



Published in final edited form as:

J Sex Res. 2016 February ; 53(2): 239–250. doi:10.1080/00224499.2014.1002125.

Patterns of Intimate Partner Violence and Sexual Risk Behavior among Young Heterosexually Active Men

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Abstract

Intimate partner violence (IPV) victimization is linked to sexual risk exposure among women. However, less is known about the intersection of IPV perpetration and sexual risk behavior among men. This study used data from a diverse, community sample of 334 heterosexually active young men, aged 18 to 25, across the United States to examine whether and how men with distinct IPV-related behavior patterns differed in sexual risk-related behavior and attitudes. Participants were recruited and surveyed online, and grouped conceptually based on the types of IPV perpetration behavior(s) used in a current or recent romantic relationship. Groups were then compared on relevant sexual risk variables. Men reporting both physical abuse and sexual coercion against intimate partners reported significantly higher numbers of lifetime partners, higher rates of nonmonogamy, greater endorsement of nonmonogamy, and less frequent condom use relative to nonabusive men or those reporting controlling behavior only. This group also had higher sexually transmitted infection (STI) exposure compared to men who used controlling behavior only and men who used sexual coercion only. Findings suggest that interventions with men who use physical and sexual violence need to account for not only the physical and psychological harm of this behavior but also the sexual risk to which men may expose their partners.

Significant research has documented links between intimate partner violence (IPV) and risk factors related to the transmission of human immunodeficiency virus (HIV) and other sexually transmitted infections (STIs). The bulk of this extant literature has focused on the association between exposure to partner violence and STI risk among female victims. For example, relative to women who have not experienced abuse, women with a history of IPV victimization report increased rates of STI diagnoses (Coker, Sanderson, & Dong, 2004), less consistent condom use (for review, see Coker, 2007), and greater nonmonogamy by their partners (Raj, Silverman, & Amaro, 2004). Less is known about sexual risk factors among men who use abusive behaviors in their intimate relationships, however—particularly beyond men sampled from high-risk or clinical populations.

Three factors suggest the urgency of better understanding the nature of the IPV perpetration–sex risk link specifically among heterosexual men in the broader community. First, IPV remains a prevalent problem in the United States, and although both men and women experience IPV and can be perpetrators of this behavior, research suggests that the harmful impact of IPV within heterosexual couples accrues disproportionately to women (Black et al., 2011). Second, heterosexual activity remains the primary vector of HIV transmission to women (Centers for Disease Control and Prevention, 2012), and IPV appears to place women at particular risk for STI exposure for review, (see Coker, 2007). Finally, scholars have begun to note the lack of research on the HIV/STI prevention needs specifically of heterosexual men (e.g., Higgins, Hoffman, & Dworkin, 2010). Given the role of IPV perpetration as a correlate or potential mechanism of sexual risk, deepening our understanding of this link holds promise for enhancing sexual health prevention and intervention both for heterosexual men who use violence and for their female partners.

Prevalence of IPV: Physical Abuse, Sexual Abuse, and Controlling Behavior

IPV has generally been conceptualized as inclusive of both physical and sexual aggression, as well as of domineering, monitoring, and/or psychologically abusive behaviors that collectively have the impact of intimidating or controlling an intimate partner (Black et al., 2011). A recent national study of more than 15,000 U.S. residents found that the lifetime prevalence of experiencing physical abuse, rape, or stalking by an intimate partner was 36% for women and nearly 29% for men (Black et al., 2011). Of people reporting IPV victimization in this study, women were twice as likely as men to experience severe physical violence and three times more likely to report significant emotional, physical, or job-related impacts as a result of the abuse. Estimates of male perpetration of IPV are largely confined to clinical or geographically specific samples. Rates of past-year physical violence perpetration by men range from 41% in a sample of urban health clinic patients (Santana, Raj, Decker, La Marche, & Silverman, 2006) to 32% in a sample of active-duty military soldiers (Rosen et al., 2002). A recent study of college-enrolled men found that approximately 30% reported using physical violence with an intimate partner since the age of 14 (Edwards, Dixon, Gidycz, & Desai, 2013). Finally, among women who report experiencing physical abuse, over 20% also report that their partners are sexually abusive (Black et al., 2011).

Attention specifically to the use of controlling and monitoring behavior among men is more recent, and estimates of rates of these behaviors are rare. Controlling behaviors may accompany or be reinforced by physical violence and are typically operationalized as, among other things, dictating what partners do, who they see, and what they wear; maintaining control over financial decisions; and constraining access to work or education (Kelly & Johnson, 2008). These behaviors are sometimes termed *coercive control* (e.g., Kelly & Johnson, 2008; Stark, 2007) to indicate the collective and simultaneous dominating impact of physical, sexual, and verbal/control abuse tactics. In this article, however, we use the broader term *controlling behaviors* to leave room for the possibility that these behaviors may, at times, exist outside of the use of physical or sexual tactics to intentionally establish dominance and power over a partner. While many individuals who have experienced physical or sexual abuse also report psychological and controlling behavior by their partners (Basile & Black, 2011), little is known about the prevalence of controlling behaviors in the absence of physical aggression and the degree to which these behaviors are also associated with sexual risk.

IPV and Sexual Risk

As noted, the majority of research examining links between IPV and sexual risk has focused on female IPV victims. Research with female samples documents that women who report IPV victimization by a male partner are more likely than women without this history to report that their male partners engage in risky sexual behavior (e.g., unprotected intercourse, sexual partner concurrency; El-Bassel et al., 1998; Raj, Silverman, & Amaro, 2004). Female IPV victims are also more likely than nonvictimized women to report engaging in sex risk behaviors themselves (such as inconsistent condom use; Silverman, 2011) and are less likely to feel efficacious or free to employ STI and pregnancy prevention strategies with their partners (Beadnell, Baker, Morrison, & Knox, 2000).

A limited literature has begun to document links between IPV perpetration and behaviors that can increase exposure to sex-related risk among men in the United States. In this literature, the terms *sexual risk* and *sex-related risk* refer to behaviors that are associated with increasing one's own or one's female partner's vulnerability to STIs, HIV, and unplanned pregnancy. Generally, men who self-report aggression in relationships also report higher overall numbers of sexual partners (Decker et al., 2009; El-Bassel et al., 2001) and a greater likelihood of paying for sexual activity (Gilbert, El-Bassel, Wu, & Chang, 2007; Raj, Reed, Welles, Santana, & Silverman, 2008). Similarly, a link between perpetrating physical IPV and ever having received an STI diagnosis has been found both among men accessing an urban health clinic (Decker et al., 2009) and among African American men recruited in an urban setting (Raj et al., 2008).

Research also documents links between the perpetration of physical or sexual IPV and sexual risk behaviors specific to the relationship in which the violence occurs, focusing chiefly on patterns of condom use in men's primary relationships. For example, among men in an urban health clinic sample, IPV perpetration was associated with "gendered" behavior related to condoms, including coercing condom nonuse and responding with anger to female partners' condom requests (Decker et al., 2009). Similarly, Collins, Ellickson, Orlando, and

Klein (2005) found that young men who use physical aggression against their intimate partners are more likely to report inconsistent condom use with that partner. Other partner-specific sexual risks include higher rates of sexual partner concurrence among male perpetrators of physical IPV accessing methadone maintenance services (El-Bassel et al., 2001) and forcing sexual intercourse without a condom among men in an urban low-income health center (Raj et al., 2006). Relationships between IPV perpetration and other forms of sexual risk or safety strategies, such as negotiating nonbarrier methods of birth control or agreeing to pursue testing for STIs, have not been examined in the literature to date. Taken together, the literature suggests that men who use physical and sexual aggression in their relationships accumulate greater STI risk over time compared to men who do not use violence, through both higher numbers of sexual partners and exposure to high-risk partners and STIs. These men then place their primary romantic partners at higher STI risk through inconsistent condom use, partner concurrency, and forced intercourse.

Theorizing regarding the IPV–sex risk link among men has focused on the unequal power dynamics inherent in physical and sexual violence, and has suggested that sexual and reproductive behavior is an arena through which men can reinforce or practice authority, control, and the enactment of a “traditional” male gender role of being dominant in a relationship (e.g., Basile & Black, 2011; Coker, 2007; Dunkle & Jewkes, 2007; Santana et al., 2006). Indeed, research suggests that controlling behavior in intimate relationships often also takes the form of sexual and reproductive control, through control or sabotage of contraceptives, forced or coerced sex, or the enforcement of a sexual double standard (e.g., Coker, 2007; Moore, Frohworth, & Miller, 2010). In the only study to explicitly examine the prevalence of controlling or psychologically manipulative relationship behavior among men and its relationship to sexual risk, El-Bassel and colleagues (2004) found that 23% of men in their methadone clinic sample reported “frequent” psychologically dominating behavior with an intimate partner during the past six months, and that this behavior independently predicted HIV-related risk behavior. If a mechanism of the link between IPV and sexual risk behavior is a motivation to control and dominate, this link may appear irrespective of the use of other types of abusive tactics. This underscores the importance of understanding the prevalence of controlling behavior itself as well as the degree to which it is independently associated with sexual behavior, attitudes, and risk taking.

The unique role of sexually aggressive behavior in generating STI-related risk also deserves attention. Not surprisingly, a history of sexual abuse or rape has been shown to be a stronger correlate of STI diagnosis than a history of physical IPV victimization among women (Johnson & Hellerstedt, 2002). Women who experience repeated sexual assaults by a physically abusive partner are also at greater risk of STI exposure than those who experience physical abuse alone (McFarlane et al., 2005). Although literature examining sexual aggression and sex risk behavior among U.S. men is sparse, Peterson, Janssen, and Heiman (2010) found that among an online sample of heterosexual men, those who reported committing multiple acts of sexual aggression were more likely than nonaggressive men to have multiple sexual partners and to have received an STI diagnosis. In addition, 47% of the sexual assaults reported in the Peterson study did not involve condom use. Given the totality of this evidence—that unique types of abusive behavior may be differentially related to particular STI-related risks—distinguishing among the prevalence and patterns of unique

types of abusive behavior may be instructive for understanding the overall IPV–sex risk link in a more nuanced way.

Finally, most prior research on the link between IPV perpetration and sexual risk has focused on behaviors related to exposure to STIs and unplanned pregnancies. However, examining attitudinal and other cognitive or personality-related correlates of sexual risk could also shed light on the nature of this link. Links between attitudes toward sexual behaviors, such as monogamy, and sexual risk and safety strategies are well established in the literature (e.g., Beadnell et al., 2008). Personality factors, and in particular a sensation-seeking orientation toward sexual encounters, have been associated with increased numbers of sex partners (Donohew et al., 2000) and unprotected casual sex (Kalichman, Cain, Zweben, & Swain, 2003) among men. Research based on the confluence model of sexual aggression (Malamuth, Sockloskie, Koss, & Tanaka, 1991) has also demonstrated links between an “impersonal” or non-intimacy-based approach to sex (inclusive of multiple sex partners and an emphasis on casual sex) and risk for sexually coercive behavior among men (Parkhill & Abbey, 2008; Zawacki, Abbey, Buck, McAuslan, & Clinton-Sherrod, 2003). Still unclear, however, is the degree of association between these nonbehavioral indicators of potential sexual risk and the use of physically abusive or controlling behaviors in relationships. Explicating nonbehavioral factors associated with the IPV and sex risk link may illuminate underlying cognitive factors that are related to both violence and sexual risk-related behavior, or that may serve as mechanisms connecting the two.

Summary and Study Aims

In summary, a small but growing body of literature has begun to describe the association between aggressive behaviors toward a female romantic partner and behaviors associated with STI risk among heterosexual men in the United States. Most have explored this link in clinical, high-risk, or geographically specific samples, however, with unclear implications for men in the general community or for young, heterosexual men in particular. In addition, these studies have largely examined the connection between sexual risk behaviors and the use of physical violence in relationships. Because of the complexity of patterns of IPV, we do not fully understand whether other types of abusive behavior operate similarly with respect to sexual risk or whether IPV as a unified construct is homogeneously associated with behaviors that expose couples to STIs. For example, given the potential role of power and control motivations and behavior as one possible driver of sexual risk behaviors among men who use IPV, specifically examining links between controlling behavior and sex risk irrespective of the use of physical violence may help illuminate the salience of this possible mechanism. Finally, sexuality research more generally has moved toward understanding sexual risk behaviors as contextualized patterns of multiple behaviors and factors, rather than as behaviors such as condom use or partner concurrency examined in isolation (e.g., Patel, Gutnik, Yoskowitz, O’Sullivan, & Kaufman, 2006). For example, infrequent condom use in the context of a monogamous relationship that makes use of other pregnancy prevention measures holds a different level of STI risk than infrequent condom use in the context of multiple concurrent partners or a more sensation-seeking, experienced-focused approach to sexuality (Masters et al., 2014). Factors such as sexual attitudes, sexual sensation seeking, and sexual safety strategies beyond condom use and monogamy have not

been well explored in extant IPV literature and may provide additional insight into the actual degree of danger posed by specific sex risk-related behaviors.

To address the aforementioned gaps, we used data from the larger Sexual Scripts and Sexual Risk Among Heterosexual Men study. This project had a primary aim of examining relationships between sexual scripts (ideas about what sexual relationships are or should be) and sexual and relationship behavior among a diverse, community sample of young, heterosexually active men—a population that is surprisingly understudied in sexual health research (Higgins et al., 2010). The findings described here are from a secondary data analysis in which we took a conceptually derived, person-centered approach to examining whether distinct patterns of IPV behaviors (including a pattern involving only the use of controlling behaviors) are differentially associated with sexual risk and safety strategies. A person-centered approach is well suited to the current developmental stage of the IPV–sex risk literature and is advantageous because it allows for the detection of heterogeneity among individuals in terms of how specific combinations of IPV-related behaviors are associated with sexual risk. For example, variable-centered approaches have detected linear relationships between physically aggressive behavior and sexual risk but may obscure nuance or differences between subgroups in connections between these variables. It may be that physically aggressive behavior elevates sexual risk exposure only in combination with sexually aggressive behavior, or as a function of control—distinctions which a person-centered approach (which identifies subgroups of people based on their unique behavioral profiles) can assist in detecting.

These analyses were therefore guided by two aims. Our first objective was to describe the proportions of young men in the sample reporting each type of IPV (controlling behavior, sexually coercive behavior, and physical abuse). Although there is a dearth of research regarding the prevalence and nature of controlling relationship behaviors among men, we hypothesized that some men in the sample would report controlling behaviors only, while those reporting physical abuse and/or sexually coercive behavior would be more likely than nonabusive men to also report controlling behavior. Our second aim was to describe the co-occurrence in the sample of specific patterns of IPV perpetration and risk factors associated with STI exposure and unplanned pregnancy. Specifically, these sexual risk indicators included (a) sexual cognitions, such as sexual sensation seeking and monogamy attitudes; (b) lifetime sexual risk behaviors, such as numbers of sexual partners and acquisition of STIs; and (c) sexual risk and safety behaviors used in the context of men's current or most recent romantic relationship, such as partner concurrency, condom use frequency, and the use of other relational strategies to increase sexual safety. Given the theorized link between control motivations as a factor in sexual risk behaviors, we hypothesized that all IPV patterns, including the controlling behavior only pattern, would be associated with elevated sexual risk behaviors and cognitions, irrespective of the presence of physically abusive behaviors in relationships. Still, given evidence that the presence of sexually aggressive behavior elevates risk in the context of IPV, we also hypothesized that men reporting both physical aggression and sexual coercion would report the highest levels of STI-related risk behaviors.

Method

Data used in these analyses came from a larger study of sexual scripts, sexual risk taking, and violence-related behavior among 334 young, heterosexually active men. The University of Washington Institutional Review Board approved all procedures. The entire survey took place online, including recruitment, eligibility screening, informed consent, and data collection.

Recruitment

We deployed recruitment advertisements on Facebook and Craigslist. Craigslist ads were posted in a variety of geographic sites around the United States, and Facebook ads were tailored to appear on the pages of men within our target age group. Advertisements depicted racially and ethnically diverse male/female couples, and an invitation to share “your views in a web survey about relationships with women.” Participants who clicked on the ad were then advised that the purpose of the survey was to “learn more about men’s thoughts on sexual and romantic relationships with women, and to find out how other aspects of men’s lives affect these relationships.” The recruitment period was from mid-December 2010 to mid-June 2011. Demographic inclusion criteria were being 18 to 25 years old, male, a current U.S. resident, and a U.S. resident during the teen years. In addition, the potential participant had to have ever been physically intimate with a woman at least once (defined as touching below the waist or having oral, vaginal, or anal sex) and be interested in having oral, vaginal, or anal sex with a woman in the future. Interested potential participants clicked on the advertisement and were directed to an initial screening survey. Eligible respondents then entered the main survey. Participants’ Internet protocol (IP) addresses were recorded to prevent respondents from either participating more than one time or, for those who were previously found ineligible, from altering their description of themselves in an attempt to become eligible. Using a previously recorded IP address blocked entrance into the main survey.

To recruit a heterogeneous sample along dimensions of race and ethnicity, we sought equal proportions of respondents from each of five racial/ethnic categories (African American, Asian American, Latino, European American/White, and multiracial or “other”). Once the limit in any race/ethnicity category was reached, all additional potential participants from that category were denied entrance to the survey. Slower recruitment among certain ethnic minority groups—specifically African American, Latino, and Asian American men—necessitated more targeted ads in 14 metropolitan areas with more condensed populations of these racial or ethnic groups (based on U.S. Census data). The targeted ads in each of these areas (which included Atlanta, Detroit, Honolulu, and Los Angeles) were “live” for one week. Participants received \$40 as compensation for completing surveys in their entirety.

Measures

Intimate partner violence perpetration—Six items adapted from the Revised Conflict Tactics Scale (CTS2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) were used to assess sexual coercion and physical violence perpetration in a current or recent relationship that men defined as a “wife, girlfriend, or committed partner.” The CTS2 is the most widely

used tool for assessing acts of IPV and has demonstrated construct validity across multiple populations (e.g., with dominance in relationships; Straus, 2004), measurement invariance across groups over time (Kristman-Valente, 2014), and internal consistency of subscales ranging from .79 to .95 (Straus et al., 1996). While relationship duration was not a prerequisite to receiving CTS2 items, men indicating that their relationship was casual or a one-night stand were not given these items. Given that IPV measurement was a secondary aim of the parent study, and to avoid participant burden, we selected a subset of CTS2 items that was successfully used in our previous research (Beadnell et al., 2008) and designed to capture a range of behaviors of varying levels of risk for injury. These included five items capturing physically aggressive behavior, ranging from pushing and grabbing to kicking/punching or causing injuries requiring medical attention, and one sexual coercion item (i.e., “I insisted on sexual activity even when she did not want to”). In addition, two items used in our previous research were used to capture controlling behavior (Beadnell et al., 2008): “I tried to control where she goes, who she sees, or what she does” and “I pressured or forced her to skip a meeting, work, school, or something important to her so she could be with me.” Response options for all IPV items ranged from *Never* (0) to *More than 10 times* (5). Participants were also given the response option of *Never with this partner but it happened before*. Although IPV items were used for the purposes of categorizing men into groups based on their behavior in relationships, these items also had good internal consistency. Cronbach’s alpha for total IPV scores in the sample was .80.

In keeping with the person-centered nature of our analyses, we recoded CTS2 items to facilitate assignment of participants into groups based on their patterns of IPV perpetration. Guided by previous research, we created dichotomous versions of each type of IPV for analyses (use of physical abuse, sexual coercion, and controlling behavior). Identical to prior IPV/sexual risk literature focused on men (e.g., Decker et al., 2009; Raj et al., 2008; Santana et al., 2006), we recoded the frequency of physically aggressive behavior in the past year into a single variable indicating whether men ever or never perpetrated any of the five types of physical abuse captured in our items. We used the same approach to create the dichotomous sexual coercion item. For the controlling behavior items, there was an absence of guidance from existing literature. Preliminary analyses showed that any endorsement of the items regarding preventing a partner from going to work or school, or controlling where she goes and who she sees, was associated with the occurrence of other types of physical and sexual IPV. Thus, similar to the dichotomous physical abuse and sexual coercion variables, men endorsing any level of frequency of the two control items were categorized as having ever used control in their relationships in the dichotomous “control” variable.

Sexual attitudes and personality factors—Two scales, monogamy attitudes and sexual sensation seeking, were selected for the larger, parent study because of their demonstrated relationship to sexual risk and their developmental relevance to the young, heterosexually active male sample. Monogamy attitudes were assessed using the mean score of the three-item attitude subscale from the Sociosexual Orientation Scale (SOS) (Simpson & Gangestad, 1991) to capture men’s endorsement of nonmonogamy. Sample items include “Sex without love is okay” and “I could be comfortable having more than one woman in my life that I am having sex with.” Participants used a 5-point rating scale ranging from 0

(*Strongly disagree*) to 4 (*Strongly agree*), with higher scores reflecting greater endorsement of nonmonogamy. Previous studies have demonstrated convergent validity for the attitudes subscale; the SOS is related in expected ways to partner concurrency, and the attitudes subscale is positively correlated with lifetime sexual partners (Simpson & Gangestad, 1991). The alpha coefficient for the monogamy attitudes scores in this sample was .76.

Sexual sensation seeking was derived using the mean score of six items from the Sexual Sensation Seeking (SSS) Scale (Kalichman & Rompa, 1995). Again, a subset of items was selected to reduce participant burden and was chosen to reduce redundancy and target concretely attitudinal indicators of this construct. Example items included “I like wild, uninhibited sexual encounters” and “I like to have new and exciting sexual experiences and sensations.” Response options ranged from 0 (*Not at all like me*) to 3 (*Very much like me*). Higher scores indicate stronger desire for novel, unique, and varied sexual experiences. Past examinations of the measures’ validity demonstrate their association with unprotected sexual activity and higher numbers of sexual partners (Kalichman & Rompa, 1995). The Cronbach’s alpha for scores in the current sample was .81.

Lifetime sexual risk behaviors and outcomes—Three items adapted from our previous research (Beadnell et al., 2008) were used to assess sexual risk occurring at any point in participants’ lives. These items were selected based on their consistency with past research on links between IPV and sexual risk (e.g., Decker et al., 2009). *Number of lifetime female sexual partners* was assessed with a single item—“How many women have you had sexual intercourse with in your lifetime?”—which respondents answered by providing a number. To reduce the influence of outliers, this number was capped at 100 (this cap affected only five respondents). STI diagnosis history was assessed via the question, “How many times have you been told by a medical professional that you have a sexually transmitted disease (chlamydia, herpes, gonorrhea, genital warts)?” Given the relatively small number of men in the sample who had received an STI diagnosis, this item was recoded into a dichotomous variable reflecting whether respondents had ever versus never been diagnosed with an STI. Finally, transactional sex was measured with one item: “Thinking about the last year, how often did you pay for sexual services such as stripping, peep shows, lap dances, oral sex, or intercourse?” The response options for this item ranged from 0 (*Never*) to 5 (*Every day or almost every day*). Again, responses on this item were dichotomized into ever/never given a relatively low prevalence of this behavior in the sample.

Relationship-specific sexual risk and safety measures—Six items adapted from Beadnell and colleagues (2008) assessed sexual safety strategies used within the participant’s current or most recent relationship. Sexual partner concurrence was measured by asking: “Thinking about the woman you were physically intimate with [and] the time period when you were being physically intimate with her in the last year ... During that time, were you ever physically intimate with another woman?” Responses were coded to indicate whether men had ever versus never engaged in partner concurrency. General condom use frequency with the most recent partner was assessed with a single item with possible responses ranging from 0 (*Never*) to 5 (*Always*). Participants’ responses were then

recoded into a dichotomous variable reflecting whether they “often or always” used condoms or whether they used condoms “less than half the time” or less. Finally, to assess the use of other sexual safety strategies, participants were asked to respond yes or no to four additional items regarding their current or most recent partner: having ever talked about sexual histories, agreed to both get tested for HIV and/or STIs, agreed to have sex only with each other, and discussed whether she is using birth control.

Analysis Strategy

We first categorized participants into five distinct groups based on the three dichotomous IPV items reflecting the presence or absence of controlling, physically abusive, and sexually coercive behavior. These groups were conceptually based and intended to isolate specific patterns of abusive tactics in participants’ current or most recent dating relationship, including patterns involving only the use of controlling behavior and only the use of sexually coercive behavior. The five groups were no abusive behaviors, controlling behavior only, physically abusive behavior, sexually coercive behavior, and both physically abusive and sexually coercive behavior. For men who reported IPV in their current or most recent relationship ($n = 209$), the categorization to groups was based on the use of IPV behaviors in that relationship. There were 18 men who reported no abusive behaviors in their current or most recent relationship but that at least one IPV item happened with a previous partner. We categorized these men using the same procedure described previously for respondents reporting on their current or most recent relationship. We then conducted bivariate tests both with and without this group of 18 men. Findings did not differ based on inclusion of these men, so all results presented here reflect the entire sample.

We compared IPV groups on study variables using the generalized linear model (GLM) in SPSS version 19 to examine differences in sexually risky behavior across groups. GLM is a flexible generalization of the general linear model that can accommodate dependent variables with varying distributional properties. Accordingly, we used logit analysis for dichotomous dependent variables, negative binomial analysis for the one count dependent variable (number of lifetime partners), and linear analysis (akin to traditional ANOVA) for the two continuous dependent variables (monogamy attitudes and sexual sensation seeking). Across all analyses, significant omnibus tests were followed by post hoc pairwise comparisons to examine differences on sexual risk variables between specific IPV groups.

Results

Sample Characteristics

Approximately 18,910 individuals entered the survey screening page from Facebook and Craigslist advertisements. Of these men, 2,759 answered all screening questions and 662 were found eligible and consented to participate in the survey. The high rate of noneligibility was due, in large part, to our stratification of the sample by ethnic group; men who responded after there were sufficient men of their ethnicity in the survey were not eligible. Of the 662 men who entered the survey, 93 completed less than 25% of the survey and were excluded from analysis. An additional 14 participants were excluded because of erratic or illogical responses (for example, providing conflicting responses). A total of 555 men

remained in the survey. Because IPV-related items were shown only to men who had a sexual relationship in the past year, the analysis sample for this article consisted of the 334 respondents for whom this was true. This sample contained approximately equal representation across five racial/ethnic groups: 18.6% of the sample identified as Asian American, 17.7% as Black, African American, or African, 21.6% as Latino, 22.5% as White/Caucasian, and 19.8% as “other,” multiracial, or Native American. The mean age of the group was 20.57 ($SD = 2.06$ years). Approximately 36% reported being a current student and an additional 13.9% reported having earned a college degree. The age, education level, and race/ethnicity of the men in the final sample did not differ significantly from the 221 men who did not report being involved in a relationship in the past year. Although our inclusion criteria were purposefully broad to ensure participation of men who had engaged in sex play but not intercourse, almost all of the men included in these analyses had had intercourse at least once (95%), and 91% reported engaging in vaginal intercourse with their most recent partner.

Proportion of Participants Reporting Abusive Behavior

Of the 334 men in the analysis sample, 227 (68%) reported some type of abusive or controlling behavior directed toward an intimate partner. Specifically, 107 men (32%) reported no abuse, 67 (20.1%) reported controlling behavior only, 65 (19.5%) reported physically abusive behavior but no sexual coercion, 38 (11.4%) reported sexual coercion but no physical abuse, and 57 (17.1%) reported both physically abusive and sexually coercive behavior. Most men who engaged in physical abuse and/or sexual coercion also used at least one of the two controlling behaviors measured here: 63.0% of the physical abuse group, 68% of the sexual coercion group, and 86% of the physical abuse/sexual coercion group. IPV groups did not differ significantly by age ($F = .797, (4, 327), p = .53$) or by socioeconomic status, as measured by participants' mothers' highest level of education ($F = 1.72 (4, 329), p = .14$). IPV did differ slightly by race/ethnicity ($\chi^2 = 26.14, df = 16, p = .02$), with African American men overrepresented in the no-abuse group compared to Asian American men, and Asian American participants slightly overrepresented in the controlling behavior only group compared to African American men. Proportions of men in the physical abuse only, sexual coercion only, and the physical abuse and sexual coercion groups did not differ by race.

Differences between IPV Groups on Sex Risk Variables

Table 1 shows differences between the five IPV groups on sexual risk-related attitudes and behaviors. Group differences were found for the two attitude and personality variables in this analysis. Men in the physical abuse/sexual coercion group indicated the highest endorsement of nonmonogamy attitudes, which were significantly different from men in the no-abuse or controlling group. Similarly, men in the physical abuse/sexual coercion group reported significantly higher sexual sensation-seeking scores than men in the no-abuse, controlling, and physical abuse groups. Men in the sexual coercion group also had significantly higher sexual sensation-seeking scores than men in the no-abuse category.

With respect to general sexual behaviors, men who perpetrated both physical abuse and sexual coercion reported the highest number of lifetime female sex partners, significantly

more than all other groups. Men who reported sexual coercion reported the lowest number of lifetime sex partners, which was significantly fewer than men in all other groups. In a similar vein, men reporting both physical and sexual abuse reported the highest lifetime STI rate, significantly greater than men in the controlling or sexual coercion groups. Finally, men in both the physical abuse group and the physical abuse and sexual coercion group reported higher rates of accessing transactional sex than men in the no-abuse category.

There were differences in two of the relationship-specific sexual risk and safety behavior variables: sexual partner concurrence (whether they had sex outside of their current relationship) and condom use. Men in the physical abuse/sexual coercion group were more likely to report partner concurrency and less likely to report consistent condom use than were men in the no-abuse and controlling groups. There were no significant between-group differences regarding partner communication–related sexual safety strategies.

Discussion

This analysis sought to describe rates of controlling and abusive relationship behaviors in a diverse sample of young men and to elucidate the degree to which sexual risk–related behaviors and attitudes differed between groups of men categorized by their use of abusive relationship behaviors. With respect to our first research question regarding rates of physically abusive, sexually coercive, and controlling behaviors in this sample, we found that a majority of young men in the study reported using at least one type of abusive or controlling behavior in a current or recent relationship. Approximately 37% of men reported using some form of physically aggressive behavior, a rate that is within the range of estimates from geographically specific samples (e.g., Santana et al., 2006). Similarly, nearly 29% of men in the sample reported sexually coercive behavior with an intimate partner, a rate similar to other studies of young men in this developmental group (e.g., Casey, Beadnell, & Lindhorst, 2009). Although consistent with previous literature, these rates are nonetheless disturbingly high and underscore the need for continued attention to understanding etiological factors related to the use of aggressive behavior and to the ongoing enhancement and availability of violence prevention programs.

A high number of men in the sample reported the use of controlling behavior, although studies that would allow for easy comparison are not available in current literature. A majority of men in this sample (55%) reported using controlling behavior, either alone or in combination with physical aggression, sexual coercion, or both. These findings suggest that controlling behaviors such as occasionally attempting to limit or control a partner's social activities or access to work or education are somewhat normative behaviors in this sample and perhaps in this age group. The impact of this behavior on partners and relationships is unclear; controlling behavior alone was not associated with increased sexual risk behavior in this sample, and other possible relationship impacts, such as relationship satisfaction or duration, were not assessed. Additional research across various age groups is needed to investigate whether the acceptance and use of controlling behaviors in relationships is related to developmental stage, is a cohort effect, or is more broadly true across men (and perhaps women) irrespective of age. The prevalence of controlling behaviors in this sample also suggests the importance of sexual and relationship health education and interventions

that build skills related to egalitarian and respectful approaches to communication and conflict resolution in relationships. Consistent with previous research (e.g., Basile & Black, 2011), controlling behavior was also significantly associated with the use of physically and sexually abusive behavior (73% of abusive and/or coercive men were controlling, versus 39% of men who did not use physical abuse or sexual coercion), reinforcing the need to continue to conceptualize and investigate intimate partner violence as a cluster of related behaviors inclusive of domineering and controlling behaviors. Additional investigation is therefore needed into both the predictors and impacts of men's use of behaviors that limit their partners' autonomy or choices, as well as into the potential qualitative differences between controlling relationships that do and do not contain physical or sexual abuse.

Relationships between IPV Perpetration and Sexual Attitudes and Behaviors

Our second aim was to describe the degree to which sexual risk-related attitudes and sexual risk behaviors (both those specific to men's most recent relationship and those used over time) were differentially associated with IPV groupings. Consistent with expectations, and most strikingly, a pattern of elevated sexual risk emerged for the 17% of men who reported using both physically abusive and sexually coercive behaviors. Men in this group reported higher levels of nonmonogamy endorsement, sexual sensation seeking, numbers of lifetime female sexual partners, infrequent condom use, and partner concurrency than men in the no-abuse or controlling behavior only groups. Men in the physical abuse/sexual coercion group also reported a greater likelihood of an STI diagnosis than men in the control-only group and higher rates of accessing transactional sex than the no-abuse group. Thus, this subgroup of men both accumulated more risk over time and exposed their partners to greater risk through the simultaneity of condom use infrequency and partner concurrency. In general, these findings from our community sample replicate and extend previous research with clinical samples (e.g., El-Bassel et al., 2001) and geographically specific samples (e.g., Raj et al., 2006), documenting elevated STI exposure and sexual risk behavior among men who use violence and sexual coercion. In particular, the unique risk posed by the combined use of physical abuse and sexual coercion echoes work by McFarlane and colleagues (2005), who noted that sexual assault in the context of physically abusive relationships particularly elevated female victims' exposure to STIs.

For this physical abuse and sexual coercion group especially, understanding the cognitive mechanisms and potential gender-related belief systems that support both the physical and sexual mistreatment of a female partner and the use of sexually risky behavior is critical to informing both sexual and relationship health interventions. Engaging in sexual risk behaviors may represent a means of reinforcing gender-based power inequities in relationships. Wingood and DiClemente (2000) applied the larger theory of gender and power (Connell, 1987) to sexual risk and suggested that sexual behavior and the enforcement of different sexual standards for men versus women are vehicles for establishing and maintaining male dominance in intimate relationships. By extension, the use of sexual risk behavior as a tactic of dominance generates the disproportionate vulnerability of women to HIV and STIs, as well as unplanned pregnancy within heterosexual relationships in which abuse is occurring. Along these lines, previous research consistently documents relationships between endorsement of traditional gender roles and

adversarial gendered beliefs with both sexual risk behaviors (e.g., O’Sullivan, Hoffman, Harrison, & Dolezal, 2006) and with the use of violence in relationships (see for review, Flood & Pease, 2009). As Dunkle and Jewkes (2007) suggested in a review of international research on the epidemiology and prevention of HIV/AIDS, it may be “that both violence perpetration and sexual risk taking arise from a common underlying cause, and that this cause is social ideals of masculinity” (p. 173). However, studies simultaneously examining the interrelationships and potential mediating relationships of all three of these constructs (gendered beliefs, sexual risk behaviors, and IPV) are rare, and they are needed to tease out the most promising intervention targets within sexual health and IPV-related interventions.

In contrast, and contrary to expectations, in the absence of the use of physical abuse or sexual coercion, a history of using some controlling behavior alone was not associated with elevated levels of sexual risk. Yet, as noted, controlling behaviors were moderately associated with physical and sexual aggression in the sample; almost all of the abusive and/or coercive men also reported controlling behaviors. It may be that men who employ controlling behaviors but do not reinforce these with physically or sexually aggressive behavior are qualitatively different from men for whom physical and sexual abuse are part of a larger pattern of dominance and coercion in their romantic relationships. Alternatively, some men may begin their patterns of abuse with controlling behavior only, and relationship length, status, or other contextual factors not measured here may circumscribe the degree to which physically or sexually abusive behaviors have yet appeared in these relationships. Additional research with more multifaceted measures of control—including monitoring, financially controlling, and socially isolating behaviors—is needed to understand both their prevalence and their potential role related to sex-associated attitudes and behaviors.

Men in the sexual coercion category, albeit a small group, reported some unique patterns. This group reported a high level of sexual sensation seeking but the lowest number of lifetime sex partners and incidence of STIs. These findings are somewhat in contrast to Peterson and colleagues’ (2010) findings that men reporting multiple acts of sexual aggression had higher levels of sexual risk factors, including numbers of sexual partners and STI diagnoses. In this sample, it may be that men who were sexually coercive in absence of physical abuse may have had different underlying motivations or may have used monogamous relationships and relational strategies to meet their sexual goals. It is also important to note that the use of a single item to assess sexual coercion makes definitive conclusions regarding this group difficult, as it was not possible to distinguish between men who used verbal or relational strategies to gain access to sex when a partner is unwilling (such as utilizing guilt or pressure) and those who use more physically aggressive tactics or drugs or alcohol to gain compliance. It may be that the young men in this sample that employed physical force to gain sex, or who engaged in multiple types of sexual aggression, were more likely to be in the physical abuse/sexual coercion group in which rates of sexual risk behaviors were higher. Future research with larger sample sizes that employ a multi-item sexual assault perpetration scale may help to better understand whether different types of sexual aggression are differentially related to sexual risk behaviors and attitudes.

Finally, it is interesting that the majority of men, regardless of IPV group, employed relational sexual safety strategies such as discussing sexual history, agreeing to be

monogamous, and discussing female partners' use of contraceptives. While these numbers are encouraging and indicate the potential normativity of relational strategies, it is also important to assess these "talk-related" sexual safety strategies in the context of other sexual risk indicators. For example, although nearly 80% of the men in the physical abuse and sexual coercion IPV group had agreed to be monogamous, nearly half of them also had a sexual partner outside of their primary relationship and one-fourth had accessed transactional sex, but only one-fourth were consistently using condoms with their primary partner. In this context, agreeing to be monogamous may be less a sexual safety strategy than a condom-avoidance strategy, which exacerbates potentially unsuspecting female partners' sexual risk exposure. This particular combination of risk may also reflect inequitable sexual standards, in which nonmonogamy is encouraged for the male partner only and is an added means to reinforce sexual power inequity in the relationship. These findings also underscore the importance of examining multiple indicators of sexual risk and the patterns they form to contextualize the degree of STI-related risk that any single behavior (such as condom use or nonuse) actually poses.

Limitations

Limitations of the current study include sample characteristics and some measurement issues. Our sample consisted entirely of Internet users. Although most young men in this age group are Internet users (Pew Internet & American Life Project, 2013), and preliminary evidence points to the racial representativeness of Facebook membership relative to the U.S. population (Chang, Rosenn, Backstrom, & Marlow, 2010), these results may not be generalizable to men who do not use these tools. We oversampled men of non-White ethnicity, so our sample is not representative of ethnic distribution, though it is worth noting that most abuse categories did not differ by ethnicity group. A breakdown of participants by region is not possible due to anonymous participation, and individuals in urban U.S. environments are likely overrepresented in the sample. Volunteers for sexuality-related research tend to have more liberal sexual attitudes and more sexual experience than nonvolunteers (Strassberg & Lowe, 1995). These analyses were also based on relatively small group sizes within the IPV categories and may have lacked some statistical power to detect between-group differences; as a secondary analysis study, the initial findings here point to and justify the need for similar analyses with larger samples.

As with any secondary data analysis, this study had some limitations due to measures. Our use of items adapted from the Conflict Tactics Scale (CTS2) to assess IPV limits the ability to understand abusive and controlling behaviors in their situational and relationship context. It was not possible, for example, to determine the extent of injury, impact, or reciprocity of these behaviors or to rule out self-defense as a behavioral motivation. Also, as noted, we included only one item assessing partner-specific sexual coercion, which limited our ability to distinguish between the tactics used to gain nonconsensual sexual access (such as physical force versus verbal coercion and pressure). In addition, data limitations and the small sample size with accompanying power limitations prevented examination of the experiences of male victims with respect to sexual risk exposure; this remains an area still in need of scholarly attention. Finally, future research would benefit from including additional contextualizing

variables which were not available here, such as condom use with extra-relationship partners and frequency of accessing HIV and STI testing services.

Implications and Conclusions

These findings extend previous research linking the use of physical and sexual aggression in relationships to sexual risk factors among heterosexually active men and highlight the ways in which specific patterns of aggressive behavior are linked to sex-related cognitions and to men's relational and nonrelational sexual risk taking. The pattern of sexual risk that emerged among men who used both physically and sexually aggressive behaviors in their relationships underscores the importance of cross-system assessment and intervention. Specifically, men seeking sexual health-related care should be screened for IPV-related behaviors, and men in domestic violence intervention programs and settings (as well as their partners) may benefit from sexual health and safety-related support. Analogously, domestic violence intervention systems for victims should be sensitive and responsive to the elevated sexual risk to which their clients may have been exposed. The findings of this study demonstrate the utility of a person-centered approach to IPV-sex risk research, as well as the need for future research with larger sample sizes to better detect sex risk-related differences between IPV perpetration profiles. In addition, qualitative research with men who have used controlling or abusive behaviors in their relationships could help illuminate the meaning and role of sexual behaviors within larger patterns of abuse. As a whole, findings from this and other research highlight the importance of accounting for IPV perpetration or victimization in conceptualizing and implementing sexual risk reduction interventions. Understanding the sexual attitude and behavior correlates of men's aggressive behavior toward women stands to contribute to our understanding of aggression as well as our understanding of sexual risk.

Acknowledgments

Funding

This research was supported by grant R01 HD056952 from the National Institute of Child Health and Human Development to Diane M. Morrison (the Guys' Turn study). We also acknowledge the software and data storage resources provided by the University of Washington's Center for Studies in Demography and Ecology under National Institute of Child Health and Human Development grant R24 HD42828.

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Table 1
Intimate Partner Violence (IPV) Groups' Differences on Sex-Related Attitudes and Personality Factors and Sexual Risk-Related Behaviors

Sexual Risk and Safety Indicators	n	No Abuse	IPV Group				χ^2 (df = 4) [†]
			Controlling Behavior Only	Physical Abuse	Sexual Coercion	Physical Abuse and Sexual Coercion	
Sex-related attitudes and personality factors: <i>M</i> (<i>SD</i>)							
Nonmonogamy attitudes	334	1.93 _a (.95)	1.99 _b (1.12)	2.16 (.94)	2.11 (1.04)	2.42 _{a,b} (.86)	10.02*
Sexual sensation seeking	334	1.26 _{a,b} (.69)	1.45 _c (.61)	1.43 _d (.70)	1.69 _a (.70)	1.77 _{b,c,d} (.86)	22.54***
Non-relationship-specific sexual behaviors							
Lifetime sex partners: <i>M</i> (<i>SD</i>)	318	8.60 _a (13.53)	10.63 _b (19.03)	10.98 _c (15.83)	5.08 _{a,b,c,d} (6.80)	17.15 _{a,b,c,d} (28.83)	32.20***
STI diagnosis ever: <i>n</i> (%)	334	6 (6%)	2 (3%) _a	7 (11%)	1 (3%) _b	9 (16%) _{a,b}	10.09*
Transactional sex ever: <i>n</i> (%)	334	10 (9%) _{a,b}	12 (18%)	15 (23%) _a	7 (18%)	15 (26%) _b	9.81*
Relationship-specific sexual behaviors: <i>n</i> (%)							
Sexual partner concurrence	301	20 (21%) _a	13 (21%) _b	19 (34%)	10 (29%)	25 (46%) _{a,b}	12.80*
Often or always uses a condom	301	39 (42%) _a	32 (52%) _b	20 (35%)	13 (37%)	13 (24%) _{a,b}	10.20*
Discussed sexual history	333	78 (73%)	57 (85%)	50 (77%)	31 (82%)	46 (82%)	4.52
Agreed to STI testing	334	40 (37%)	26 (39%)	27 (42%)	16 (42%)	27 (47%)	1.68
Agreed to be monogamous	334	77 (72%)	56 (84%)	51 (78%)	33 (87%)	45 (79%)	5.39
Discussed whether partner is on birth control	334	81 (76%)	51 (76%)	45 (69%)	33 (87%)	44 (77%)	4.38

[†] Results of generalized linear model (GLM) testing.

* $p < .05$;

*** $p < .001$; shared subscripts in a row denote IPV subgroups that differ significantly from one another at $p < .05$.