

Dyadic Reporting of Intimate Partner Violence Among Male Couples in Three U.S. Cities

American Journal of Men's Health
2018, Vol. 12(4) 1039–1047
© The Author(s) 2018
Reprints and permissions:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1557988318774243
journals.sagepub.com/home/jmh


Nicolas A Suarez^{1,2} , Matthew J Mimiaga^{3,4,5,6},
Robert Garofalo^{7,8}, Emily Brown⁶, Anna Marie Bratcher⁹,
Taylor Wimply⁹, Marco A Hidalgo^{10,11} , Samuel Hoehnle^{7,8},
Jennie Thai⁷, Erin Kahle^{2,12}, Patrick S Sullivan⁹, and Rob Stephenson^{2,12}

Abstract

Intimate partner violence (IPV) is a prevalent and pressing public health concern that affects people of all gender and sexual identities. Though studies have identified that male couples may experience IPV at rates as high as or higher than women in heterosexual partnerships, the body of literature addressing this population is still nascent. This study recruited 160 male–male couples in Atlanta, Boston, and Chicago to independently complete individual surveys measuring demographic information, partner violence experience and perpetration, and individual and relationship characteristics that may shape the experience of violence. Forty-six percent of respondents reported experiencing IPV in the past year. Internalized homophobia significantly increased the risk for reporting experiencing, perpetrating, or both for any type of IPV. This study is the first to independently gather data on IPV from both members of male dyads and indicates an association between internalized homophobia and risk for IPV among male couples. The results highlight the unique experiences of IPV in male–male couples and call for further research and programmatic attention to address the exorbitant levels of IPV experienced within some of these partnerships.

Keywords

Intimate partner violence, men who have sex with men, internalized homophobia

Received August 31, 2017; revised March 16, 2018; accepted March 29, 2018

Intimate partner violence (IPV) is a prevalent public health concern that affects people of all genders and sexual orientations. Though the focus of violence research has typically been on females experiencing violence from male perpetrators in heterosexual couples (Finneran & Stephenson, 2013; Kubicek, McNeeley, & Collins, 2015), recent studies have reported prevalence rates of IPV among men who have sex with men (MSM) comparable to those of heterosexual women (Carvalho, Lewis, Derlega, Winstead, & Viggiano, 2011; Davis et al., 2015; Feldman, Ream, Díaz, & El-Bassel, 2008; Houston & McKirnan, 2007; Stephenson, Rentsch, Salazar, & Sullivan, 2011). IPV refers to emotional, physical, or sexual violence between romantic or sexual partners (Davis et al., 2015; Kubicek et al., 2015) and may extend beyond physical and sexual violence to include monitoring and controlling behaviors (Stephenson & Finneran, 2013). Estimates for IPV prevalence in same-sex male

relationships cover a wide range between 12% and 78% (Finneran & Stephenson, 2013; Greenwood et al., 2002; Houston & McKirnan, 2007; Kubicek et al., 2015; Stephenson, Rentsch et al., 2011; Stephenson, Sato, & Finneran, 2013). A study by Stephenson and associates (Stephenson, Rentsch et al., 2011) identified varying rates for specific types of IPV, with 33% of men experiencing emotional IPV, 23% physical IPV, and 10% sexual IPV. Collectively, these findings highlight alarmingly high rates of IPV among male couples and a pressing need for greater research and intervention efforts.

There is a wealth of evidence linking dyadic characteristics and relationship factors to the experience of IPV in heterosexual relationships. Partner's age negatively correlates with prevalence of IPV, while other partner characteristics such as dyadic differences in education level may contribute to increased violence in heterosexual couples (Kim, Laurent, Capaldi, & Feingold, 2008;



Rodriguez, Lasch, Chandra, & Lee, 2001; Stephenson et al., 2013). Younger heterosexual couples tend to exhibit higher rates of violence than do older partnerships, an outcome that may have roots in childhood experiences of violence, bullying, and harassment (Capaldi & Langhinrichsen-Rohling, 2012). Only very recently has IPV research begun to examine dyadic and relationship factors as correlates of IPV in same-sex male couples. In recent research among this group, age has been reported to be a significant factor in IPV—with violence decreasing with age and having an older partner reducing the risk of experiencing violence (Stephenson et al., 2013). It has been suggested that for male–male couples, age differences may influence IPV through an older partner's assertions of dominance and control over the younger partner (Goldenberg, Stephenson, Freeland, Finneran, & Hadley, 2016). Financial stress, depression, and alcohol and drug use in relationships are also correlates of IPV for both heterosexual couples and same-sex male and female couples (Carvalho et al., 2011; Goldenberg et al., 2016; Leone, Crane, Parrott, & Eckhardt, 2016; Stall et al., 2003; Stephenson, Rentsch et al., 2011; Stephenson et al., 2013). Substance use has long been identified to be a significant factor in violence among heterosexual couples (Leone et al., 2016) and more recently in male couples (Goldenberg et al., 2016; Stall et al., 2003; Stults, Javdani, Greenbaum, Kapadia, & Halkitis, 2015). As has been recognized in heterosexual couples, differences in financial wealth and security may result in financial dependence or relational power dynamics that increases the risk of violence among male couples (Goldenberg et al., 2016). Emerging evidence suggests that IPV precipitants specific to male–male couples may include inter-partner differences in degree of “outness” (i.e., public recognition or disclosure of their sexuality), a difference that may precipitate bidirectional violence as well as creating a power imbalance where the “out” partner may threaten to disclose his partner's sexual orientation and lead to further violence (Goldenberg et al., 2016).

IPV is a complex health risk that is affected by myriad individual and demographic characteristics in tandem with partner attributes and relationship quality factors. Studies of IPV among same-sex male couples have generally ignored dyadic factors and examined IPV as a factor associated with sexual risk-taking behaviors and drug use (Chakravarty, Hoff, Neilands, & Darbes, 2012; Davis et al., 2015; Feldman et al., 2008; Stall et al., 2003; Stephenson, de Voux, & Sullivan, 2011; Stults et al., 2015; White & Stephenson, 2016) rather than taking a broader scope to examine factors that affect the risk for IPV. The few studies that have incorporated dyadic data are based on reports from only one partner (Stephenson, Rentsch et al., 2011; Stephenson et al., 2013). The current study aims to fill gaps in the literature (a lack of comprehensive dyadic studies that include reporting from both members) on partner violence among same-sex male couples by examining a wide range of individual and dyadic factors being reported by both members of the couple. Through this analysis, the researchers aim to identify the individual and dyadic factors that influence IPV among male couples.

Methods

The data reported in this article come from the baseline survey of the project Stronger Together, an ongoing randomized control trial of sero-discordant, same-sex male couples in Atlanta, Boston, and Chicago (ClinicalTrials.org reference # NCT01772992). Self-identified gay or bisexual male (GBM) couples were recruited through online and in-person outreach efforts. Study recruitment was facilitated through the Facebook, Twitter, Scruff, Grindr, and social marketing campaigns of the sites conducting the intervention. Flyers and posters were displayed in the sites and local gay-targeted venues, and information on the study was displayed at the HIV testing check-in at each site.

Inclusion criteria were: at least 18 years old; had been in a partnership for at least 1 month; had been residents of

¹Department of Health Behavior and Health Education, University of Michigan School of Public Health, Ann Arbor, MI, USA

²Center for Sexuality and Health Disparities, University of Michigan, Ann Arbor, MI, USA

³Center for Health Equity Research, Brown University, Providence, RI, USA

⁴Departments of Behavioral and Social Health Sciences and Epidemiology, Brown University School of Public Health, Providence, RI, USA

⁵Department of Psychiatry and Human Behavior, Alpert Medical School, Brown University, Providence, RI, USA

⁶The Fenway Institute, Fenway Health, Boston, MA, USA

⁷Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL, USA

⁸Department of Pediatrics, Northwestern University, Feinberg School of Medicine, Chicago, IL, USA

⁹Department of Epidemiology, Rollins School of Public Health, Emory University, Atlanta, GA, USA

¹⁰Center for Trans Youth Health and Development, Children's Hospital Los Angeles, Los Angeles, CA, USA

¹¹Department of Pediatrics, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

¹²Department of Health Behavior and Biological Sciences, University of Michigan School of Nursing, Ann Arbor, MI, USA

Corresponding Author:

Rob Stephenson, Department of Health Behavior and Biological Sciences, University of Michigan School of Nursing, 400 N Ingalls St, Ann Arbor, MI 48109, USA.

Email: rbsteph@umich.edu

metro Atlanta, Boston, or Chicago for at least 3 months; and not in a known sero-concordant positive relationship. Those who presented for participation in the trial completed informed consent documentation before taking the baseline survey. Of the 411 individuals who presented for participation and completed the check-in survey, 398 consented and were eligible to take the baseline survey (96.8%). Of the 398 participants who completed the baseline survey, 78 participants were purposefully excluded from analysis due to missing responses on HIV status, IPV, and demographic characteristics. A total of 320 participants were included in the analysis. Couples presented together, but each member of the couple took the baseline survey independently in separate rooms. Data were analyzed as individuals and compared to the partner's responses. For example, partner A answered his experience of IPV and perpetration, and these answers were compared to partner B's answers to the same questions. A description of the protocol for the full study can be found in Stephenson et al. (2017). Approval for this study was obtained from the (University) Institutional Review Boards.

Individual characteristics measured included age, race/ethnicity, sexual orientation, HIV status, employment status, education level, arrest history, internalized homophobia, drug and alcohol use, and depression. Controlling for these characteristics, this study analyzed factors associated with IPV. IPV was measured using the IPV among Gay and Bisexual Men (IPV-GBM) scale, a validated scale with high reliability (Cronbach's $\alpha > 0.78$) adapted from the Conflict Tactics Scale to more accurately measure IPV among gay and bisexual men (Stephenson & Finneran, 2013). The scale encompasses five types of IPV: physical and sexual (including hitting partner and rape), emotional (such as criticizing clothes), controlling (preventing seeing family or friends), monitoring (reading emails and text messages), and HIV-related IPV (lying about HIV status and intentional transmission of HIV). The scale measured experience of IPV by asking participants to rate how often their partner perpetrated IPV against them, and how often they perpetrated IPV against their partner. Responses to these questions were used to determine prevalence of past-year experience of IPV, perpetration, and both experiencing and perpetrating.

The analysis explored individual and dyadic factors that have been identified in partner violence in heterosexual partnerships as well as factors unique to MSM that may be potential correlates of IPV. The survey employed the 20-item subset of the Gay Identity Scale developed by Brady and Busse (1994) to measure the prevalence of internalized homophobia among respondents. This scale has proven reliability with Cronbach's α of 0.84 (Meyer, Frost, Navarez, & Dietrich, 2006). Responses were translated into continuous total scores on the scale and a binary variable for whether respondents scored in the top 20th percentile to focus on respondents who report the highest

degrees of internalized homophobia. Depression was measured using the short form Center for Epidemiologic Studies – Depression (CES-D) 11 Iowa depression scale, a validated scale derived from the original 20-item CES-D scale (Cronbach's $\alpha = 0.81$; Carpenter et al., 1998; Kohout, Berkman, Evans, & Cornoni-Huntley, 1993). Responses were analyzed as continuous variables of the total score and as a binary whether or not participants presented symptoms of clinical depression (defined as scoring 8 or higher on the scale; Carpenter, Fowler, Maxwell, & Andersen, 2010). Poly-drug use and binge drinking behavior (i.e., having more than six drinks on one occasion) were measured using behavioral self-reports in response to questions asking about past-year binge-drinking frequency (Peacock, Andrinopoulos, & Hembling, 2015; Rowe, Liou, Vittinghoff, Coffin, & Santos, 2016; Santos, Jin, & Raymond, 2015) and use of various club drugs, injection drugs, inhalants, and hallucinogens. For analysis, binge drinking was restricted to at least once a month, and poly-drug use was coded as a binary of using at least three of the drugs listed (Daskalopoulou et al., 2014; Yu, Wall, Chiasson, & Hirshfield, 2015). The Communications Patterns Questionnaire short form assessed the degree to which participants use constructive communication behaviors when a problem with their partner arises (Heavey, Larson, Zumtobel, & Christensen, 1996). Responses were analyzed categorically in reference to the partner; looking at who scored higher on the scale (i.e., who more frequently used constructive communication behaviors). This scale has demonstrated reliability with Cronbach's $\alpha > 0.81$ (Heavey et al., 1996). Perceptions of love within the relationship were measured through a 19-item validated scale examining intimacy, passion, and commitment (Lemieux & Hale, 1999). Dyadic trust was assessed using an 8-item validated scale developed by Larzelere and Huston (1980). Results for both love and trust scales were analyzed for differences between partner's responses (i.e., respondent scores higher than partner). Both the love and trust scales have demonstrated reliability with Cronbach's $\alpha > 0.78$ for both scales. In order to assess dyadic quality, the survey included the 32-item validated Dyadic Adjustment Scale examining dyadic satisfaction, dyadic cohesion, dyadic consensus, and affectional expression wherein higher scores indicate higher degrees of these characteristics (Spanier, 1976). This scale has demonstrated reliability with Cronbach's $\alpha = 0.96$ (Spanier, 1976). Scores were interpreted as differences between partners' responses.

Additional variables of interest included age (continuous and comparatively between partners), race (White, Black, multiracial/other, and being in an interracial relationship), sexual orientation (partners have concordant or discordant orientations), highest education level (high school, some college, college or higher), employment status, arrest history, HIV status, and cohabitation.

Prevalence ratios with 95% confidence interval for past-year experience of IPV, perpetration of IPV, and both experience and perpetration were calculated with a Poisson model using Generalized Estimated Equations (GEE), with a robust standard error via the GENMOD procedure in SAS 9.4 (Barros & Hirakata, 2003; Zou, 2004). Unadjusted prevalence ratios of any type of IPV were investigated in Table 4. This model underwent stepwise regression to adjust for confounding variables, and a final, reduced model with adjusted prevalence ratios (PRs) was generated (Table 5).

Results

Respondents' individual and relationship characteristics are summarized in Table 1, and dyadic differences are reported in Table 3. The mean age of this sample was 35.9 years (19–69 years). The sample majority (77.5%) was White (248/320), with 12.2% Black (39/320), and 10.3% multiracial (33/320) or other. Less than a third of the sample (28.13%) was in an interracial relationship (90/320), and 39.4% was in an age-discordant relationship (126/320). This sample was mostly highly educated with 68.4% reporting having a college degree or higher (219/320), 24.1% with some college education (77/320), and 7.5% with a high school education or less (24/320). Of the 320 participants, 9.6% reported being unemployed or retired (36/320) and 27.2% reported having been arrested (87/320). Most of the participants self-identified as homosexual or gay (287/320, 89.7%) and 15.6% reported being HIV positive (50/320). Relationship quality measures are noted in Table 2. In the past year, 45.6% of participants reported experiencing IPV of any kind (146/320), with 9.7% reporting physical IPV (31/320); 6.8%, controlling IPV (22/320); 20.3%, monitoring IPV (65/320); and 33.6%, emotional IPV (108/320). All violence reported here is with the respondent's current intimate partner.

The unadjusted Poisson GEE model (Table 4) displays variables significantly correlated with the three IPV outcomes (experience, perpetration, and both). Age and age difference, sero-discordant partnerships, discordance in sexual orientation, lower degrees of internalized homophobia, couples not cohabitating, and equal scores on the love scale were all negatively associated with the IPV outcomes. Differences in the love scale and differences in reports of internalized homophobia, however, had a positive relationship with the IPV outcomes, as well as both partners reporting polydrug use.

The adjusted Poisson GEE model summarized in Table 5 indicates that the respondent's age was negatively correlated with experiencing any type of IPV, perpetrating IPV, and both experiencing and perpetrating IPV (prevalence ratio [PR]: .99, 95% CI [.98, 1.0]; PR: .98, 95% CI [.97, .99]; PR: .97, 95% CI [.96, .99]). A respondent scoring in the top 20%

Table 1. Demographic Characteristics of a Sample of Male Couples ($n = 320$ individuals) Recruited From Atlanta, Boston, and Chicago.

Individual Respondent Demographics	N (%)		
Age			
18–24	46 (14.4)		
25–34	126 (39.4)		
35–44	69 (21.6)		
45+	79 (24.7)		
Race/ethnicity			
White (Latino & non-Latino)	248 (77.5)		
Black/African American (Latino & non-Latino)	39 (12.2)		
Multiracial/Other (Latino & non-Latino)	33 (10.3)		
Sexual orientation			
Homosexual/gay	287 (89.7)		
Other	33 (10.3)		
HIV status			
Negative	270 (84.4)		
Positive	50 (15.6)		
Employment status			
Employed/student	338 (90.4)		
Unemployed/retired	36 (9.6)		
Education level			
High school or less	24 (7.5)		
Some college	77 (24.1)		
College or higher	219 (68.4)		
Arrest history			
Ever arrested	87 (27.2)		
Never arrested	233 (72.8)		
Internalized homophobia			
Above 80th percentile	66 (20.6)		
Below 80th percentile	254 (79.4)		
Polydrug use			
Yes	58 (18.1)		
No	262 (81.9)		
Binge drinking			
Yes	71 (22.2)		
No	249 (77.8)		
	M (range)	SD	
Internalized homophobia	32.8 (20, 75)	9.6	
Depression (CES-D scale)	5.2 (0, 21)	4.4	
Relationship logistics	N (%)		
Relationship length			
Less than 1 year	80 (25)		
1–2 years	97 (30.3)		
3–5 years	57 (17.8)		
6+ years	86 (26.9)		
Cohabitating	276 (73.8)		
Sexual agreement type			
No sex with outside partners	118 (36.9)		
Sex with outside partners (with restrictions)	120 (37.5)		
Sex with outside partners (no restrictions)	14 (4.4)		
No agreement	68 (21.3)		

Table 2. Descriptive Statistics of Respondents' Average Relationship Quality Scores of a Sample of Male Couples (*n* = 320 individuals) Recruited From Atlanta, Boston, and Chicago.

Relationship Quality Scales	Individual (respondent) Scores	<i>N</i> (%)	<i>M</i> (range)	<i>SD</i>
IPV (experience last 12 months)				
Physical/sexual IPV	31 (9.7)			
Emotional IPV	108 (33.6)			
Controlling IPV	22 (6.8)			
Monitoring IPV	65 (20.3)			
Any form IPV	146 (45.6)			
Happiness scale	4.94 (1, 7)			1.50
Love scale	75.66 (0, 95)			14.70
Trust scale	33.46 (0, 40)			5.80
Communications patterns scale	35.08 (0, 45)			6.61
Dyadic adjustment scale	79.10 (0, 98)			19.04

Note. IPV = intimate partner violence.

on the internalized homophobia scale was positively associated with them reporting experiencing, perpetrating, and both experience and perpetration of IPV in their current relationship (PR: 1.67, 95% CI [1.31, 2.14]; PR: 1.59, 95% CI [1.23, 2.06]; PR: 1.79, 95% CI [1.27, 2.51]). Cohabitation was positively correlated with any type of victimization, perpetration, and both (PR: 1.74, 95% CI [1.23, 2.45]; PR: 1.68, 95% CI [1.21, 2.33]; PR: 1.64, 95% CI [1.1, 2.45]).

Discussion

The results of this study highlight individual and dyadic factors associated with minority stress as potential correlates of IPV in same-sex male couples. This study is among the first studies of same-sex male dyads to examine violence where both partners of the dyad are independently asked about IPV victimization and perpetration. This method of inquiry allows researchers to gather a more complete assessment of violence in these partnerships. These results inform the authors of the effects various individual and dyadic factors may have on IPV in male couples and provide direction for future research and prevention interventions.

With respect to IPV, an alarmingly high rate of couples reported experiencing any form of IPV (nearly one in every two couples), with experiencing emotional IPV being especially high. This high prevalence is consistent with reports from other studies (Stephenson, Rentsch et al., 2011; Stephenson et al., 2013), emphasizing the continued need for developing and testing culturally sensitive violence prevention programming. Similar to previous studies were perpetration rates of physical,

Table 3. Dyadic Differences in Individual Characteristics and Demographics of a Sample of Male Couples (*n* = 160) Recruited From Atlanta, Boston, and Chicago.

Dyadic Differences	<i>N</i> (%)
Age	
Age concordant	97 (60.6)
Age discordant	63 (39.4)
Race	
Not interracial dyad	115 (71.9)
Interracial dyad	45 (28.1)
HIV status	
Sero-concordant	110 (68.8)
Sero-discordant	50 (31.2)
Sexual orientation	
Concordant orientations	134 (83.8)
Discordant orientations	26 (16.2)
Employment status	
Concordant employment status	130 (81.3)
Discordant employment status	30 (18.8)
Highest education level	
Concordant education level	59 (36.9)
Discordant education levels	101 (63.2)
Arrest history (ever arrested)	
Neither arrested	89 (55.6)
Both arrested	16 (10)
Discordant arrest history	55 (34.4)
Sexual agreement description	
Concordant sexual agreement	102 (63.8)
Discordant sexual agreement	58 (36.3)
Internalized homophobia	
Both above 80th percentile	14 (8.8)
Neither above 80th percentile	108 (67.5)
Discordant internalized homophobia	38 (23.8)
Depression	
Both have symptoms of clinical depression	9 (5.6)
Neither have symptoms of clinical depression	91 (56.9)
Discordant symptoms of clinical depression	60 (37.5)
Polydrug use	
Neither use	115 (71.9)
Both use	12 (8.1)
Discordant polydrug use	32 (20)
Binge drinking	
Neither binge drinks	74 (46.3)
Both binge drink	38 (23.8)
Discordant binge drinking	48 (30)
IPV	
No IPV	66 (41.3)
Unidirectional IPV	40 (25)
Bidirectional IPV	54 (33.8)

Note. IPV = intimate partner violence.

emotional, and controlling IPV (Stephenson, Rentsch et al., 2011; Stephenson et al., 2013), with higher rates of monitoring IPV reported in this study sample.

Table 4. Poisson General Estimated Equations With Unadjusted Prevalence Ratios (PRs) and 95% Confidence Intervals (CIs) of Any Type of IPV in the Past Year of a Sample of Male Couples ($n = 320$ Individuals) Recruited From Atlanta, Boston, and Chicago.

Key Covariates	IPV Victimization PR [95% CI]	IPV Perpetration PR [95% CI]	Both Victim and Perpetrator of IPV PR [95% CI]
Age			
Respondent's age	.99 [.98, 1]	.99 [.97, 1.0]^{a*}	.98 [.96, .99]^{a****}
Respondent is older than partner	.7 [.48, 1.01]	.8 [.58, 1.11]	.61 [.38, .98]^{a*}
Partner is older than respondent	.86 [.62, 1.18]	.74 [.52, 1.04]	.69 [.44, 1.07]
Race/ethnicity			
Black/African American	.76 [.49, 1.18]	.73 [.47, 1.13]	.74 [.42, 1.3]
Multiracial/other	.96 [.65, 1.43]	.86 [.57, 1.31]	1.05 [.65, 1.7]
In an interracial relationship	.93 [.71, 1.22]	.99 [.77, 1.29]	1.03 [.73, 1.44]
Sexual orientation			
Discordant orientation	.91 [.65, 1.29]	.66 [.44, .99]^{a*}	.83 [.53, 1.31]
Highest education level			
High school or less	1.55 [.99, 2.41]	1.14 [.68, 1.9]	1.69 [.91, 3.12]
College or higher	1.25 [.91, 1.72]	1.22 [.9, 1.66]	1.46 [.95, 2.24]
Employment status			
Employed or student	1.24 [.78, 1.97]	1.08 [.72, 1.63]	1.22 [.69, 2.18]
Arrest history			
Ever arrested	1.19 [.93, 1.53]	1.15 [.9, 1.47]	1.18 [.85, 1.63]
HIV status			
Respondent only is positive	.94 [.67, 1.32]	.82 [.58, 1.16]	.8 [.5, 1.25]
Partner only is positive	.9 [.63, 1.28]	.62 [.41, .95]^{a*}	.53 [.3, .95]^{a*}
Drug use			
Both partners use	1.43 [1.02, 2.01][*]	1.39 [.99, 1.94]	1.6 [1.04, 2.45]^{a*}
Respondent only uses	1.09 [.73, 1.62]	1.06 [.71, 1.57]	1.1 [.66, 1.84]
Partner only uses	1.16 [.8, 1.69]	1.2 [.84, 1.71]	1.2 [.74, 1.95]
Binge drinking			
Both binge drink	1.11 [.73, 1.67]	.83 [.57, 1.21]	.81 [.49, 1.33]
Neither partner binge drinks	1.02 [.7, 1.5]	.9 [.65, 1.23]	.85 [.55, 1.31]
Partner only binge drinks	1.4 [.93, 2.11]	.92 [.62, 1.37]	1.11 [.68, 1.82]
Depression			
Score on CES-D Scale	1.02 [1.0, 1.05]	1.02 [1.0, 1.05]	1.03 [.99, 1.06]
Internalized homophobia			
Individual score on IH scale	1.01 [1.0, 1.02]	1.01 [1.0, 1.02]	1.01 [1.0, 1.03]
Both in top 20%	.65 [.42, 1.02]	.68 [.43, 1.07]	.71 [.41, 1.22]
Neither partner in top 20%	.59 [.46, .77]^{a****}	.62 [.47, .8]^{a****}	.54 [.38, .76]^{a****}
Partner only in top 20%	.56 [.36, .87]^{a****}	.77 [.5, 1.11]	.57 [.33, .99]^{a*}
Cohabitation			
Respondents are not cohabitating	.63 [.45, .89]^{a****}	.67 [.48, .93]^{a*}	.74 [.49, 1.1]
Love scale			
No difference in love score	.82 [.45, 1.5]	.44 [.2, .98]^{a*}	.52 [.21, 1.32]
Partner reports higher love	1.3 [1.01, 1.67][*]	1.07 [.85, 1.35]	1.21 [.89, 1.66]
Trust scale			
No difference in trust score	.85 [.49, 1.48]	1.17 [.76, 1.83]	.92 [.47, 1.79]
Partner reports higher trust	1.11 [.87, 1.42]	1.19 [.93, 1.52]	1.15 [.84, 1.58]
Communication patterns scale			
No difference in score	1.08 [.66, 1.76]	1.06 [.65, 1.73]	1.01 [.52, 1.94]
Partner scores higher	1.16 [.9, 1.49]	1.19 [.93, 1.51]	1.15 [.84, 1.58]
Dyadic adjustment scale			
No difference in score	.76 [.34, 1.73]	.34 [.09, 1.21]	.47 [.13, 1.69]
Partner scores higher	1.12 [.88, 1.42]	.95 [.75, 1.2]	.93 [.68, 1.27]

Note. Level of significance $\alpha = .05$.

Values in bold are significant at the 5% level.

* $p < .05$. **** $p < .01$.

^adenotes negative relationship.

Table 5. Poisson General Estimated Equations With Adjusted Prevalence Ratios (PRs) and 95% Confidence Intervals (CIs) of Any Type of IPV in the Past Year of a Sample of Male Couples ($n = 320$ Individuals) Recruited From Atlanta, Boston, and Chicago.

Key Covariates	IPV Victimization PR [95% CI]	IPV Perpetration PR [95% CI]	Both Victim and Perpetrator of IPV PR [95% CI]
Age			
Respondent's age	.99 [.98, 1.0]^{a*}	.98 [.97, .99]^{a****}	.97 [.96, .99]^{a****}
Internalized homophobia			
Both in top 20%	1.26 [.82, 1.94]	1.27 [.86, 1.9]	1.58 [.98, 2.53]
Respondent only in top 20%	1.67 [1.31, 2.14]^{***}	1.59 [1.23, 2.06]^{***}	1.79 [1.27, 2.51]^{***}
Partner only in top 20%	.9 [.6, 1.35]	1.17 [.85, 1.63]	.97 [.59, 1.57]
Cohabitation			
Respondents are cohabiting	1.74 [1.23, 2.45]^{***}	1.68 [1.21, 2.33]^{***}	1.64 [1.1, 2.45][*]

Note. Level of significance $\alpha = .05$.

Values in bold are significant at the 5% level.

* $p < .05$. *** $p < .01$.

^adenotes negative relationship.

Minority stress theory postulates that negative societal attitudes toward social minority groups, such as MSM, contribute to social stressors among these groups (Hatzenbuehler, Nolen-Hoeksema, & Erickson, 2008; Meyer, 1995). The effects of minority stress on MSM in particular may include experiences of discrimination, internalized homophobia, and expectations of rejection, all of which have been associated with poor physical and behavioral health outcomes, including increased substance use disorders (Hatzenbuehler et al., 2008). Internalized homophobia, a measure of internalized stigma and a factor in minority stress (Edwards & Sylaska, 2013; Hatzenbuehler et al., 2008), was reported by respondents in this study at both the individual and dyadic levels and appeared to play an important role in understanding the high prevalence of violence observed in this sample. The stress created by this internalized stigma, coupled with other behaviors such as drug and alcohol use (which may also be exacerbated by minority stress factors), may have significant effects on IPV risk. Factors associated with minority stress and dyadic power struggles were among precipitants of IPV in a recent qualitative study of male couples (Goldenberg et al., 2016). Findings revealed that IPV was more common among partners who had experienced homophobic violence and who had traditionally hegemonic views of masculinity that they had difficulty negotiating, referred to as "struggling to be the alpha" (Goldenberg et al., 2016). Sexual risk behaviors, specifically condomless anal intercourse and stimulant use during sex, have been reported to co-occur with experiencing IPV (Chakravarty et al., 2012; Kubicek et al., 2015; Meyer, 1995; Stall et al., 2003; Stephenson, Rentsch et al., 2011; Stephenson et al., 2013).

Results highlight the effects internalized homophobia and other relationship level and individual factors may

have on violence prevalence. First, age had a negative effect on experience, perpetration, and both of any form of IPV, a finding mirrored in previous MSM violence studies (Greenwood et al., 2002; Stephenson et al., 2013). Older men may positively influence their partner and connect them to support networks, as well as be more understanding and supportive partners by way of their lifetime experiences. Cohabiting partners were at an increased risk of all IPV outcome categories (experience, perpetration, or both of any type of partner violence), which may be due to increased contact and possibility for violence when living together. This could also be tied to financial concerns and differences in home lifestyles that become more prevalent when a couple decides to live together, which may cause internal stress in the relationship that could lead to violence (Stephenson, Rentsch et al., 2011). Although few studies have explored the relationship between internalized homophobia and violence and yielded similar results (Edwards & Sylaska, 2013; Finneran, Chard, Sineath, Sullivan, & Stephenson, 2012), these results do suggest a possible link between negative feelings of self and the prevalence of any form of violence which is especially pertinent to minority stress theory. The results of this analysis highlight that these covariates influence the presence of violence in a relationship, and this violence may often be mutually perpetrated within a partnership.

This study's main limitations are in its sample size and the cross-sectional nature of the survey. The final included sample, comprised 160 male couples (320 individuals), was by no means a wholly representative sample of all male same-sex couples. Latino participants and those of other races were too few to be included in analysis and were thus grouped together as "multiracial/other," though this may obscure possible unique relationships faced by those of non-White or non-Black racial backgrounds.

Public Health Implications

IPV among male–male couples has several implications on health, especially with behaviors associated with the risk of HIV transmission or acquisition, indicating a need for developing and testing culturally sensitive prevention intervention programs. This study is one of the first to independently gather data from both members of the dyad regarding partner violence and the first to do so while taking into account such a wide range of individual- and dyad-level characteristics. This study demonstrates a high prevalence of violence among male same-sex couples and, despite its limitations, highlights an important connection between internalized homophobia and violence reporting among couples. Future dyad studies should incorporate mixed-methods approaches and repeated assessments in order to better understand factors that are causally related to IPV as possible intervention targets for this group.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This publication was supported by the Eunice Kennedy Shriver National Institute of Child Health & Human Development of the National Institutes of Health under Award Number R01HD075655 (mPIs: Garofalo, Mimiaga, and Stephenson). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Ethical Standards

The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

ORCID iDs

Nicolas A Suarez  <https://orcid.org/0000-0002-5543-1700>

Marco A Hidalgo  <https://orcid.org/0000-0003-0684-0740>

References

- Barros, A. J., & Hirakata, V. N. (2003). Alternatives for logistic regression in cross-sectional studies: An empirical comparison of models that directly estimate the prevalence ratio. *BMC Medical Research Methodology*, 3, 21. doi:10.1186/1471-2288-3-21
- Brady, S., & Busse, W. J. (1994). The gay identity questionnaire: A brief measure of homosexual identity formation. *Journal of Homosexuality*, 26(4), 1–22. doi:10.1300/J082v26n04_01
- Capaldi, D. M., & Langhinrichsen-Rohling, J. (2012). Informing intimate partner violence prevention efforts: Dyadic, developmental, and contextual considerations. *Prevention Science*, 13(4), 323–328. doi:10.1007/s1121-012-0309-y
- Carpenter, J., Andrykowski, M., Wilson, J., Hall, L., Kay Rayens, M., Sachs, B., & Cunningham, L. (1998). Psychometrics for two short forms of the center for epidemiologic studies-depression scale. *Issues in Mental Health Nursing*, 19(5), 481–494. doi:10.1080/016128498248917
- Carpenter, K. M., Fowler, J. M., Maxwell, G. L., & Andersen, B. L. (2010). Direct and buffering effects of social support among gynecologic cancer survivors. *Annals of Behavioral Medicine*, 39(1), 79–90. doi:10.1007/s12160-010-9160-1
- Carvalho, A. F., Lewis, R. J., Derlega, V. J., Winstead, B. A., & Viggiano, C. (2011). Internalized sexual minority stressors and same-sex intimate partner violence. *Journal of Family Violence*, 26(7), 501–509. doi:10.1007/s10896-011-9384-2
- Chakravarty, D., Hoff, C. C., Neilands, T. B., & Darbes, L. A. (2012). Rates of testing for HIV in the presence of serodiscordant UAI among HIV-negative gay men in committed relationships. *AIDS and Behavior*, 16(7), 1944–1948. doi:10.1007/s10461-012-0181-6
- Daskalopoulou, M., Rodger, A., Phillips, A. N., Sherr, L., Speakman, A., Collins, S., ... Lampe, F. C. (2014). Recreational drug use, polydrug use, and sexual behaviour in HIV-diagnosed men who have sex with men in the UK: Results from the cross-sectional ASTRA study. *The Lancet HIV*, 1(1), e22–e31. doi:10.1016/S2352-3018(14)70001-3
- Davis, A., Best, J., Wei, C., Luo, J., Van Der Pol, B., & Meyerson, B., ... Social Entrepreneurship for Sexual Health Research, G. (2015). Intimate partner violence and correlates with risk behaviors and HIV/STI diagnoses among men who have sex with men and men who have sex with men and women in China: A hidden epidemic. *Sexually Transmitted Diseases*, 42(7), 387–392. doi:10.1097/OLQ.0000000000000302
- Edwards, K. M., & Sylaska, K. M. (2013). The perpetration of intimate partner violence among LGBTQ college youth: The role of minority stress. *Journal of Youth and Adolescence*, 42(11), 1721–1731. doi:10.1007/s10964-012-9880-6
- Feldman, M. B., Ream, G. L., Díaz, R. M., & El-Bassel, N. (2008). Intimate partner violence and HIV sexual risk behavior among Latino gay and bisexual men: The role of situational factors. *Journal of LGBT Health Research*, 3(4), 75–87. doi:10.1080/15574090802226618
- Finneran, C., Chard, A., Sineath, C., Sullivan, P., & Stephenson, R. (2012). Intimate partner violence and social pressure among gay men in six countries. *Western Journal of Emergency Medicine*, 13(3), 260–271. doi:10.5811/westjem.2012.3.11779
- Finneran, C., & Stephenson, R. (2013). Intimate partner violence among men who have sex with men: A systematic review. *Trauma Violence Abuse*, 14(2), 168–185. doi:10.1177/1524838012470034
- Goldenberg, T., Stephenson, R., Freeland, R., Finneran, C., & Hadley, C. (2016). ‘Struggling to be the alpha’: Sources of tension and intimate partner violence in same-sex relationships between men. *Culture, Health & Sexuality*, 18(8), 875–889. doi:10.1080/13691058.2016.1144791

- Greenwood, G. L., Relf, M. V., Huang, B., Pollack, L. M., Canchola, J. A., & Catania, J. A. (2002). Battering victimization among a probability-based sample of men who have sex with men. *American Journal of Public Health, 92*(12), 1964–1969.
- Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Erickson, S. J. (2008). Minority stress predictors of HIV risk behavior, substance use, and depressive symptoms: Results from a prospective study of bereaved gay men. *Health Psychology, 27*(4), 455–462. doi:10.1037/0278-6133.27.4.455
- Heavey, C. L., Larson, B. M., Zumtobel, D. C., & Christensen, A. (1996). The communication patterns questionnaire: The reliability and validity of a constructive communication subscale. *Journal of Marriage and the Family, 58*(3), 796. doi:10.2307/353737
- Houston, E., & McKirnan, D. J. (2007). Intimate partner abuse among gay and bisexual men: Risk correlates and health outcomes. *Journal of Urban Health, 84*(5), 681–690. doi:10.1007/s11524-007-9188-0
- Kim, H. K., Laurent, H. K., Capaldi, D. M., & Feingold, A. (2008). Men's aggression toward women: A 10-year panel study. *Journal of Marriage and Family, 70*(5), 1169–1187. doi:10.1111/j.1741-3737.2008.00558.x
- Kohout, F. J., Berkman, L. F., Evans, D. A., & Cornoni-Huntley, J. (1993). Two shorter forms of the CES-D depression symptoms index. *Journal of Aging and Health, 5*(2), 179–193. doi:10.1177/089826439300500202
- Kubicek, K., McNeelley, M., & Collins, S. (2015). Young men who have sex with men's experiences with intimate partner violence. *Journal of Adolescent Research, 31*(2), 143–175. doi:10.1177/0743558415584011
- Larzelere, R. E., & Huston, T. L. (1980). The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family, 42*(3), 595. doi:10.2307/351903
- Lemieux, R., & Hale, J. L. (1999). Intimacy, passion, and commitment in young romantic relationships: Successfully measuring the triangular theory of love. *Psychological Reports, 85*(2), 497–503. doi:10.2466/pr0.1999.85.2.497
- Leone, R. M., Crane, C. A., Parrott, D. J., & Eckhardt, C. I. (2016). Problematic drinking, impulsivity, and physical IPV perpetration: A dyadic analysis. *Psychology of Addictive Behaviors, 30*(3), 356–366. doi:10.1037/adb0000159
- Meyer, I. H. (1995). Minority stress and mental health in gay men. *Journal of Health and Social Behavior, 36*(1), 38–56. doi:10.2307/2137286
- Meyer, I. H., Frost, D. M., Navarez, R., & Dietrich, J. H. (2006). *Project STRIDE methodology and technical notes*. Unpublished manuscript.
- Peacock, E., Andrinopoulos, K., & Hembling, J. (2015). Binge drinking among men who have sex with men and transgender women in San Salvador: Correlates and sexual health implications. *Journal of Urban Health, 92*(4), 701–716. doi:10.1007/s11524-014-9930-3
- Rodriguez, E., Lasch, K. E., Chandra, P., & Lee, J. (2001). Family violence, employment status, welfare benefits, and alcohol drinking in the United States: What is the relation? *Journal of Epidemiology & Community Health, 55*(3), 172–178. doi:10.1136/jech.55.3.172
- Rowe, C., Liou, T., Vittinghoff, E., Coffin, P. O., & Santos, G. M. (2016). Binge drinking concurrent with anal intercourse and condom use among men who have sex with men. *AIDS Care, 28*(12), 1566–1570. doi:10.1080/09540121.2016.1191616
- Santos, G. M., Jin, H., & Raymond, H. F. (2015). Pervasive heavy alcohol use and correlates of increasing levels of binge drinking among men who have sex with men, San Francisco, 2011. *Journal of Urban Health, 92*(4), 687–700. doi:10.1007/s11524-015-9958-z
- Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *Journal of Marriage and the Family, 38*(1), 15. doi:10.2307/350547
- Stall, R., Mills, T. C., Williamson, J., Hart, T., Greenwood, G., Paul, J., & ... Catania, J. A. (2003). Association of co-occurring psychosocial health problems and increased vulnerability to HIV/AIDS among urban men who have sex with men. *American Journal of Public Health, 93*(6), 939–942.
- Stephenson, R., de Voux, A., & Sullivan, P. S. (2011). Intimate partner violence and sexual risk-taking among men who have sex with men in South Africa. *Western Journal of Emergency Medicine, 12*(3), 343–347.
- Stephenson, R., & Finneran, C. (2013). The IPV-GBM scale: A new scale to measure intimate partner violence among gay and bisexual men. *PLoS One, 8*(6), e62592. doi:10.1371/journal.pone.0062592
- Stephenson, R., Rentsch, C., Salazar, L. F., & Sullivan, P. S. (2011). Dyadic characteristics and intimate partner violence among men who have sex with men. *Western Journal of Emergency Medicine, 12*(3), 324–332.
- Stephenson, R., Sato, K. N., & Finneran, C. (2013). Dyadic, partner, and social network influences on intimate partner violence among male-male couples. *Western Journal of Emergency Medicine, 14*(4), 316–323. doi:10.5811/westjem.2013.2.15623
- Stephenson, R., Suarez, N. A., Garofalo, R., Hidalgo, M. A., Hoehnle, S., Thai, J., & ... Sullivan, P. (2017). Project stronger together: Protocol to test a dyadic intervention to improve engagement in HIV care among sero-discordant male couples in three US cities. *JMIR Research Protocols, 6*(8), e170. doi:10.2196/resprot.7884
- Stults, C. B., Javdani, S., Greenbaum, C. A., Kapadia, F., & Halkitis, P. N. (2015). Intimate partner violence and substance use risk among young men who have sex with men: The P18 cohort study. *Drug and Alcohol Dependence, 154*, 54–62. doi:10.1016/j.drugalcdep.2015.06.008
- White, D., & Stephenson, R. (2016). Correlates of perceived HIV prevalence and associations with HIV testing behavior among men who have sex with men in the United States. *American Journal of Men's Health, 10*(2), 90–99. doi:10.1177/1557988314556672
- Yu, G., Wall, M. M., Chiasson, M. A., & Hirshfield, S. (2015). Complex drug use patterns and associated HIV transmission risk behaviors in an Internet sample of U.S. men who have sex with men. *Archives of Sexual Behavior, 44*(2), 421–428. doi:10.1007/s10508-014-0337-8
- Zou, G. (2004). A modified Poisson regression approach to prospective studies with binary data. *American Journal of Epidemiology, 159*(7), 702–706. doi:10.1093/aje/kwh090