



Published in final edited form as:

J Fam Violence. 2019 October ; 34(7): 677–686. doi:10.1007/s10896-019-00076-w.

Concordance in the reporting of intimate partner violence among male-male couples

R Stephenson^{1,2}, A Sharma^{1,2}, MJ Mimiaga^{3,4,5,6}, R Garofalo^{7,8}, E Brown⁶, A Bratcher⁹, T Wimply⁹, MA Hidalgo^{10,11}, S Hoehnle^{7,8}, J Thai⁸, PS Sullivan⁹, NA Suarez^{2,12}

¹Department of Health Behavior and Biological Sciences, School of Nursing, University of Michigan, Ann Arbor, MI, USA.

²Department of Health Behavior and Health Education, University of Michigan School of Public Health, 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

¹²The Center for Sexuality and Health Disparities, University of Michigan, Ann Arbor, MI, USA

Abstract

Intimate partner violence (IPV) among male couples is increasingly recognized as a public health concern. Research on IPV in opposite sex couples indicates frequent underreporting of IPV and high levels of discordance in reporting among dyads. Concordance studies inform refinement

Terms of use and reuse: academic research for non-commercial purposes, see here for full terms. <http://www.springer.com/gb/open-access/authors-rights/aam-terms-v1>

Corresponding author: Rob Stephenson, rbsteph@umich.edu.

Publisher's Disclaimer: This Author Accepted Manuscript is a PDF file of a an unedited peer-reviewed manuscript that has been accepted for publication but has not been copyedited or corrected. The official version of record that is published in the journal is kept up to date and so may therefore differ from this version.

methods to measure the experience of IPV among dyads; however the lack of dyadic studies of male couples impedes our understanding of the extent to which IPV is differentially reported in male-male dyads. This study utilized baseline data from a randomized controlled trial of a behavioral intervention to optimize antiretroviral therapy (ART) adherence among 160 sero-discordant male couples in three US cities and provides the first analysis of concordance in reporting IPV among male couples. Low degrees of concordance in the reporting of IPV were identified among male dyads, with a greater proportion of men reporting violence perpetration than experiencing violence. The greater reporting of IPV perpetration may be linked to adherence to concepts of masculinity. The results underscore the unique experiences of IPV among male couples and the need to reexamine current IPV measurement and intervention strategies.

Keywords

Intimate partner violence; men who have sex with men; concordance; dyadic

Introduction

Over the past ten years there has been a growth in research illustrating that men who have sex with men (MSM) experience intimate partner violence (IPV) at rates that are substantially higher than those experienced by men who do not have sex with men, and rates that are comparable or higher to those among heterosexual women (Finneran & Stephenson, 2013). Estimated prevalence for the recent (past 12 month) receipt of IPV among MSM range from 12% (Stephenson, Khosropour, & Sullivan, 2010) to 45% (Craft & Serovich, 2005) for physical IPV, 1.8% (Bartholomew, Regan, White, & Oram, 2008) to 33% (Craft & Serovich, 2005) for sexual IPV, and 28% (Pruitt, White, Mitchell, & Stephenson, 2015) to 64% (Bartholomew et al., 2008) for emotional/psychological. Prevalence rates for recent (12 month) experience of any form of IPV range from 32% (Houston & McKirnan, 2007) to 54% (Pantalone, Schneider, Valentine, & Simoni, 2012). Perpetration rates of violence have been comparatively less studied among MSM, and estimates for recent (past 12 months) range from to 8.3% (Carvalho, Lewis, Derlega, Winstead, & Viggiano, 2011) to 36% (Welles, Corbin, Rich, Reed, & Raj, 2011) – both substantially higher than those reported by men who have sex with women, yet similar to the prevalence reported by women in opposite sex relationships. The large variation in estimates of experience and perpetration rates for IPV among MSM reflects variations in sample sizes and populations, with higher rates identified among clinic populations versus population-based estimates. Of particular importance to MSM is emergent evidence demonstrating a link between IPV and risk for HIV infection (Feldman, Ream, Díaz, & El-Bassel, 2008; Greenwood et al., 2002; Koblin et al., 2006; Relf, 2001; Stephenson, de Voux, & Sullivan, 2011).

As an illegal and socially taboo behavior, IPV is often differentially reported by partners with inter-partner agreement on whether IPV exists in a relationship frequently low (Halim, Steven, Reich, Badi, & Messersmith, 2018). Several studies consistently report low agreement between opposite-sex partners on the presence of IPV in their relationship, with differential reporting of perpetration violence being more common than the differential reporting of victimization (Panuzio et al., 2006; Shafer, Caetano and & Clark, 2002:

Freeman, Schumacher, & Coffey, 2015; Halim et al., 2018; Marshall, Panuzio, Makin-Byrd, Taft, & Holtzworth- Munroe, 2011; Strandmoen, Askeland, Tjersland, Wentzel-Larsen, & Heir, 2016). However, there is some evidence that women report both higher levels of experience of IPV than the levels of perpetration reported by men (Desmarais et al., 2012a; Desmarais et al., 2012b). Reports of both experience and perpetration of IPV may be impacted by social desirability bias (Freeman et al., 2015), as well as misinterpretation of questions or forgetting instances of IPV, a common limitation of retrospective self-reports (Halim et al., 2018). Low levels of agreement between partners in the reporting of IPV is a serious limitation to the accurate reporting of IPV prevalence. Accurate measures of IPV prevalence are needed to inform the development of interventions for primary and secondary prevention of IPV, especially in surveys where only one partner responds. Understanding the extent of disagreement in the reporting of IPV among partners, and the degree of under-reporting of both victimization and perpetration, are important steps in refining and developing more accurate methods to measure the experience of IPV among dyads (Halim et al., 2018) that can inform the development and content of IPV reduction interventions for male couples.

Research examining the under-reporting of IPV among dyads has to date focused on male-female couples, and we are not aware of any studies have examined the under-reporting of IPV among two men. Studies of the experience of IPV among MSM have largely collected data from individuals, not male dyads. A male dyad refers to a male-male relationship and does not connote a specific identity: men in a male dyad may or may not have a gay/bisexual identity, or may be behaviorally MSM. For brevity, we refer to male couples in this paper as two men in a self-reported relationship with no indication of what this means for their sexual identity. While some recent studies have sought to understand dyadic factors shaping the experience of IPV among male dyads, these have done so by collecting data from only one member of the couple, and asking them to provide data on their partner (Stephenson, Rentsch, Salazar, & Sullivan, 2011; Stephenson, Sato, & Finneran, 2013). The lack of dyadic studies that have collected IPV data from both members of the male couple has limited the ability to assess the agreement between partners on IPV experience and perpetration in male couples. The current study uses baseline data from a randomized controlled trial (RCT) of male couples enrolled from three US cities (Atlanta, Boston and Chicago) collected from both members of the dyad about recent victimization and experience of IPV, to quantify the degree of partner agreement around presence of IPV in the relationship. This study is the first to analyze concordance in reporting IPV among MSM couples, and has the potential to inform the development and refinement of measures for accurately assessing IPV in male couples.

Methods

This analysis uses data from the baseline survey of *Stronger Together*, an ongoing RCT of male couples in Atlanta, Boston and Chicago (clinicaltrials.org reference #NCT01772992) (Stephenson et al., 2017). Male couples were recruited through online and in-person outreach efforts, including Facebook, Twitter, Scruff, Grindr and social marketing campaigns of the sites conducting the intervention. Additionally, flyers and posters were

displayed in the sites and at local gay-targeted venues. Information on the study was also displayed at the HIV testing check-in at each site.

The RCT recruited male couples, defined as two cisgender males (assigned male sex at birth and currently identify as male), aged at least 18 years old, and who reported being in a partnership for at least one month. Partnership was assessed as “*Do you have a primary male partner, that is, someone you feel emotionally, romantically committed to above others?*” Participants had to be residents of metro Atlanta, Boston or Chicago for at least 3 months. Those who presented for participation in the trial completed informed consent documentation before taking the baseline survey. The informed consent and survey processes were conducted with each member of the dyad in a separate room. Of the 410 individuals who presented for participation, 398 consented and were eligible to take the baseline survey (97%). Of the 398 participants who completed the baseline survey, 78 individuals (20%) were excluded from analysis due to missing responses. The most common areas of missing data were in employment, age and HIV status. Sensitivity analysis determined that the missing data were missing completely at random (MCAR) and therefore multiple imputation techniques were not applied. Importantly, respondents with missing data were not significantly different in their reporting of IPV than those with complete data. Data from 160 male couples were analyzed as dyads, with the responses of each partner used to create measures of dyadic differences. A description of the protocol for the full study can be found elsewhere (Stephenson et al., 2017). Approval for this study was obtained from the Michigan Institutional Review Board.

Participants self-reported demographic and socio-economic characteristics including age, race/ethnicity, education level, employment status, annual household income, arrest history, alcohol and drug use, sexual orientation, and HIV status. The survey measured both recent (previous 12 months) experience (victimization) and perpetration of IPV using the Gay and Bisexual Men (IPV-GBM) scale (Experience: Cronbach’s alpha > 0.78; Perpetration Cronbach’s alpha > 0.76) adapted from the Conflict Tactics scale to more accurately measure IPV among gay and bisexual men (Stephenson & Finneran, 2013). The IPV-GBM scale was developed to measure the experience of IPV in male couples. Full details of the scale development and validation can be found at Stephenson & Finneran (2013). Briefly, ten focus group discussions were held with men in Atlanta to explore perceptions of IPV: men listed actions they felt would constitute IPV. More than 30 items were generated from the focus groups, and after expert review to remove repeat and similar items, 23 IPV actions were identified. These items were included in a survey of 1,075 MSM in Atlanta, who were asked if they endorsed each item as IPV, and whether they had experienced or perpetrated each item in the last 12 months. Factor analysis conducted on the survey data: the IPV-GMB scale produced from this analysis consists of 23 items over four domains of IPV. The IPV-GBM has been used in samples of MSM and gay/ bisexual men to measure the recent prevalence of IPV and to explore associations between IPV and HIV risk behaviors (Stephenson et al., 2013; Stephenson et al., 2017; Stephenson and Finneran 2017a; Stephenson and Finneran 2017b; Davis et al., 2016). The scale encompasses 23 measures over four domains of IPV: physical and sexual (e.g. “[partner] punched, hit, or slapped you?”, “[partner] raped you?”), emotional (“e.g. “[partner] told you to ‘act straight’ around certain people?”, “[partner] called you fat or ugly?”), controlling (e.g. “[partner] prevented

you from seeing your family?”, “[partner] prevented you from seeing your friends?”), and monitoring (e.g. “[partner] demanded access to you email?”, “[partner] read your text messages without your knowledge?”). Respondents provided a nickname for their partner, which was then piped into the question to replace [partner]. Questions were asked about the experience of IPV in the past 12 months and the perpetration of IPV in the past 12 months, as separate sets of questions (“*Has your partner done any of the following to you in the past 12 months?*”, “*Have you done any of the following to your partner in the past 12 months?*”). Responses to these questions were compared to determine agreement in reporting of IPV experience and perpetration among dyads.

Statistical analyses were conducted using SAS 9.4. Descriptive statistics were used to summarize the demographic characteristics of the sample, as well as participants’ experience and perpetration of IPV. Three measures were calculated to assess concordance between partner responses to questions around IPV. Observed agreement (P0) was obtained by taking the ratio of the number of responses for which both partners agreed to the total number of responses. One limitation of this measure is that it does not account for the possibility that sometimes partners might agree on a specific characteristic solely due to chance. Cohen’s kappa statistic (K) was calculated as the ratio of P0 minus the chance-expected agreement and 1 minus the chance-expected agreement, and corrects for agreement expected to occur by chance. Cohen’s kappa statistic (K), introduced in 1960 (Cohen, 1960), corrects for the amount of agreement that can be expected to occur by chance, and has been frequently employed to measure inter-rater reliability in clinical studies (Brennan & Hays, 1992; Sim & Wright, 2005). A common criticism of K is that it is highly dependent on prevalence, defined as the probability with which a specific characteristic is classified into a particular response category (Cicchetti & Feinstein, 1990; Feinstein & Cicchetti, 1990). Variations in prevalence might result in low values of K for some characteristics, but this does not necessarily reflect a low level of agreement between partners. The prevalence-adjusted bias-adjusted kappa statistic (PABAK), proposed by Byrt in 1993 (Byrt, Bishop, & Carlin, 1993), accounts for imbalances caused by differences in prevalence while assuming the absence of any systematic errors in classification. Prevalence-adjusted bias-adjusted kappa statistic (PABAK), was obtained by subtracting 1 from two times the value of P0, and accounts for imbalances caused by differences in prevalence while assuming the absence of any systematic errors in classification. PABAK reporting is being increasingly recommended as a supplement to K in healthcare research (Girianelli & Santos Thuler, 2007; Mak, Yau, & Chan, 2004). PABAK measures the degree of concordance in the reporting of IPV, while accounting for the underlying differences in prevalence. McHugh’s (2012) recommendations were used to interpret PBAK values as follows: 0.59 indicates “weak” concordance, 0.60–0.79 indicates “moderate” concordance, and 0.80 indicates “strong” concordance.

All three concordance measures were calculated for the overall sample. Variations in the reporting of IPV may be shaped by different life experiences within couples, i.e. one member of the couple may be older, and have more experience of relationships. Variations in the reporting of IPV may also vary by factors that shape the risk of IPV, i.e. couples with open sexual agreements may experience more conflict than monogamous couples. Analysis was also stratified by age group match (both partners are in the same age group or partners are in different age groups), race and ethnicity match (same race or different races), dyadic

HIV sero-status (sero-concordant negative or sero-discordant), cohabitation status (cohabit, do not cohabit, disagree about cohabitation status), and mutual agreement about sex with outside partners (have an agreement, do not have an agreement, disagree about mutual agreement). Agreement was categorized as “poor” ($K < 0.00$), “slight” ($0.00 < K < .20$), “fair” ($0.21 < K < 0.40$), “moderate” ($0.41 < K < 0.60$), “substantial” ($0.61 < K < 0.80$) or “almost perfect” ($0.81 < K < 1.00$) (Landis & Koch, 1977).

Results

Demographic characteristics of the 320 participants are summarized in Table 1. This sample is diverse in terms of age, with 20% aged 18–24 years (65/320), 38% aged 25–34 years (121/320), 18% aged 35–44 years (59/320), and 23% aged 45 years or older (75/320). The sample, however, is mostly white non-Hispanic (72%: 231/320), with 12% identifying as black non-Hispanic (37/320), 9% as white-Hispanic (29/320), and 7% as another race or reporting being multiracial (23/320). The majority of participants were highly educated, with 69% reporting a bachelor’s degree or higher (219/320). Ten percent reported being unemployed, retired, or receiving disability assistance (32/320), and over one-quarter reported having been arrested (27%: 87/320). Average relationship length was approximately 3 years (range 6 months to 11 years). Less than one-quarter reported binge drinking behavior in the past year (22%: 71/320), and less than one-fifth reported polydrug use in the past year (18%: 58/320).

Concordance in reporting IPV

This sample reported a high prevalence of any form of IPV (Table 2), with 41% indicating experiencing any type of IPV with their current partner in the past year (132/320). Emotional IPV was the most commonly reported experience of IPV at 38% (123/320), followed by monitoring IPV at 30% (96/320), physical IPV at 18% (56/320), and controlling IPV at 12% (37/320). In contrast, this sample reported higher prevalence of IPV perpetration, at 50% (160/320). Emotional IPV was the most commonly reported form of IPV perpetrated at 39% (125/320), followed by monitoring IPV at 37% (117/320), physical IPV at 17% (53/320), and controlling IPV at 8% (24/320).

There were generally low levels of agreement between partners’ reports of experience and perpetration of IPV in the relationship (Table 3). Unadjusted kappa values demonstrate only “slight” agreement for reports of controlling IPV ($K = .16$) and “fair” agreement for any type of IPV ($K = .26$), physical IPV ($K = .27$), emotional IPV ($K = .25$), and monitoring IPV ($K = .26$). The PABAK, which adjusts for prevalence and bias in the kappa statistic, indicates different levels of agreement with “poor” agreement for any type of IPV (PABAK = $-.06$), “slight” agreement for emotional IPV (PABAK = $.01$) and monitoring IPV (PABAK = $.05$), “fair” agreement for physical IPV (PABAK = $.39$), and “moderate” agreement for controlling IPV (PABAK = $.54$).

Concordance in reporting by age match

Among couples for whom both partners were in the same age group ($n = 102$), unadjusted kappa values generally show “fair” agreement for reporting any IPV, and “slight” agreement

for controlling IPV ($K=.11$) (Table 4). However, adjusted values show “poor” agreement for any type of IPV (PABAK= $-.02$), “slight” agreement for emotional IPV (PABAK= $.02$) and monitoring IPV (PABAK= $.12$), “fair” agreement for physical IPV (PABAK= $.27$), and “moderate” agreement for controlling IPV (PABAK= $.51$). Couples with members in different age groups ($n=58$) showed roughly similar levels of prevalence-adjusted bias-adjusted agreement, except there was higher concordance on physical IPV (PABAK= $.59$) and lower concordance on monitoring IPV (PABAK= $-.07$).

Concordance in reporting by race/ethnicity

Couples of the same race/ethnicity ($n=97$) exhibited similar “fair” levels of agreement for all measures of IPV, except for controlling IPV with “slight” agreement ($K=.17$). Adjusted values reveal lower levels of concordance for any type of IPV (PABAK= $-.03$), emotional IPV (PABAK= $-.05$), and monitoring IPV (PABAK= $.09$), while controlling IPV had higher concordance (PABAK= $.61$). Interracial couples ($n=63$) only differed from same-race couples in adjusted values of agreement, showing higher agreement for physical IPV (PABAK= $.52$) and emotional IPV (PABAK= $.11$), and lower agreement for controlling IPV (PABAK= $.43$) and monitoring IPV (PABAK= $-.02$).

Concordance in reporting by couple HIV sero-status

Couples who were sero-concordant negative ($n=110$) exhibited similarly low levels of concordance as with previous groups (any type $K=.15$, physical $K=.3$, emotional $K=.2$, controlling $K=.19$, monitoring $K=.25$). Adjusted values, however, indicate “poor” agreement for any type of IPV (PABAK= $-.2$) and emotional IPV (PABAK= $-.07$), “slight” agreement for monitoring IPV (PABAK= $.02$), and “moderate” agreement for physical IPV (PABAK= $.45$) and controlling IPV (PABAK= $.53$). Sero-discordant couples ($n=50$) showed differences with higher concordance on any type of IPV, both unadjusted ($K=.27$) and adjusted (PABAK= $.24$), higher adjusted concordance on emotional IPV (PABAK= $.2$), and lower adjusted concordance on physical IPV (PABAK= $.24$).

Concordance in reporting by relationship characteristics

Analyzing differences in relationship characteristics (Table 5) yielded similar results. Looking at couples who cohabitate ($n=117$), unadjusted concordance was “slight” for physical IPV ($K=.19$) and controlling IPV ($K=.18$) and “fair” for any type of IPV ($K=.25$), emotional IPV ($K=.23$), and monitoring IPV ($K=.23$). Adjusted values showed higher agreement on physical IPV (PABAK= $.23$) and controlling IPV (PABAK= $.5$), and lower concordance on any type of IPV (PABAK= $-.09$), emotional IPV (PABAK= $-.06$), and monitoring IPV (PABAK= $-.04$). Couples who do not cohabitate ($n=34$) showed lower unadjusted concordance in any type of IPV ($K=.18$) and controlling IPV ($K= -.06$), and unadjusted values were for higher physical IPV ($K=.47$). Adjusted agreement in this group was higher than in couples who cohabitate for physical IPV (PABAK= $.82$) and controlling IPV (PABAK= $.65$), but lower for any type of IPV (PABAK= $-.06$) and emotional IPV (PABAK= $.12$). Couples who disagreed on their cohabitation status ($n=9$) generally had higher levels of agreement about IPV compared to the other two groups. All the unadjusted agreement levels were higher than the other two groups (any type $K=.47$, physical $K=.75$, controlling $K=.28$, monitoring $K=.43$), except for emotional IPV which showed “fair”

agreement as the other two groups ($K=.36$). The adjusted statistic remained higher than both groups (any type PABAK=.33, emotional PABAK=.56) or about as high as the other groups (physical PABAK=.78, controlling PABAK=.56, monitoring PABAK=.33).

Couples with a sexual agreement about having sex with outside partners only showed “fair” agreement (unadjusted) across all categories, except controlling IPV which was only “slight” agreement ($K=.13$). Adjusted values generally yielded “poor” agreement, while showing “fair” agreement for physical IPV (PABAK=.38) and “moderate” agreement for controlling IPV (PABAK=.58). Unadjusted concordance levels were lower among couples who did not have a sexual agreement ($n=10$) for controlling IPV ($K= -.11$) and emotional IPV ($K=.19$) but were higher for physical IPV ($K=.51$) and for any type of IPV ($K=.52$). Adjusted statistics showed higher degrees of concordance on IPV across all measures of IPV in this group. Couples who disagreed on their sexual agreement ($n=40$) often showed lower degrees of concordance, having the lowest unadjusted concordance among the three groups in physical IPV ($K=.08$), but the highest unadjusted concordance of the groups for controlling IPV ($K=.22$). Adjusted concordance levels were typically higher than couples with a sexual agreement but lower than those without (any type PABAK=.15, physical PABAK=.35, emotional PABAK=.1, controlling PABAK=.4, monitoring PABAK=.2).

Discussion

In general, concordance in reporting of recent IPV among this sample of male couples was only low to moderate. The reporting of perpetration of recent IPV was higher than the reporting of recent victimization. This contrasts with studies of opposite sex couples in which there is evidence that women report higher levels of victimization in contrast to the levels of perpetration reported by their male partners (Halim et al., 2018; Panuzio et al., 2006; Shafer, Caetano and Clark, 2002; Freeman, Schumacher, & Coffey, 2015). Across comparison groups of differences in age, race, HIV serostatus, cohabitation status and sexual agreement, kappa and PABAK values were consistently in the “moderate” or below range, indicating a lack of agreement of the presence of IPV in relationships across a range of individual demographic and relationship contexts.

There are several possible explanations for the generally low levels of agreement in the reporting of the presence of recent IPV in this sample of male couples. It is possible that men do not perceive all the acts they experience as IPV. The questions used to assess IPV ask men to respond to a list of acts (including physical, emotional, controlling, and monitoring) and note whether their partner has done this to them, or they have done this to their partner (as separate questions) in the previous 12 months. The questions do not directly ask the respondents if they have experienced or perpetrated *IPV*: they report the experience or perpetration of acts, which are then used to classify the presence or absence of IPV in the relationship. While some acts listed fall into more widely accepted definitions of violence, i.e. forced sex, other acts may not be commonly perceived as IPV. If we accept that IPV is a socially undesirable behavior that is likely to be under-reported, men may under-report the prevalence of acts that are seen as IPV, yet may not necessarily under-report acts that they do not perceive as IPV. The only form of IPV for which there was moderate agreement was controlling behaviors; this includes behaviors such as stopping a partner from seeing their

friends of family. This may not be perceived as an act of IPV, and therefore may be more accurately reported and have more agreement of reporting among dyads.

However, this does not explain the rather surprising result that overall, the perpetration of IPV was more commonly reported than the experience of IPV. The answer to this may lie in associations between perpetrations of violence and traditional constructs of masculinity. Literature examining the experience of IPV among opposite sex couples has noted an association between the perpetration of IPV by men against women and men's beliefs and adherence to traditional norms that view masculinity as dominant, violent, or controlling (Moore & Stuart, 2005). There is also evidence that men may use violence as a resource for overcoming challenges to masculinity (i.e. unemployment) (Messerschmidt, 2000). Hunt et al., (2016) hypothesize that the persisting stereotype that gay men are not masculine may lead gay men to be vulnerable to threats to their masculinity, and react to this challenge by distancing themselves from feminine-stereotyped gay men or by attempting to present themselves as more masculine. Acting violently towards a partner may be a tactic to reinforce masculinity. Just as reporting IPV may validate an individual's masculinity, not reporting IPV may equally be an effort to validate masculinity. Admitting to experiencing IPV may be seen as a challenge to masculinity (Hunt, Fasoli, Carnaghi, & Cadinu, 2016).

Alternatively, some the difference in the reporting of experience and perpetration may lie in the nature of the items included in the IPV-GBM scale. The monitoring domain includes items such as "having read emails without knowledge": this would naturally be easier to report more perpetration than experience, unless the victim was aware it had happened. Hence, to some extent, the over-reporting of IPV perpetration may be linked to specific acts of IPV. Further research is warranted, perhaps with qualitative methods, to disentangle the extent to which over-reporting of perpetration relative to experience of IPV represents measurement error or real experiences.

Although this is the first study to examine concordance in the reporting of IPV among male couples, there are several limitations to consider. The sample was not racially diverse, and the results may not be representative of non-white male couples. Participants who identified as multi-racial, Asian, or Native American were too few for statistical analysis and were categorized as one group, limiting our ability to examine the concordance of IPV among male couples from a range of racial and ethnic groups. Only fifty participants reported positive HIV sero-status, and all were in a sero-discordant partnership; hence that data from sero-concordant positive couples is still lacking, although there is no evidence to suggest that male sero-concordant positive couples experience higher levels of IPV or would report IPV differently. The survey did not collect data on degree of relationship commitment, or measures of the social desirability of IPV, which may also shape the differential reporting of IPV. Couples included in the analysis are also selective in that they are couples who have agreed to be in a RCT together. These couples may be expected to report lower levels of IPV, either because the relationship communication and functioning required to enter a RCT together may be associated with lowered experience of IPV or, alternatively, couples may fear that reporting IPV may exclude them from enrollment in the RCT and hence under-report the experience of IPV. In the current RCT, reporting recent experience or perpetration of IPV was an exclusion criterion for enrolling in the RCT. The measure of IPV used, the

IPB-GBM scale, is unique to the experience of IPV among MSM: however, the inclusion of damage to property under physical IPV may give a higher prevalence of IPV than is found with more traditional measures of IPV.

The results point to high levels of discordance in the reporting of IPV among this sample of male couples from three U.S cities. While further work is warranted with a larger, more racially and ethnically diverse sample, the results present preliminary evidence that male couples discordantly report IPV. The differential reporting of IPV may be shaped by desires to conform to constructs of masculinity, leading to biases in the reporting of both the experience and perpetration of IPV, or may also be shaped by measurement error. Further work is required, adopting qualitative approaches, to understand the factors that shape gay men's desire to report their experiences or perpetration of IPV, and to examine how current measures of IPV may be adapted to reflect these challenges.

References

- Bartholomew K, Regan KV, White MA, & Oram D (2008). Patterns of Abuse in Male Same-Sex Relationships. *Violence and Victims*, 23(5), 617–636. doi:10.1891/0886-6708.23.5.617 [PubMed: 18958989]
- Brennan PF, & Hays BJ (1992). Focus on psychometrics the kappa statistic for establishing interrater reliability in the secondary analysis of qualitative clinical data. *Research in nursing & health*, 15(2), 153–158. [PubMed: 1565808]
- Byrt T, Bishop J, & Carlin JB (1993). Bias, prevalence and kappa. *Journal of clinical epidemiology*, 46(5), 423–429. [PubMed: 8501467]
- Carvalho AF, Lewis RJ, Derlega VJ, Winstead BA, & 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
- Cicchetti DV, & Feinstein AR (1990). High agreement but low kappa: II. Resolving the paradoxes. *Journal of clinical epidemiology*, 43(6), 551–558. [PubMed: 2189948]
- Cohen J (1960). A coefficient of agreement for nominal scales. *Educational and psychological measurement*, 20(1), 37–46.
- Craft SM, & Serovich JM (2005). Family-of-origin factors and partner violence in the intimate relationships of gay men who are HIV positive. *J Interpers Violence*, 20(7), 777–791. doi:10.1177/0886260505277101 [PubMed: 15914700]
- Davis A, Kaighobadi F, Stephenson R, Rael C, and Sandfort T (2016): Associations between Alcohol Use and Intimate Partner Violence among Men Who Have Sex with Men. *LGBT Health* 3(6), 400–406. doi: 10.1089/lgbt.2016.0057 [PubMed: 27906642]
- Desmarais SL, Reeves KA, Nicholls TL, Telford R, & Fiebert MS (2012a). Prevalence of physical violence in intimate relationships: Part 1. Rates of male and female victimization. *Partner Abuse*, 3(2), 140–169.
- Desmarais SL, Reeves KA, Nicholls TL, Telford R, & Fiebert MS (2012b). Prevalence of physical violence in intimate relationships: Part 2. Rates of male and female perpetration. *Partner Abuse*, 3(2), 170–198.
- Feldman MB, Ream GL, Diaz RM, & 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
- Feinstein AR, & Cicchetti DV (1990). High agreement but low kappa: I. The problems of two paradoxes. *Journal of clinical epidemiology*, 43(6), 543–549. [PubMed: 2348207]
- 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 [PubMed: 23271429]

- Freeman AJ, Schumacher JA, & Coffey SF (2015). Social desirability and partner agreement of men's reporting of intimate partner violence in substance abuse treatment settings. *J Interpers Violence*, 30(4), 565–579. doi:10.1177/0886260514535263 [PubMed: 24923888]
- Girianelli VR, & Santos Thuler LC (2007). Evaluation of agreement between conventional and liquid-based cytology in cervical cancer early detection based on analysis of 2,091 smears: experience at the Brazilian National Cancer Institute. *Diagn Cytopathol*, 35(9), 545–549. doi:10.1002/dc.20699 [PubMed: 17703446]
- Greenwood GL, Relf MV, Huang B, Pollack LM, Canchola JA, & Catania JA (2002). Battering Victimization Among a Probability-Based Sample of Men Who Have Sex With Men. *American Journal of Public Health*, 92(12), 1964–1969. [PubMed: 12453817]
- Halim N, Steven E, Reich N, Badi L, & Messersmith L (2018). Variability and validity of intimate partner violence reporting by couples in Tanzania. *PLoS One*, 13(3), e0193253. doi:10.1371/journal.pone.0193253 [PubMed: 29518162]
- Houston E, & McKirnan DJ (2007). Intimate partner abuse among gay and bisexual men: risk correlates and health outcomes. *J Urban Health*, 84(5), 681–690. doi:10.1007/s11524-007-9188-0 [PubMed: 17610158]
- Hunt CJ, Fasoli F, Carnaghi A, & Cadinu M (2016). Masculine self-presentation and distancing from femininity in gay men: An experimental examination of the role of masculinity threat. *Psychology of Men & Masculinity*, 17(1), 108–112. doi:10.1037/a0039545
- Koblin BA, Torian L, Xu G, Guilin V, Makki H, Mackellar D, & Valleroy L (2006). Violence and HIV-related risk among young men who have sex with men. *AIDS Care*, 18(8), 961–967. doi:10.1080/09540120500467182 [PubMed: 17012086]
- Landis JR, & Koch GG (1977). The Measurement of Observer Agreement for Categorical Data. *Biometrics*, 33(1), 159. doi:10.2307/2529310 [PubMed: 843571]
- Mak HK, Yau KK, & Chan BP (2004). Prevalence-adjusted bias-adjusted kappa values as additional indicators to measure observer agreement. *Radiology*, 232(1), 302–303. doi:10.1148/radiol.2321031974
- Marshall AD, Panuzio J, Makin-Byrd KN, Taft CT, & Holtzworth-Munroe A (2011). A multilevel examination of interpartner intimate partner violence and psychological aggression reporting concordance. *Behav Ther*, 42(3), 364–377. doi:10.1016/j.beth.2010.09.003 [PubMed: 21658520]
- McHugh ML (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, 22(3), 276–282. [PubMed: 23092060]
- Messerschmidt JW (2000). Becoming “Real Men”: Adolescent Masculinity Challenges and Sexual Violence. *Men and Masculinities*, 2(3), 286–307. doi:10.1177/1097184x00002003003
- Moore TM, & Stuart GL (2005). A Review of the Literature on Masculinity and Partner Violence. *Psychology of Men & Masculinity*, 6(1), 46–61. doi:10.1037/1524-9220.6.1.46
- Pantalone DW, Schneider KL, Valentine SE, & Simoni JM (2012). Investigating partner abuse among HIV-positive men who have sex with men. *AIDS Behav*, 16(4), 1031–1043. doi:10.1007/s10461-011-0011-2 [PubMed: 21822954]
- Panuzio J, O'Farrell TJ, Marshall AD, Murphy CM, Murphy M, & Taft CT (2006). Intimate partner aggression reporting concordance and correlates of agreement among men with alcohol use disorders and their female partners. *Assessment*, 13(3), 266–279 [PubMed: 16880279]
- Pruitt KL, White D, Mitchell JW, & Stephenson R (2015). Sexual agreements and intimate-partner violence among male couples. *International Journal of Sexual Health*, 27(4), 429–441. doi:10.1080/19317611.2015.1037037
- Relf MV (2001). Battering and HIV in Men Who Have Sex With Men: A Critique and Synthesis of the Literature. *Journal of the Association of Nurses in AIDS Care*, 12(3), 41–48. doi:10.1016/s1055-3290(06)60143-x [PubMed: 11387804]
- Schafer J, Caetano E and Clark CL (2002): Agreement about violence in US couples. *Journal of Interpersonal Violence*, 17(4):457–470
- Sim J, & Wright CC (2005). The kappa statistic in reliability studies: Use, interpretation, and sample size requirements. *Physical therapy*, 85(3), 257–268. [PubMed: 15733050]

- Stephenson R, de Voux A, & Sullivan PS (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. [PubMed: 21731792]
- 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 [PubMed: 23755098]
- Stephenson R and Finneran C: Receipt and Perpetration of Intimate Partner Violence and Condomless Anal Intercourse among gay and bisexual men in Atlanta (2017a): *AIDS and Behavior* 21(8): 2253–2260. Doi: 10.1007/s10461-017-1709-6/ [PubMed: 28176169]
- Stephenson R and Finneran C (2017b): Minority stress and intimate partner violence among gay and bisexual men in Atlanta. *American Journal of Men's Health* 11(4), 952–961. doi: 10.1177/1557988316677506
- Stephenson R, Khosropour C, & Sullivan P (2010). Reporting of Intimate Partner Violence among Men Who Have Sex with Men in an Online Survey. *Western Journal of Emergency Medicine*, 11(3), 5.
- Stephenson R, Rentsch C, Salazar LF, & Sullivan PS (2011). Dyadic Characteristics and Intimate Partner Violence among Men Who Have Sex with Men. *Western Journal of Emergency Medicine*, 12(3), 324–332. [PubMed: 21731790]
- Stephenson R, Sato KN, & Finneran C (2013). Dyadic, Partner, and Social Network Influences on Intimate Partner Violence among Male-Male Couples. *West J Emerg Med*, 14(4), 316–323. doi:10.5811/westjem.2013.2.15623 [PubMed: 23930144]
- Stephenson R, Suarez NA, Garofalo R, Hidalgo MA, 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 [PubMed: 28860107]
- Strandmoen JF, Askeland IR, Tjersland OA, Wentzel-Larsen T, & Heir T (2016). Intimate Partner Violence in Men Voluntarily Attending Treatment: A Study of Couple Agreement. *Violence Vict*, 31(1), 124–134. doi:10.1891/0886-6708.VV-D-13-00193 [PubMed: 26646683]
- Welles SL, Corbin TJ, Rich JA, Reed E, & Raj A (2011). Intimate partner violence among men having sex with men, women, or both: early-life sexual and physical abuse as antecedents. *J Community Health*, 36(3), 477–485. doi:10.1007/s10900-010-9331-9 [PubMed: 21116698]

TABLE 1:

Demographic and behavioral characteristics of study participants (N=320).

Characteristic	n	(%)
Age group (years) ^a		
18–24	65	(20)
25–34	121	(38)
35–44	59	(18)
45	75	(23)
Race and ethnicity		
White, non-Hispanic	231	(72)
Black/African American, non-Hispanic	37	(12)
Hispanic	29	(9)
Other ^b	23	(7)
Education		
Associate's/Technical degree or lower ^c	101	(32)
Bachelor's degree	136	(43)
Master's degree or higher	83	(26)
Employment		
Employed (full-time or part-time)	209	(65)
Student (full-time or part-time)	79	(25)
Other ^d	32	(10)
Annual household income		
< \$15,000	32	(10)
\$15,001-\$50,000	110	(34)
\$50,001-\$100,000	94	(29)
\$100,001	84	(26)
Arrest history		
Ever been arrested	87	(27)
Never been arrested	233	(73)
Binge drinking in the past year ^e		
Yes	71	(22)
No	249	(78)
Polydrug use in the past year ^f		
Yes	58	(18)
No	262	(82)
Sexual orientation		
Homosexual/gay	287	(90)
Other ^g	33	(10)
Self-reported HIV status		
Negative	270	(84)

Characteristic	n	(%)
Positive	50	(16)

^aAge: Mean=36, Median=34, Range=19–69.

^bIncludes 15 multiracial, 6 Asian, 1 Native American/Alaskan Native, and 1 other.

^cIncludes 77 with an Associate's/Technical degree or some college education, 23 with a high school diploma or General Educational Development (GED), and 1 with some high school education.

^dIncludes 17 receiving disability benefits, 12 retired, 2 unemployed, and 1 unknown.

^eDefined as having 6 or more drinks on a single occasion.

^fDefined as using 2 or more psychoactive substances in combination on a single occasion.

^gIncludes 18 bisexual, 11 queer, 2 questioning/unsure, and 2 other.

TABLE 2:

Experience and perpetration of intimate partner violence (IPV) in the past 12 months categorized by domains of IPV (N=320)

Characteristic	Experience IPV		Perpetrate IPV	
	n	(%)	n	(%)
Any type of IPV	132	(41)	160	(50)
Physical IPV	56	(18)	53	(17)
Have been punched, hit or slapped	20	(6)	21	(7)
Have been kicked	3	(1)	6	(2)
Have been pushed or shoved	34	(11)	29	(9)
Have been forced to do something sexual against my will	1	(0)	0	(0)
Have been raped	0	(0)	0	(0)
Have had my personal property damaged or destroyed	38	(12)	21	(7)
Emotional IPV	123	(38)	125	(39)
Have been called fat or ugly	42	(13)	32	(10)
Have been asked to “act straight” around certain people	22	(7)	21	(7)
Have been criticized about my clothes	110	(34)	117	(37)
Controlling IPV	37	(12)	24	(8)
Have been prevented from seeing my family	5	(2)	1	(0)
Have been prevented from seeing my friends	24	(8)	15	(5)
Have been prevented from seeing my partner’s family	11	(3)	8	(3)
Have been prevented from seeing my partner’s friends	13	(4)	9	(3)
Monitoring IPV	96	(30)	117	(37)
Have been demanded to provide access to my cell phone	46	(14)	35	(11)
Have been demanded to provide access to my email	20	(6)	18	(6)
Have had my text messages read without my knowledge	71	(22)	96	(30)
Have had my email read without my knowledge	42	(13)	60	(19)
Have had my social networking pages been posted on repeatedly	31	(10)	20	(6)

TABLE 3:

Overall concordance between participant and partner responses regarding experiencing/perpetrating intimate partner violence among 160 couples.

Characteristic	F ^a	P ₀ ^b	K ^c	PABAK ^d
Any type of IPV ^e	75/160	47	0.26	-0.06
Physical IPV ^e	111/160	69	0.27	0.39
Emotional IPV ^e	81/160	51	0.25	0.01
Controlling IPV ^e	123/160	77	0.16	0.54
Monitoring IPV ^e	84/160	53	0.26	0.05

^aFrequency of agreement.

^bObserved percent agreement (%).

^cCohen's kappa statistic.

^dPrevalence-adjusted bias-adjusted kappa statistic.

TABLE 4:

Concordance between participant and partner responses regarding experiencing/perpetrating intimate partner violence stratified by age group match, race and ethnicity match, and dyadic HIV serostatus among 160 couples.

Characteristic	F ^a	P ₀ ^b	K ^c	PABAK ^d	F ^a	P ₀ ^b	K ^c	PABAK ^d
Age group match								
	Same (102 couples)				Different (58 couples)			
Any type of IPV ^e	50/102	49	0.27	-0.02	25/58	43	0.22	-0.14
Physical IPV ^e	65/102	64	0.27	0.27	46/58	79	0.17	0.59
Emotional IPV ^e	52/102	51	0.27	0.02	29/58	50	0.19	0.00
Controlling IPV ^e	77/102	75	0.11	0.51	46/58	79	0.25	0.59
Monitoring IPV ^e	57/102	56	0.31	0.12	27/58	47	0.17	-0.07
Race and ethnicity match								
	Same (97 couples)				Different (63 couples)			
Any type of IPV ^e	47/97	48	0.28	-0.03	28/63	44	0.23	-0.11
Physical IPV ^e	63/97	65	0.25	0.30	48/63	76	0.29	0.52
Emotional IPV ^e	46/97	47	0.21	-0.05	35/63	56	0.31	0.11
Controlling IPV ^e	78/97	80	0.17	0.61	45/63	71	0.14	0.43
Monitoring IPV ^e	53/97	55	0.25	0.09	31/63	49	0.26	-0.02
Dyadic HIV serostatus								
	Seroconcordant negative (110 couples)				Serodiscordant (50 couples)			
Any type of IPV ^e	44/110	40	0.15	-0.20	31/50	62	0.27	0.24
Physical IPV ^e	80/110	73	0.30	0.45	31/50	62	0.20	0.24
Emotional IPV ^e	51/110	46	0.20	-0.07	30/50	60	0.36	0.20
Controlling IPV ^e	84/110	76	0.19	0.53	39/50	78	0.09	0.56
Monitoring IPV ^e	56/110	51	0.25	0.02	28/50	56	0.31	0.12

^aFrequency of agreement.

^bObserved percent agreement (%).

^cCohen's kappa statistic.

^dPrevalence-adjusted bias-adjusted kappa statistic.

Concordance between participant and partner responses regarding experiencing/perpetrating intimate partner violence stratified by cohabitation status and mutual agreement about sex with outside partners among 160 couples.

TABLE 5:

Characteristic	F ^a	P ₀ ^b	K ^c	PABAK ^d	Cohabitation status							
					F ^a	P ₀ ^b	K ^c	PABAK ^d	Do not cohabit (34 couples)		Disagree about cohabitation status (9 couples)	
Any type of IPV ^e	53/117	45	0.25	-0.09	16/34	47	0.18	-0.06	6/9	67	0.47	0.33
Physical IPV ^e	72/117	62	0.19	0.23	31/34	91	0.47	0.82	8/9	89	0.75	0.78
Emotional IPV ^e	55/117	47	0.23	-0.06	19/34	56	0.21	0.12	7/9	78	0.36	0.56
Controlling IPV ^e	88/117	75	0.18	0.50	28/34	82	-0.06	0.65	7/9	78	0.28	0.56
Monitoring IPV ^e	56/117	48	0.23	-0.04	22/34	65	0.24	0.29	6/9	67	0.43	0.33
Mutual agreement about sex with outside partners												
					Have an agreement (110 couples)		Do not have an agreement (10 couples)		Disagree about mutual agreement (40 couples)			
Any type of IPV ^e	45/110	41	0.20	-0.18	7/10	70	0.52	0.40	23/40	58	0.36	0.15
Physical IPV ^e	76/110	69	0.30	0.38	8/10	80	0.51	0.60	27/40	68	0.08	0.35
Emotional IPV ^e	54/110	49	0.23	-0.02	6/10	60	0.19	0.20	22/40	55	0.31	0.10
Controlling IPV ^e	87/110	79	0.13	0.58	8/10	80	-0.11	0.60	28/40	70	0.22	0.40
Monitoring IPV ^e	53/110	48	0.24	-0.04	7/10	70	0.39	0.40	24/40	60	0.29	0.20

^aFrequency of agreement.

^bObserved percent agreement (%).

^cCohen's kappa statistic.

^dPrevalence-adjusted bias-adjusted kappa statistic.