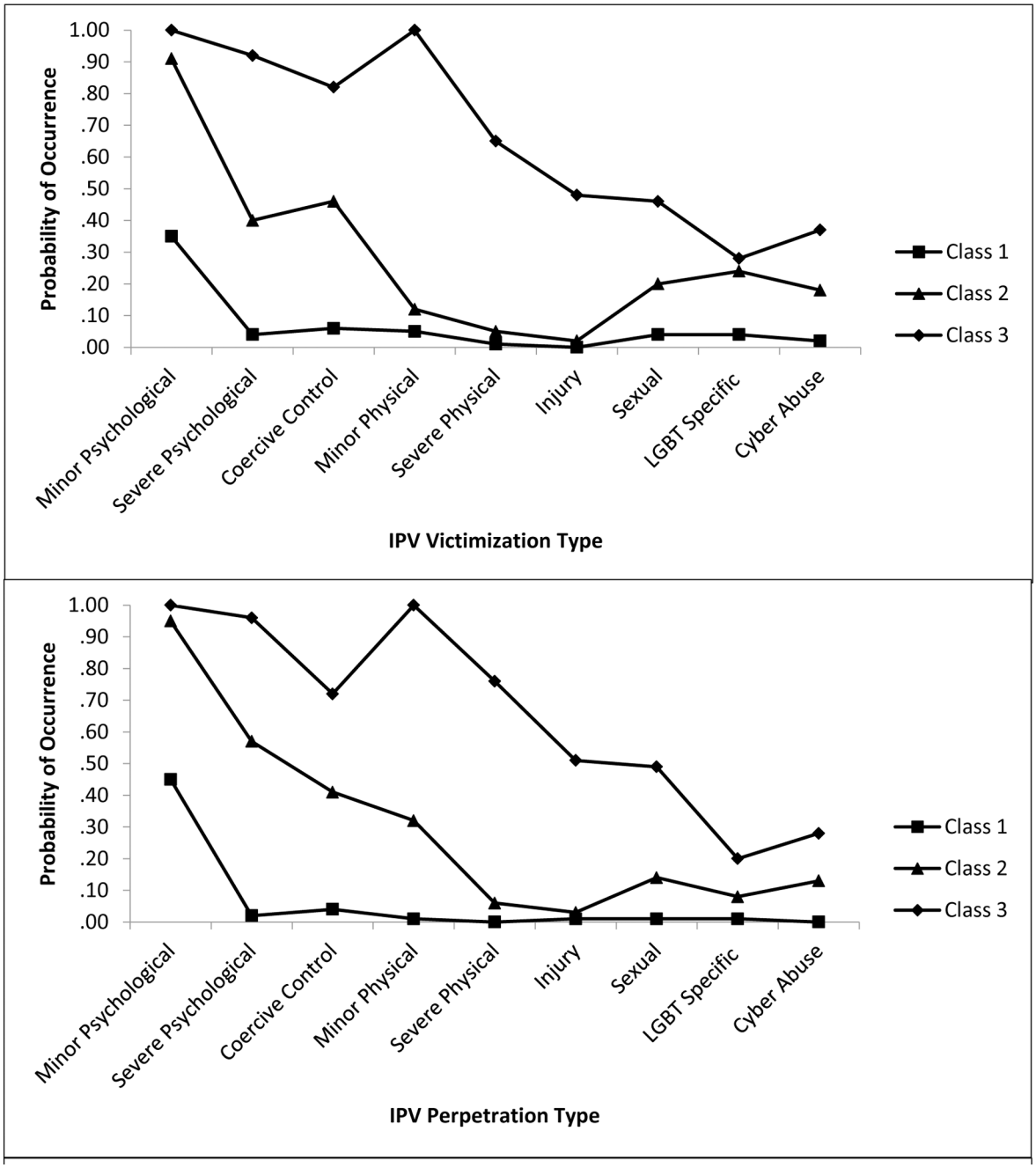

Figure 2.

Latent classes of Intimate Partner Violence (IPV) victimization (above) and perpetration (below). Class 1 is low IPV risk and represents 52.5% and 53.4% of sample in victimization and perpetration models respectively. Class 2 is psychological IPV only and consists of 32.1% and 36.0% of the sample in victimization and perpetration models. Class 3 is high IPV risk and consists of 15.3% and 10.5% of the sample in victimization and perpetration models respectively. Types of IPV were reordered in this figure so that similar types of IPV (e.g., psychological and coercive control) were grouped together for ease of interpretation.

Table 1

Demographics for Full and Analytic Samples of Participants Identified as Female at Birth.

	Full Sample *N* = 488		Analytic Sample *N* = 352	
Demographic Variable	***n***	**%**	***n***	**%**
Cohort				
2016 Cohort	400	82.0%	275	78.1%
2007 Cohort	88	18.0%	77	21.9%
Race/Ethnicity				
White	127	26.0%	82	23.3%
Black	170	34.8%	133	37.8%
Latinx	120	24.6%	93	26.4%
Other	71	14.5%	44	12.5%
Participant Gender				
Cisgender Women	360	73.8%	269	76.4%
Transgender or Male	44	9.0%	27	7.7%
Genderqueer	30	6.1%	22	6.3%
Gender Nonconforming	29	5.9%	19	5.4%
Non-Binary	15	3.1%	8	2.3%
Other Gender Identity	10	2.0%	7	2.0%
Sexual Identity				
Lesbian	115	23.6%	94	26.7%
Bisexual	181	37.1%	132	37.5%
Queer	64	13.1%	36	10.2%
Pansexual	82	16.8%	62	17.6%
Unsure/Questioning	21	4.3%	10	2.8%
Straight/Heterosexual	6	1.2%	5	1.4%
Asexual	12	2.5%	7	2.0%
Other Sexual Identity	7	1.4%	6	1.7%
Partner Gender				
Cisgender Women	172	35.2%	156	44.3%
Cisgender Man	176	36.1%	143	40.6%
Gender Minority	51	10.5%	52	14.8%
No Relationships	88	18.2%	0	0.0%
Missing	1	18.2%	1	0.3%
Household Income				
< $20,000	95	19.5%	70	19.9%
$20,000-$39,999	110	22.5%	88	25.0%
$40,000-$59,999	105	21.5%	78	22.1%
$60,000-$79,999	65	13.3%	45	12.8%
≥ $80,000	109	22.3%	69	19.6%
Missing	4	.8%	2	.6%

	Full Sample ***N*** **= 488**		**Analytic Sample** ***N*** **= 352**	
Demographic Variable	***n***	**%**	***n***	**%**
Age (*M, SD*)	20.06 (3.66)		20.44 (3.87)	

Table 2

Proportion of Participants Reporting Intimate Partner Violence (IPV) Victimization and Perpetration, by IPV Type.

	Victimization			*Perpetration*		
Type of IPV	***n***	**%**	**α**	***n***	**%**	**α**
Minor Psychological	224	63.6%	.75	247	70.2%	.74
Severe Psychological	102	29.0%	.67	117	33.2%	.65
Minor Physical	75	21.3%	.82	82	23.3%	.77
Severe Physical	42	11.9%	.81	36	10.2%	.85
Injury	27	7.7%	.83	24	6.8%	.71
Sexual	55	15.6%	.48	38	10.8%	.54
Coercive Control	109	31.0%	.78	90	25.6%	.73
SGM-Specific	52	14.8%	.63	20	5.7%	.85
Cyber Abuse	44	12.5%	.64	28	8.0%	.75
Any Type of IPV	*260*	*73.9%*		*262*	*74.4%*	

Note. % calculated based on the analytic sample ($N = 352$).

Table 3

Bidirectional and Unidirectional Intimate Partner Violence (IPV).

	Bidirectional		***Unidirectional: Victim Only***		***Unidirectional: Perpetrator Only***	
Type of IPV	***n***	**%**	***n***	**%**	***n***	**%**
Minor Psychological	218	86.2%	6	2.4%	29	11.5%
Severe Psychological	86	64.7%	16	12.0%	31	23.3%
Minor Physical	63	67.0%	12	12.8%	19	20.2%
Severe Physical	28	56.0%	14	28.0%	8	16.0%
Injury	18	54.5%	9	27.3%	6	18.2%
Sexual	25	36.8%	30	44.1%	13	19.1%
Coercive Control	79	65.8%	30	25.0%	11	9.2%
SGM-Specific	9	14.5%	42	67.7%	11	17.7%
Cyber Abuse	21	41.2%	23	45.1%	7	13.7%
Any Type of IPV	*243*	*87.1%*	*17*	*6.1%*	*19*	*6.8%*

Note. For each type of IPV, % was calculated based on the total number of relationships that included victimization and/or perpetration of that IPV type.

Table 4

Frequency of Intimate Partner Violence (IPV).

	Victimization			Perpetration		
Type of IPV	**Mean**	***SD***	**Range**	**Mean**	***SD***	**Range**
Minor Psychological	1.62	1.24	.25-6.00	1.57	1.23	.25-5.50
Severe Psychological	1.02	.94	.25-4.25	.89	.89	.25-4.75
Minor Physical	.96	.99	.20-4.20	.83	.90	.20-4.20
Severe Physical	.59	.71	.14-3.86	.46	.67	.14-3.86
Injury	.67	.82	.17-4.33	.62	.65	.17-3.17
Sexual	.69	.58	.20-3.80	.64	.69	.20-4.20
Coercive Control	.77	.77	.13-3.50	.58	.61	.13-3.25
SGM-Specific	.58	.65	.20-4.00	.57	.92	.20-4.20
Cyber Abuse	.90	.75	.25-4.00	.67	.76	.25-4.00

Note. Frequency of each type of IPV calculated using only participants who reported that type of IPV. Response options included: 0 (*never*), 1 (*once*), 2 (*twice*), 3 (*3-5 times*), 4 (*6-10 times*), 5 (*11-20 times*), 6 (*more than 20*).

Table 5

Model Fit for Latent Class Analyses.

Model Type	# Classes	BIC	Adjusted BIC	LMR		BLRT		Entropy
				estimate	*p*	estimate	*p*	
Victimization	1	3050.95	3022.39	-	-	-	-	-
	2	2639.11	2578.84	462.58	< .001	470.47	< .001	.88
	3	2631.71	2539.71	64.93	.003	66.04	< .001	.73
	4	2665.97	2542.24	23.97	.70	24.37	.18	.78
Perpetration	1	2709.08	2680.53	-	-	-	-	-
	2	2359.90	2299.63	400.98	< .001	407.82	< .001	.79
	3	2341.23	2249.23	76.01	.05	77.30	< .001	.78
	4	2378.79	2255.07	20.72	.13	21.08	.09	.79

Note. BIC = Bayesian information criterion; LMR = Lo-Mendell-Rubin Likelihood Ratio Test; BLRT = parametric bootstrapped likelihood ratio test. Lower BIC values indicate a better fitting model. Significant LMR and BLRT indicate preference for the current model over the model with one less class.

Table 6

Multivariate Associations Between Demographic Factors and Intimate Partner Violence (IPV; Odds Ratios).

		Race			Sexual Identity				Participant Gender Identity	Partner Gender[a]	
	Age	Black	Latinx	Other	Bisexual	Queer	Pansexual	Other		Cisgender Man	Gender Minority
Victimization											
Minor Psychological	1.04	3.10**	1.72	1.04	.97	.79	.74	.73	.69	.75	.88
Severe Psychological	.95	3.62**	2.49*	2.43	.85	.99	.59	1.12	1.04	.61	1.00
Minor Physical	.98	2.36*	1.16	1.94	1.08	.55	.59	.72	.58	.90	1.23
Severe Physical	1.04	2.13	1.32	1.82	.66	.38	.21	.39	.49	.60	.78
Injury	1.12*	1.18	1.32	1.61	.50	.61	.15	.56	1.01	.75	.76
Sexual	1.03	2.67*	1.82	1.89	1.33	-	1.54	1.18	1.70	1.52	1.31
Coercive Control	1.03	2.11*	2.34*	1.53	.98	.53	.64	1.09	.92	.79	1.34
SGM-Specific	.95	.49	.86	.86	2.43*	.65	2.01*	1.25	.79	1.48	1.23
Cyber Abuse	.92	2.47	2.35	1.39	.99	.79	.99	.81	.74	1.25	2.01
Perpetration											
Minor Psychological	1.01	2.72**	1.56	.93	1.11	1.00	1.16	.74	.66	.86	.74
Severe Psychological	.96	4.71**	3.15**	2.90*	.81	.74	.85	.64	.83	.77	1.25
Minor Physical	.98	4.10**	2.91*	2.09	1.01	.68	.68	.84	.63	.91	1.34
Severe Physical	1.07	4.73*	3.35	2.46	.68	.26	.31	.51	.50	.97	1.01
Injury	1.07	1.51	2.07	1.09	.51	.56	.16	.32	.66	.66	.61
Sexual	1.07	6.35*	4.51	2.43	.90	.21	.81	1.17	1.47	1.16	1.35
Coercive Control	1.01	5.38**	4.51**	2.57	.96	1.10	1.18	2.22	.67	1.23	2.27*
SGM-Specific	.94	2.03	2.49	1.14	.87	1.08	1.86	2.27	1.98	2.25	7.13**
Cyber Abuse	.94	1.04	.98	.25	.87	.95	.29	.79	.79	.98	1.49

Note. Reference group: race (White), sexual identity (lesbian), partner gender (cisgender woman). Participant gender identity (0 = cisgender women; 1 = gender minority).

[a]Given the high degree of overlap between sexual identity and partner gender, partner gender and sexual identity were not included as simultaneous predictors. All results, except for those for partner gender, are from a set of multivariate regressions in which age, race/ethnicity, sexual identity, and gender identity were entered as predictors. Results presented for partner gender are from a separate set of analyses, in which age, race/ethnicity, gender identity, and partner gender were included as predictors.

* $p < .05$;

** $p < .01$.

Table 7

Multivariate associations between demographic factors and Intimate Partner Violence (IPV classes; Odds Ratios).

	Victimization: Psychological IPV		Victimization: High IPV		Perpetration: Psychological IPV		Perpetration: High IPV	
	***b* (*SE*)**	***OR***	***b* (*SE*)**	***OR***	***b* (*SE*)**	***OR***	***b* (*SE*)**	***OR***
Age	−.02 (.03)	.98	.01 (.04)	1.01	−.05 (.03)	.95	.02 (.05)	1.02
Race: Black	.93 (.35)	2.54**	1.41 (.51)	4.09**	1.10 (.34)	3.00**	2.90 (1.05)	18.14**
Race: Latinx	1.04 (.35)	2.82**	.73 (.56)	2.07	.82 (.34)	2.28*	2.53 (1.07)	12.52*
Race: Other	.54 (.44)	1.72	.97 (.62)	2.64	.63 (.42)	1.88	1.46 (1.26)	4.29
Sexual Identity: Bisexual	.16 (.32)	1.17	.10 (.38)	1.10	.07 (.31)	1.07	−.53 (.44)	.59
Sexual Identity: Queer	.07 (.47)	1.07	−.60 (.71)	.55	.42 (.46)	1.52	−.66 (.87)	.52
Sexual Identity: Pansexual	.15 (.39)	1.16	−.81 (.63)	.44	.17 (.39)	1.18	−1.38 (.83)	.25
Sexual Identity: Other	.41 (.49)	1.50	−.06 (.66)	.94	.37 (.48)	1.44	−.70 (.84)	.50
Participant Gender Identity	.03 (.30)	1.03	−.22 (.04)	.80	−.59 (.31)	.55	−.39 (.58)	.68
Partner Gender: Cisgender Man[a]	−.11 (27)	.89	−.31 (.35)	.73	.02 (.26)	1.02	−.30 (.42)	.74
Partner Gender: Gender Minority[a]	.37 (.38)	1.45	.28 (.52)	1.32	.35 (.38)	1.42	.90 (.59)	2.46

Note. Reference group: race (White), sexual identity (lesbian), partner gender (cisgender woman). Participant gender identity (0 = cisgender women; 1 = gender minority); reference group for outcome (IPV class) is Class1 (low risk).

[a]Given the high degree of overlap between sexual identity and partner gender, these two variables were not included as simultaneous predictors. All results, except for those for partner gender, are from multivariate regressions in which age, race/ethnicity, sexual identity, and gender identity were predictors. Results presented for partner gender are from a separate set of analyses, in which age, race/ethnicity, gender identity, and partner gender were predictors.

*$p < .05$;

**$p < .01$.