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## Perpetration and Victimization of Intimate Partner Violence Among Young Men and Women in Dar es Salaam, Tanzania

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### Abstract

We describe and compare the baseline rates of victimization and perpetration of three forms of intimate partner violence (IPV)—psychological, physical, and sexual—among sexually active men ( $n = 1,113$ ) and women ( $n = 226$ ) enrolled in an ongoing cluster-randomized HIV and gender-based violence prevention trial in Dar es Salaam, Tanzania. IPV was measured using a modified version of the World Health Organization Violence Against Women instrument. We assess the degree to which men and women report overlapping forms of IPV victimization and perpetration. Sociodemographic and other factors associated with increased risk of victimization and perpetration of IPV are examined. Within the last 12 months, 34.8% of men and 35.8% of women reported any form of IPV victimization. Men were more likely than women to report perpetrating IPV (27.6% vs. 14.6%, respectively). We also found high rates of co-occurrence of IPV victimization and perpetration with 69.7% of male perpetrators and 81.8% of female perpetrators also reporting victimization during the last year. Among men, having ever consumed alcohol and experiencing childhood violence were associated with increased risk of most forms of IPV. Younger women were more likely to report perpetrating IPV than older women. We found evidence of gender symmetry with regard to most forms of IPV victimization, but men reported higher rates of IPV perpetration than women. Given the substantial overlap between victimization and perpetration reported, our findings suggest that IPV may be bidirectional within relationships in this setting and warrant further investigation. Implications for interventions are discussed.

### Keywords

gender; intimate partner violence (IPV); Tanzania

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## Introduction

Intimate partner violence (IPV)—which includes physical, sexual, or psychological harm perpetrated by a current or former partner or spouse—is a serious public health problem (Garcia-Moreno, Jansen, Ellsberg, Heise, & Watts, 2006). The World Health Organization (WHO) reports that 30% of ever-partnered women worldwide have experienced IPV in their life (World Health Organization, 2013). The consequences of experiencing IPV among women are severe, including increased risk of depression, post-traumatic stress disorder (PTSD), harmful alcohol use, increased risk of suicide, non-fatal injuries, and fatal injuries (Devries et al., 2013; Maxwell, Devries, Zions, Alhusen, & Campbell, 2015). Experiencing violence during pregnancy has also been associated with increased risk for low-birth-weight infants, pre-term delivery, induced abortions, and neonatal death (Sarkar, 2008). Studies among women have shown that IPV victimization is prospectively linked to an increased risk of HIV (Li et al., 2014). For men, global prevalence statistics for IPV victimization are not available, though studies are increasingly assessing men's victimization. For example, a longitudinal panel study in Malawi recently reported that more than 10% of men experienced sexual violence in their lifetimes (Conroy & Chilungo, 2014). Another population-based study in Rwanda found that 7.3% of men experienced psychological IPV, 4.3% experienced physical IPV, and 1.5% experienced sexual IPV in the past year (Umubyeyi, Mogren, Ntaganira, & Krantz, 2014). Consequences of victimization among men include incident depressive symptoms and other mental health issues (Devries et al., 2013; Reid et al., 2008).

There is a large body of research comparing men and women's victimization and perpetration of violence. Much of this research has been conducted among men and women in high-resource countries and the United States in particular. These studies have mostly found evidence of gender symmetry, defined as equal rates of IPV among men and women, with regard to both victimization and perpetration (Archer, 2000, 2002). A review, including 13 empirical studies and two meta-analyses on gender symmetry in IPV, found that men and women generally exhibited similar rates of IPV when other factors including motivations and consequences were not considered (Chan, 2011). Results from these studies have important implications for prevention efforts. Specifically, by documenting significant levels of IPV victimization among men, providing evidence that women also report perpetrating IPV, and highlighting the bidirectional nature of conflict within relationships (with both partners perpetrating IPV), these studies have encouraged a greater focus on interventions that have a "family violence" or "partner violence" approach rather than interventions focused only on reducing male perpetration. Family violence researchers tend to view IPV as bidirectional within intimate relationships (Winstok, 2011). The growing recognition of gender symmetry in IPV has led to recent calls for prevention efforts to target both genders (O'Leary & Slep, 2012). As a result, recent interventions to prevent dating violence in the United States have been designed to reduce perpetration of partner violence among both girls and boys (Foshee et al., 2012; Wolfe et al., 2009).

The vast majority of research on IPV in sub-Saharan Africa, however, has not examined gender differences or similarities in the victimization or perpetration of IPV. National health

surveys in this context do not regularly collect data regarding both men's and women's victimization and perpetration of IPV and typically assess only violence victimization among women. A growing number of studies in the region have examined the prevalence and risk factors of men's perpetration of violence (Fleming et al., 2015; Jewkes, Sikweyiya, Morrell, & Dunkle, 2011; Townsend et al., 2011), though assessments of women's perpetration have been less common. Studies examining men's IPV victimization in Africa (Conroy & Chilungo, 2014; Shannon et al., 2012; Umubyeyi et al., 2014) are new, and most of these have been conducted with men who have sex with men (MSM; Stephenson, de Voux, & Sullivan, 2011). A few studies comparing victimization and perpetration among men and women have been performed in sub-Saharan Africa, including Rwanda (Umubyeyi et al., 2014), and an assessment of coercive sex among youth attending schools in 10 southern African countries (Andersson et al., 2012) as well as adolescents in Uganda (Ybarra, Bull, Kiwanuka, Bangsberg, & Korchmaros, 2012). However, many of these studies only assess one form of IPV, limiting our understanding of how psychological, physical, and sexual forms of violence overlap.

The purpose of this article is to fill this research gap by describing and comparing the baseline prevalence, overlap, and risk factors of IPV victimization and perpetration among sexually active men ( $n = 1,113$ ) and women ( $n = 226$ ) enrolled in an ongoing cluster-randomized HIV and gender-based violence prevention trial in Dar es Salaam, Tanzania. These men and women are members of stable social networks locally referred to as "camps." Specifically, we aim to describe the prevalence of psychological, physical, and sexual IPV victimization and perpetration within the last 12 months, and compare those findings by gender. We also assess the degree to which men and women report overlapping forms (psychological, physical, and sexual) of IPV when reporting victimization and perpetration. Finally, we examine the co-occurrence of victimization and perpetration for men and women and identify sociodemographic and risk/ protective factors associated with increased risk of victimization and perpetration of the three forms of IPV.

## Method

### Setting

The setting for this study is Dar es Salaam, the business capital and largest city in Tanzania. More specifically, the trial is conducted within four wards of Kinondoni District, the most populated and impoverished district within Dar es Salaam. HIV prevalence in Dar es Salaam is 6.9%, which is higher than the national average of 5% (Tanzania Commission for AIDS [TACAIDS], 2013).

### Data

This study uses baseline data from an ongoing cluster-randomized HIV and gender-based violence prevention trial in Dar es Salaam, Tanzania. The clusters for this trial are comprised of social groups locally referred to as "camps." Camps were identified in prior research as stable social networks of mostly male members (on average, 80% of camp members are male), with an elected leadership structure (Yamanis, Maman, Mbwambo, Earp, & Kajula, 2010). In this urban setting, many camp members are not formally employed and join these

camps to socialize, support one another, and engage in activities such as playing sports or occasionally participating in camp-led business enterprises. Previous research with camps found that some camps prohibited female membership, and that other camps embraced women as members and even as leaders (Yamanis et al., 2010). In some instances, female members were sexual partners of male camp members, and in other instances, women were observed to be working within the vicinity of the camps as tailors or cooks. As such, female camp members may occupy unique social positions as members of these predominantly male social groups.

Prior to the baseline assessment, we enumerated all camps within the study area ( $n = 294$ ) by conducting a Priorities for Local AIDS Control Efforts (PLACE) assessment (Weir et al., 2003). Of these, 172 were eligible and we randomly selected 60 camps for inclusion in our trial. Next, we attempted to contact all study camp members at least 3 times to assess their individual eligibility for the study. To be eligible for participation in our trial, participants had to be older than 15 years, have been a camp member for more than 3 months, visit the camp at least once a week, plan on residing in Dar es Salaam for the next 30 months, and be willing to provide contact information of a friend or a family member to be used in the event we could not contact the participant for follow-up assessments. Of the 1,836 potentially eligible participants, we collected baseline data from 1,491 eligible participants between October 8, 2013 and March 23, 2014 (response rate = 81.2%). Trained interviewers conducted the behavioral assessments using tablets programmed with a custom-designed CAPI (computer-assisted personal interviewing) instrument. As young men and women who never had sex were mostly single, unmarried individuals who were not involved in relationships in which IPV could occur, we restricted our analytic sample for this study to sexually active men ( $n = 1,113$ ) and women ( $n = 226$ ). The demographic characteristics of the men and women included in our sample are presented in Table 1.

## Measures

**Dependent variables**—We assessed past-year IPV victimization and perpetration using an adapted version of the WHO Violence Against Women instrument, which was developed for international use (Garcia-Moreno et al., 2006). This tool measures psychological, physical, and sexual IPV victimization and perpetration. Participants were first asked to report on IPV victimization before they were asked about perpetration of IPV. To assess victimization, participants were asked whether a current partner or any other partner had ever done any of 13 behaviorally specific violent acts. The psychological violence items ( $n = 4$ ) included instances of insulting, belittling or humiliating, scaring or intimidating, or threatening to hurt. Physical violence items ( $n = 6$ ) included instances of slapping, pushing, hitting, kicking, choking, and threatening with a weapon. Sexual violence items ( $n = 3$ ) included physically forcing to have sex, using threats to force sex, and sexual acts deemed degrading. For those who said yes to ever having experienced a specific act of violence, they were asked to report how many times they had experienced that act in the last 12 months. Response options included *never*, *once*, *2 to 3 times*, *4 to 10 times*, and *more than 10 times*. This tool has been used previously to measure young men's perpetration of IPV in Tanzania (Maman, Yamanis, Kouyoumdjian, Watt, & Mbwambo, 2010) and has also been used with men and women in a number of other African populations (Groves, Kagee, Maman,

Moodley, & Rouse, 2012; Jewkes, Dunkle, Nduna, & Shai, 2010). The measure demonstrated acceptable internal consistency for victimization (Cronbach's  $\alpha = .76$  and  $.80$  for men and women, respectively) and perpetration (Cronbach's  $\alpha = .73$  and  $.72$  for men and women, respectively) within the current sample. We dichotomized responses to the frequency of psychological, physical, sexual, or any form of IPV victimization within the last 12 months, such that a 0 represented no violence and a 1 represented at least 1 instance of that form of violence within the last 12 months. The same approach was taken to assess perpetration of violence, with participants first being asked whether they had done any of the 13 behaviorally specific violent acts to their current partner or any other partner. For those who said yes to having perpetrated a specific act, they were asked to report the frequency of perpetration in the last 12 months. These responses were also dichotomized to indicate perpetration of violence within the past 12 months.

### Independent variables

**Demographic variables:** Participants' *age* was categorized into four categories: 15 to 19, 20 to 24, 25 to 29, and 30 or more years. Each participant was asked to report the highest level of *education*, and responses were categorized as primary school or less, some secondary school, or secondary school completed or more. We assessed socioeconomic status (SES) using principal components analysis (PCA) to compute a composite score combining participant responses to a wealth index assessing ownership of 10 different household assets (Filmer & Pritchett, 2001). We then categorized the scores for each participant into terciles based on the entire sample of men and women in our baseline dataset (the lowest 33% of participants were classified as low SES, the highest 33% were classified as high SES, and the remainder were classified as medium SES). We determined whether participants were *unemployed* by asking whether each participant did any work for any type of pay, profit, or barter during the last 7 days, or had a job to which they would eventually return (National Bureau of Statistics (NBS) [Tanzania], 2011). Those who stated that they did not do work in the last 7 days nor had a job to which they would return were considered unemployed. All current students were excluded from the employment measure. We assessed the *marital history* of all participants by asking them whether they had ever been married. We also assessed the *number of children* by asking participants how many children they had who were still living. In addition, participants were asked how many sexual partners they had within the last year, and men were asked how many of the partners were men and how many were women.

**Risk and protective factors:** *Alcohol use ever* was assessed by asking participants whether they had ever used alcohol in their lifetime. To assess *childhood physical violence*, participants were asked if they experienced any unwanted physical violence while growing up (before the age of 12 years). Physical violence was defined as being hit, hit with an object, punched, kicked, or beaten up in a way that resulted in injury, severe pain, or other serious harm. To assess *childhood sexual violence*, participants were also asked if they had experienced any inappropriate touching or unwanted sexual intercourse while growing up (before the age of 12 years). We evaluated *social support* by asking each participant whether they talked about a personal problem with any of eight distinct groups of people, including specific family members, sexual partners, camp members, and other close friends outside the

camp. We created a dichotomous variable by grouping those who spoke about a personal problem with at least one person and comparing them with those who did not speak to anybody about a personal problem. We used the same approach to dichotomize social support with regard to having received money or other needed things from any of the same eight groups of people. Social support has been similarly dichotomized in a recent study examining associations between social support and IPV victimization (Umubyeyi et al., 2014).

### Statistical Analyses

We assessed victimization and perpetration of IPV by examining the prevalence (% , *n*) for each item as well as aggregates of any psychological IPV, any physical IPV, any sexual IPV, and any form of IPV. We visualized overlapping forms of IPV victimization and perpetration by creating proportional Venn diagrams as has been done previously (Umubyeyi et al., 2014) by using SAS and the Visualization Application Program Interface (API) for Google charts. Wald chi-square tests were performed using PROC SURVEYFREQ to compare differences in proportions between men and women for both victimization and perpetration while accounting for the clustered nature of our data, with individuals (Level 1) nested with camps (Level 2). Finally, we examined risk factors for both victimization and perpetration for the three forms of IPV (all modeled as binary outcomes) by estimating multilevel logistic regression models using PROC GLIMMIX to obtain odds ratios (ORs) and corresponding 95% confidence intervals (CIs) while also accounting for our clustered data. We conducted our analyses using SAS software Version 9.4 (SAS Institute, 2011).

### Ethical Review

The study procedures and instruments were approved by the University of North Carolina at Chapel Hill Institutional Review Board as well as by the Muhimbili University of Health and Allied Sciences (MUHAS) Senate Research and Publications Committee.

## Results

### IPV Victimization

Within the last 12 months, 34.8% of men and 35.8% of women reported any form of IPV victimization. Men and women also reported similar prevalence of psychological and sexual victimization. However, more women reported physical IPV victimization than men. The Wald  $\chi^2$  tests comparing proportions between men and women are presented in Table 2. Men and women reported similar patterns of overlapping forms of IPV victimization (see Figure 1). For both genders, most individuals who reported IPV victimization reported only psychological IPV victimization within the last 12 months. Most men and women who experienced either physical or sexual IPV victimization also experienced psychological violence.

### Perpetration of IPV

Greater proportions of men compared with women reported perpetrating all three forms of IPV (see Table 2). There were both similarities and differences in the patterns of overlapping forms of IPV perpetrated by men compared with women (see Figure 2). The most common



form of violence perpetrated among both male and female perpetrators was psychological IPV. However, while more than half of female perpetrators reported perpetrating only psychological IPV, just over one third of all male perpetrators reported only perpetrating psychological IPV.

### Co-Occurrence of Victimization and Perpetration

Among those who reported any form of IPV victimization within the last year, 55.3% of men and 33.3% of women reported perpetrating IPV within the same time period. When restricting this subanalysis to physical IPV, we found that 48.4% of men and 20.0% of women who reported physical IPV victimization also reported perpetrating physical IPV. Among those who had perpetrated IPV in the last year, the vast majority of men (69.7%) and women (81.8%) also reported IPV victimization (of any form) within the same period. When this analysis is restricted to those who perpetrated physical IPV within the last year, we find that 30.6% of male perpetrators and 54.6% of female perpetrators also reported physical IPV victimization.

### Associations With Sociodemographic and Psychosocial Factors

**IPV victimization**—We present ORs for sociodemographic and risk/protective factors and IPV victimization within the last 12 months for men and women in Table 3. Statistically significant results ( $\alpha = .05$ ) are bolded in the table. For example, compared with never-married men, previously married men were significantly less likely to report physical IPV victimization. Having ever consumed alcohol was associated with increased risk of all forms of IPV victimization among men. Experiencing childhood physical or sexual violence was also associated with increased risk of psychological and physical IPV victimization for men. Contrary to what we expected, having somebody to discuss a personal problem with was associated with increased likelihood of reporting psychological victimization and having somebody who provided money or other items for support was associated with increased likelihood of reporting sexual victimization among men.

Women between the ages of 20 and 24 years were more likely to have experienced psychological and physical IPV than their 30 years or older counterparts. Women with less than primary school education were less likely to have experienced sexual IPV victimization compared with women who completed secondary school or more. Experiencing physical violence as a child also significantly increased risk of sexual IPV victimization, and experiencing sexual violence as a child was associated with increased risk of physical IPV victimization among women.

**IPV perpetration**—The ORs for sociodemographic and risk/protective factors and IPV perpetration for men and women are presented in Table 4. Unemployed men were significantly more likely to report perpetrating psychological IPV than employed men, and having ever consumed alcohol was strongly associated with increased risk of perpetrating all forms of IPV among men. Experiencing childhood physical violence was associated with increased risk of perpetrating both psychological and physical violence, and experiencing sexual violence as a child increased men's risk of perpetrating all forms of IPV.

Interestingly, the presence of social support was associated with increased likelihood of reporting IPV perpetration among men.

Younger women were significantly more likely than older women to report perpetrating both psychological and physical IPV. Having experienced childhood physical violence was associated with increased risk of perpetrating both psychological and physical violence for women. Experiencing sexual violence as a child similarly increased risk of perpetrating psychological IPV for women.

## Discussion

We set out to describe and compare the baseline prevalence, overlap, and risk factors of psychological, physical, and sexual IPV victimization and perpetration among sexually active men and women from an ongoing HIV and gender-based violence prevention study in Dar es Salaam, Tanzania. We found greater prevalence of male victimization and female perpetration of IPV in this population than we anticipated as interventions in the region mostly target men as perpetrators and women as victims. While we did not ask about the sexual orientation of our study participants, almost all of the men in our study reported having only female sexual partners within the last year. Thus, we documented high rates of IPV victimization among a predominately heterosexual population of males who are enrolled in an ongoing cluster-randomized HIV prevention trial in Dar es Salaam. More than 11% of men in our sample reported sexual IPV victimization within the last year. This finding is consistent with the study from Malawi that found more than 10% of men experienced sexual coercion (Conroy & Chilungo, 2014). Notably, that study also found that men who had experienced sexual coercion had 7.2 times greater odds of being HIV positive than men who had not experienced sexual coercion. Future longitudinal studies are needed to better understand consequences of IPV victimization for men.

The prevalence of IPV victimization among women in our study was slightly lower than in previous studies in the region as well as the 2010 Demographic and Health Survey (DHS) in Tanzania (National Bureau of Statistics (NBS) [Tanzania] and ICF Macro, 2011). A study examining women's victimization and men's perpetration of IPV in Uganda found that 57% of women reported victimization and 40% of men reported perpetration (Speizer, 2010), though this study was performed with married men and women, thus the results are not exactly comparable. The Tanzanian DHS found that 31.8% of women in Dar es Salaam reported experiencing physical violence in their lifetimes, and 23.8% of women in Dar es Salaam reported experiencing physical violence often or sometimes within the last 12 months (National Bureau of Statistics (NBS) [Tanzania] and ICF Macro, 2011). In comparison, 13.3% of women in our study reported physical IPV victimization within the last 12 months. This may be explained by the fact that women in our sample were largely unmarried young women and may also reflect the unique position of women who are members of predominantly male camps in Dar es Salaam. The prevalence of men's IPV perpetration in our study was also slightly lower than prevalence documented in previous research. For example, while our study found that 13.3% of men reported perpetrating physical IPV in the last year, another study in Dar es Salaam found that 29.2% of men reported physical IPV perpetration against a partner (Maman et al., 2010). That study was



conducted with a smaller sample of men ( $n = 360$ ) between the ages of 16 and 24 years who had had sex within the past 6 months; thus, our results are not comparable.

When comparing prevalence of IPV victimization across genders, we found evidence of gender symmetry with regard to experiencing any form of IPV, psychological, and sexual victimization. However, women were more likely to report physical IPV victimization than men. While these findings are consistent with a large body of literature, mostly from high-resource countries (Chan, 2011), these findings do differ from some of the studies that have examined men's and women's IPV victimization in sub-Saharan Africa. For example, the study in Rwanda found that women reported greater levels of physical, sexual, and psychological IPV victimization than men (Umubyeyi et al., 2014). Adolescent females were more likely to report experiencing coercive sex than males (66% vs. 56%) among sexually active secondary school students in Uganda (Ybarra et al., 2012). One study in the region did find symmetry in victimization across genders, though it was restricted to forced or coerced sex among youth attending schools in 10 southern African countries. That study found an overall prevalence of 19.6% among female students and 21.2% among male students (Andersson et al., 2012). This symmetry is similar to our findings regarding sexual IPV victimization among men and women. Our study also examined the overlap of different forms of IPV and found that men and women reported similar patterns of psychological, physical, and sexual IPV victimization.

We did not find evidence of gender symmetry when looking at perpetration of IPV. Men were more likely to report all forms of IPV perpetration compared with women. Male perpetrators also reported perpetrating different patterns of overlapping forms of IPV when compared with female perpetrators, who predominantly reported perpetrating psychological IPV. It may be that men in this context are more sanctioned to enact different types of violence and, as a result, are more likely to use a range of forms of IPV in response to conflict. Women, however, may feel comfortable using only psychological violence. Previous research suggests that men's perpetration of IPV may be enabled by a social environment that condones violence and allows IPV. Prior qualitative research in Tanzania provides evidence of such an enabling environment. One study conducted with male and female community members in several regions of Tanzania found that both men and women suggested that it was common for women to be beaten by their husbands for disobeying them (McCleary-Sills et al., 2013).

We documented high rates of co-occurrence of IPV victimization and perpetration among both men and women. Rates of IPV victimization among perpetrators were remarkably high; almost 70% of male perpetrators and more than 80% of female perpetrators also reported IPV victimization within the last year. While our study cannot ascertain whether victimization and perpetration occurred within the same relationship, this high degree of overlap in victimization and perpetration occurring within the last year suggests that IPV may be bidirectional with males and females concurrently engaging in conflict in their relationships. These findings warrant further longitudinal investigation to prospectively examine the causes and consequences of IPV within couples. In addition, the fact that the majority of perpetrators are also being victimized should be taken into account in the design of interventions to reduce IPV in this setting. Specifically, researchers and interventionists

should consider broader “family violence” or “partner violence” approaches that aim to reduce violence perpetrated by both genders.

We also examined risk factors associated with increased risk of IPV victimization and perpetration. Having ever consumed alcohol and experiencing childhood physical and sexual violence was associated with increased risk of victimization and perpetration of most forms of IPV among men. Interestingly, younger women were much more likely than older women to report perpetrating IPV, suggesting that there may be more conflict in younger relationships or that perpetrating IPV may be more acceptable to younger generations of women. This increasing use of violence among young couples has been documented elsewhere (Archer, 2000). Additionally, a qualitative study, based on focus-group discussions with men and women from Dar es Salaam, found that some young women reported coping mechanisms, including seeking revenge and fighting back after experiencing IPV (Laisser, Nystrom, Lugina, & Emmelin, 2011). Contrary to what we expected, having social support was associated with increased reports of both IPV victimization and perpetration among men. It is possible that the presence of social support may have increased men’s comfort in disclosing their experiences of IPV, thus resulting in a higher prevalence of IPV among those with social support compared with those without social support. Our analysis of social support, however, did not take into account the breadth of the individual’s social support network. Future research should examine the ways in which various forms of social support longitudinally shape risk of IPV victimization and perpetration.

Our findings should be considered in light of their limitations. First of all, our sample is comprised of men and women who are members of social networks locally referred to as “camps” in Dar es Salaam. These camps have been previously described as informal socialization sites for young people living in these wards. Camp members often join these camps to engage with and support one another and play sports or participate in camp-led businesses (Yamanis et al., 2010). As such, our sample may not be representative of all men and women in Dar es Salaam, and thus our findings may not generalize to all men and women in Dar es Salaam or other urban East African cities. In addition, camps are comprised mainly of young men (Yamanis et al., 2010), so female members of these predominantly male social groups may be particularly unique in the ways in which they socialize with other men compared with women in the general population. Furthermore, some of these camps explicitly prohibit women from being members, which may influence men’s attitudes toward gender roles and their perpetration of violence. Relatedly, our sample of men was also much larger than the sample of women, primarily because these camps are comprised of mostly male members. As a result of the small sample size of women, many of the associations between demographic and risk/protective factors with women’s IPV victimization and perpetration did not reach significance. It is also important to note that the men and women in our sample were generally not couples, and it is not possible to know whether the victimization and perpetration occurred within the same relationship. For example, an individual may have perpetrated IPV against one partner and been victimized by another partner within the same period of time. However, as the majority of men and women reported having only one sexual partner within the last year, we can assume that many participants reported victimization and perpetration within the same relationship. While it is

ideal to include the male and female partners of the same relationships in studies of IPV across genders (Straus, 2006), that was not feasible in this study. We also acknowledge that we assessed mostly heterosexual couples and that the proportion of men who have sex may have been underestimated, given the high levels of stigma associated with MSM in the region. In addition, the data used in this analysis were collected using self-reported behavior. While we attempted to limit biases by using behaviorally specific violent acts to assess both victimization and perpetration, social desirability and other recall or reporting biases may have led to underreporting of violent behaviors. Most previous studies, however, have highlighted the similarity of underreporting in both men's and women's self-reports of IPV (Chan, 2011). Furthermore, we did not assess the motives, intentions, consequences, or context in which IPV occurred. Specifically, we are not able to assess whether the perpetration of IPV, particularly among women, was in self-defense. Research from developed countries suggests that motives may in fact be similar to that of men, namely jealousy, anger, or punishing misbehavior (O'Leary, Smith Slep, & O'Leary, 2007), though we cannot speculate on the motivations for IPV perpetration in our sample. In addition, we did not assess controlling behaviors or coercive control, which are thought to characterize more severe acts of IPV referred to as "intimate terrorism" (Johnson, 1995). IPV scholars in the United States posit that less severe forms of violence, referred to as "situational couples violence," are not characterized by coercive control and are more likely to be reciprocated or bidirectional within relationships (Johnson, 2006). As a result, the degree of coercive control may have implications for the likelihood that violence is reciprocated within relationships and therefore symmetrical between genders. Finally, we acknowledge that individuals experiencing the most severe forms of IPV (which may be less likely to be directional within relationships) may not have been willing to participate in our survey because they might fear their partners' reactions. Further research is needed to better understand the motivations, intentions, and contexts of IPV in this setting.

We believe that our findings have implications for interventions. Many of the IPV prevention programs in sub-Saharan Africa address men's perpetration of violence without acknowledging that violence may be bidirectional and occurring concurrently between men and women in sexual relationships. By only working to reduce one aspect (namely male-to-female violence) of a potentially larger and more complex problem, the effectiveness of our violence prevention efforts may be limited. While our study cannot ascertain whether victimization and perpetration occurred within the same partnerships, the high levels of victimization reported by men and the extent of overlap between victimization and perpetration reported by both males and females suggest that IPV may be bidirectional with both partners engaging in conflict. Incorporating a broader "family violence" or "partner violence" approach into our intervention efforts that aims to reduce violence perpetrated by both genders is warranted. Intervention programs may be more effective if they take into consideration the bidirectional nature of IPV that may be occurring within these relationships.

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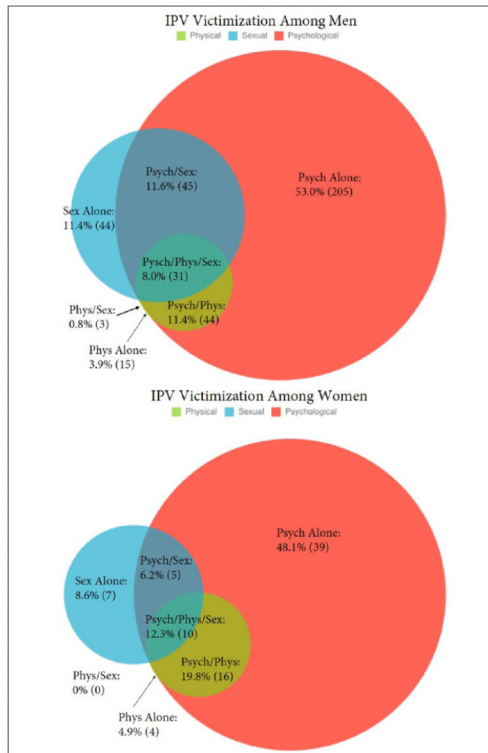
## References

- Andersson N, Paredes-Solis S, Milne D, Omer K, Marokoane N, Laetsang D, Cockcroft A. Prevalence and risk factors for forced or coerced sex among school-going youth: National cross-sectional studies in 10 southern African countries in 2003 and 2007. *BMJ Open*. 2012; 2:e000754.
- Archer J. Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological Bulletin*. 2000; 126:651–680. [PubMed: 10989615]
- Archer J. Sex differences in physically aggressive acts between heterosexual partners: A meta-analytic review. *Aggression and Violent Behavior*. 2002; 7:313–351.
- Chan KL. Gender differences in self-reports of intimate partner violence: A review. *Aggression and Violent Behavior*. 2011; 16:167–175.
- Conroy AA, Chilungo A. Male victims of sexual violence in rural Malawi: The overlooked association with HIV infection. *AIDS Care*. 2014; 26:1576–1580. [PubMed: 24992179]
- Devries KM, Mak JY, Bacchus LJ, Child JC, Falder G, Petzold M, Watts CH. Intimate partner violence and incident depressive symptoms and suicide attempts: A systematic review of longitudinal studies. *PLoS Medicine*. 2013; 10:e1001439. [PubMed: 23671407]
- Filmer D, Pritchett LH. Estimating wealth effects without expenditure data-or tears: An application to educational enrollments in states of India. *Demography*. 2001; 38:115–132. [PubMed: 11227840]

- Fleming PJ, McCleary-Sills J, Morton M, Levtoy R, Heilman B, Barker G. Risk factors for men's lifetime perpetration of physical violence against intimate partners: Results from the international men and gender equality survey (IMAGES) in eight countries. *PLoS ONE*. 2015; 10:e0118639. [PubMed: 25734544]
- Foshee VA, McNaughton Reyes HL, Ennett ST, Cance JD, Bauman KE, Bowling JM. Assessing the effects of Families for Safe Dates, a family-based teen dating abuse prevention program. *Journal of Adolescent Health*. 2012; 51:349–356. [PubMed: 22999835]
- Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH. Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *Lancet*. 2006; 368:1260–1269. [PubMed: 17027732]
- Groves AK, Kagee A, Maman S, Moodley D, Rouse P. Associations between intimate partner violence and emotional distress among pregnant women in Durban, South Africa. *Journal of Interpersonal Violence*. 2012; 27:1341–1356. DOI: 10.1177/0886260511425247 [PubMed: 22203635]
- Jewkes R, Sikweyiya Y, Morrell R, Dunkle K. The relationship between intimate partner violence, rape and HIV amongst South African men: A cross-sectional study. *PLoS ONE*. 2011; 6:e24256. [PubMed: 21935392]
- Jewkes RK, Dunkle K, Nduna M, Shai N. Intimate partner violence, relationship power inequity, and incidence of HIV infection in young women in South Africa: A cohort study. *Lancet*. 2010; 376:41–48. DOI: 10.1016/s0140-6736(10)60548-x [PubMed: 20557928]
- Johnson MP. Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and Family*. 1995; 57:283–294. DOI: 10.2307/353683
- Johnson MP. Conflict and control: Gender symmetry and asymmetry in domestic violence. *Violence Against Women*. 2006; 12:1003–1018. DOI: 10.1177/1077801206293328 [PubMed: 17043363]
- Laisser R, Nystrom L, Lugina H, Emmelin M. Community perceptions of intimate partner violence: A qualitative study from urban Tanzania. *BMC Women's Health*. 2011; 11:13. [PubMed: 21501506]
- Li Y, Marshall CM, Rees HC, Nunez A, Ezeanolue EE, Ehiri JE. Intimate partner violence and HIV infection among women: A systematic review and meta-analysis. *Journal of the International AIDS Society*. 2014; 17:18845. [PubMed: 24560342]
- Maman S, Yamanis T, Kouyoumdjian F, Watt M, Mbwapo J. Intimate partner violence and the association with HIV risk behaviors among young men in Dar es Salaam, Tanzania. *Journal of Interpersonal Violence*. 2010; 25:1855–1872. [PubMed: 19966247]
- Maxwell L, Devries K, Zions D, Alhusen JL, Campbell J. Estimating the effect of intimate partner violence on women's use of contraception: A systematic review and meta-analysis. *PLoS ONE*. 2015; 10:e0118234. [PubMed: 25693056]
- McCleary-Sills, J., Namy, S., Nyoni, J., Rweyemamu, D., Steven, E., Salvatory, A. Help-seeking pathways and barriers for survivors of gender-based violence in Tanzania: Results from a study in Dar es Salaam, Mbeya, and Iringa regions EngenderHealth/CHAMPION; Dar es Salaam, Tanzania: 2013
- National Bureau of Statistics (NBS) [Tanzania] Household and individual questionnaire NBS; Dar es Salaam, Tanzania: 2011 Tanzania - National Panel Survey (NPS) Report 2010–2011, Wave 2.
- National Bureau of Statistics (NBS) [Tanzania] ICF Macro Tanzania Demographic and Health Survey 2010 NBS and ICF Macro; Dar es Salaam, Tanzania: 2011
- O'Leary KD, Slep AM. Prevention of partner violence by focusing on behaviors of both young males and females. *Prevention Science*. 2012; 13:329–339. [PubMed: 21779924]
- O'Leary KD, Smith Slep AM, O'Leary SG. Multivariate models of men's and women's partner aggression. *Journal of Consulting and Clinical Psychology*. 2007; 75:752–764. [PubMed: 17907857]
- Reid RJ, Bonomi AE, Rivara FP, Anderson ML, Fishman PA, Carrell DS, Thompson RS. Intimate partner violence among men prevalence, chronicity, and health effects. *American Journal of Preventive Medicine*. 2008; 34:478–485. [PubMed: 18471583]
- Sarkar NN. The impact of intimate partner violence on women's reproductive health and pregnancy outcome. *Journal of Obstetrics and Gynaecology*. 2008; 28:266–271. [PubMed: 18569465]
- SAS Institute SAS® 9.4 Author; Cary, NC: 2011

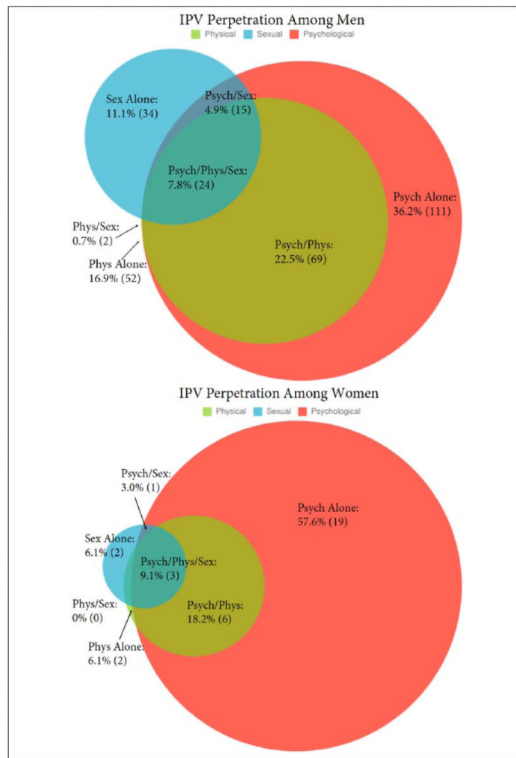
- Shannon K, Leiter K, Phaladze N, Hlanze Z, Tsai AC, Heisler M, Weiser SD. Gender inequity norms are associated with increased male- perpetrated rape and sexual risks for HIV infection in Botswana and Swaziland. *PLoS ONE*. 2012; 7:e28739. [PubMed: 22247761]
- Speizer IS. Intimate partner violence attitudes and experience among women and men in Uganda. *Journal of Interpersonal Violence*. 2010; 25:1224–1241. DOI: 10.1177/0886260509340550 [PubMed: 19758975]
- Stephenson R, de Voux A, Sullivan PS. Intimate partner violence and sexual risk-taking among men who have sex with men in South Africa. *Western Journal of Emergency Medicine*. 2011; 12:343–347. [PubMed: 21731792]
- Straus MA. Future research on gender symmetry in physical assaults on partners. *Violence Against Women*. 2006; 12:1086–1097. [PubMed: 17043370]
- Tanzania Commission for AIDSTanzania HIV/AIDS and Malaria Indicator Survey 2011–12Dar es Salaam, Tanzania: 2013
- Townsend L, Jewkes R, Mathews C, Johnston LG, Flisher AJ, Zembe Y, Chopra M. HIV risk behaviours and their relationship to intimate partner violence (IPV) among men who have multiple female sexual partners in Cape Town, South Africa. *AIDS and Behavior*. 2011; 15:132–141. [PubMed: 20217470]
- Umubyeyi A, Mogren I, Ntaganira J, Krantz G. Women are considerably more exposed to intimate partner violence than men in Rwanda: Results from a population-based, cross-sectional study. *BMC Women's Health*. 2014; 14:99. [PubMed: 25155576]
- Weir SS, Pailman C, Mahlalela X, Coetzee N, Meidany F, Boerma JT. From people to places: Focusing AIDS prevention efforts where it matters most. *AIDS*. 2003; 17:895–903. DOI: 10.1097/01.aids.0000050809.06065.e0 [PubMed: 12660537]
- Winstok Z. The paradigmatic cleavage on gender differences in partner violence perpetration and victimization. *Aggression and Violent Behavior*. 2011; 16:303–311.
- Wolfe DA, Crooks C, Jaffe P, Chiodo D, Hughes R, Ellis W, Donner A. A school-based program to prevent adolescent dating violence: A cluster randomized trial. *Archives of Pediatrics & Adolescent Medicine*. 2009; 163:692–699. [PubMed: 19652099]
- World Health OrganizationGlobal and regional estimates of violence against women: Prevalence and health effects of intimate partner violence and non-partner sexual violenceAuthor; Geneva, Switzerland: 2013
- Yamanis TJ, Maman S, Mbwanbo JK, Earp JA, Kajula LJ. Social venues that protect against and promote HIV risk for young men in Dar es Salaam, Tanzania. *Social Science & Medicine*. 2010; 71:1601–1609. [PubMed: 20846768]
- Ybarra ML, Bull SS, Kiwanuka J, Bangsberg DR, Korchmaros J. Prevalence rates of sexual coercion victimization and perpetration among Uganda adolescents. *AIDS Care*. 2012; 24:1392–1400. [PubMed: 22299764]





**Figure 1.** Overlapping forms of IPV victimization within the last 12 months for men ( $n = 389$ ) and women ( $n = 81$ ).

*Note.* Psych = psychological IPV; Phys = physical IPV; Sex = sexual IPV; IPV = intimate partner violence.



**Figure 2.** Overlapping forms of IPV perpetration within the last 12 months for men ( $n = 309$ ) and women ( $n = 33$ ).  
*Note.* IPV = intimate partner violence; Psych = psychological IPV; Phys = physical IPV; Sex = sexual IPV.

**Table 1**

Sociodemographic and Risk/Protective Variables Among Sexually Active Men ( $n = 1,113$ ) and Women ( $n = 226$ ).

Variables	Men % ( $n$ )	Women % ( $n$ )
Age (years)		
15-19	13.4 (149)	13.3 (30)
20-24	30.0 (334)	31.0 (70)
25-29	29.0 (323)	22.1 (50)
30+	27.6 (307)	33.6 (76)
Education		
Primary school or less	58.7 (652)	60.0 (135)
Some secondary school	10.5 (116)	9.3 (21)
Secondary school completed or more	30.8 (342)	30.7 (69)
SES		
Low	26.2 (291)	19.0 (43)
Medium	39.1 (435)	32.3 (73)
High	34.7 (386)	48.7 (110)
Unemployed		
No	81.5 (907)	60.2 (136)
Yes	18.5 (206)	39.8 (90)
Marital history		
Never married	75.1 (833)	58.9 (133)
Previously married	25.0 (277)	41.2 (93)
Number of children		
0	62.8 (699)	35.8 (81)
1	22.6 (251)	27.9 (63)
2+	14.7 (163)	36.3 (82)
Alcohol use ever		
No	55.1 (613)	62.8 (142)
Yes	44.9 (499)	37.2 (84)
Childhood physical violence		
No	94.5 (1,051)	97.8 (220)
Yes	5.5 (61)	2.2 (5)
Childhood sexual violence		
No	92.8 (1,033)	95.5 (214)
Yes	7.2 (80)	4.5 (10)
Social support: having friend/relative to discuss personal problem		
No	19.4 (216)	12.8 (29)
Yes	80.6 (897)	87.2 (197)
Social support: having friend/relative who provided money or other needed items		
No	27.3 (304)	21.7 (49)
Yes	72.7 (809)	78.3 (177)

Variables	Men % (n)	Women % (n)
Number of sexual partners in the last year		
0	13.3 (148)	11.5 (26)
1	67.3 (897)	81.4 (184)
2 +	19.4 (216)	7.1 (16)
All sexual partners in last year were female <sup>a</sup>		
Yes	98.5 (1,096)	—
No	1.4 (16)	—

Note. SES = socioeconomic status.

<sup>a</sup>Only men were asked how many of their partners were women and how many were men within the last year.

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**Table 2**

Prevalence of IPV Victimization and Perpetration Within the Last 12 Months Among Sexually Active Men ( $n = 1,113$ ) and Women ( $n = 226$ ).

Forms of Violence	Victimization		Perpetration	
	Men	Women	Men	Women
	% (n)	% (n)	% (n)	% (n)
Psychological				
Insulted	26.5 (295)	30.1 (68)	17.6 (196)	11.5 (26)*
Belittled or humiliated	5.1 (57)	5.3 (12)	2.4 (27)	3.1 (7)
Scared or intimidated	4.9 (54)	6.2 (14)	3.1 (34)	1.3 (3)
Threatened to hurt	4.0 (44)	6.6 (15)	3.6 (40)	1.8 (4)
<i>Any psychological IPV</i>	29.2 (325)	31.0 (70)	19.7 (219)	12.8 (29)*
Physical				
Slapped or thrown something	4.0 (44)	6.2 (14)	10.2 (113)	3.5 (8)*
Pushed or shoved	4.8 (53)	5.8 (13)	3.4 (38)	2.7 (6)
Hit with first or something else	2.9 (32)	8.4 (19)*	2.9 (32)	1.3 (3)
Kicked dragged or beaten	0.7 (8)	3.5 (8)*	2.2 (24)	0.9 (2)
Choked or burnt	1.1 (12)	1.3 (3)	0.4 (4)	0.4 (1)
Threatened or used a weapon	1.4 (15)	1.8 (4)	0.3 (3)	0 (0)
<i>Any physical IPV</i>	8.4 (93)	13.3 (30)*	13.2 (147)	4.9 (11)*
Sexual				
Physically forced to have sex	10.2 (113)	9.3 (21)	6.1 (68)	2.7 (6)*
Threats to make partner have sex	1.1 (12)	3.1 (7)	1.7 (19)	0 (0)
Forced to do something degrading	1.6 (18)	2.7 (6)	0.4 (4)	0 (0)
<i>Any sexual IPV</i>	11.1 (123)	9.7 (22)	6.7 (75)	2.7 (6)*
Any IPV	34.8 (387)	35.8 (81)	27.6 (307)	14.6 (33)*

Note. IPV = intimate partner violence.

\*  $p < .05$  for Wald  $\chi^2$  test comparing proportions between men and women ( $df = 1$ ).

**Table 3**

Associations Between Sociodemographic and Risk/Protective Factors and IPV Victimization Among Sexually Active Men ( $n = 1,113$ ) and Women ( $n = 226$ ).

Forms of Violence	Men ( $n = 1,116$ )				Women ( $n = 226$ )			
	12-Month Psychological		12-Month Physical		12-Month Psychological		12-Month Physical	
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	
Age (years)								
15-19	0.95 [0.57, 1.59]	0.81 [0.36, 1.83]	1.57 [0.88, 2.79]	2.51 [0.89, 7.06]	1.8 [0.46, 6.94]	1.82 [0.42, 7.96]		
20-24	<b>1.52 [1.04, 2.21]</b>	1.1 [0.61, 2.00]	0.76 [0.44, 1.29]	<b>2.34 [1.07, 5.13]</b>	<b>3.18 [1.15, 8.80]</b>	1.87 [0.58, 5.99]		
25-29	1.39 [0.96, 2.01]	1.47 [0.84, 2.59]	1.25 [0.76, 2.04]	1.56 [0.66, 3.69]	1.3 [0.37, 4.54]	0.5 [0.09, 2.71]		
30+ (ref)	—	—	—	—	—	—		
Education								
Primary school or less	0.89 [0.56, 1.41]	0.70 [0.36, 1.34]	0.77 [0.41, 1.42]	1.06 [0.36, 3.16]	0.86 [0.23, 3.28]	<b>0.24 [0.06, 0.94]</b>		
Some secondary school	1.17 [0.72, 1.90]	0.67 [0.33, 1.35]	1.16 [0.61, 2.20]	1.44 [0.46, 4.55]	1.02 [0.25, 4.14]	0.32 [0.08, 1.36]		
Secondary school completed + (ref)	—	—	—	—	—	—		
SES								
Low	1.09 [0.75, 1.57]	0.71 [0.39, 1.29]	1.33 [0.81, 2.18]	1.54 [0.66, 3.57]	0.60 [0.19, 1.93]	1.33 [0.34, 5.15]		
Medium	0.92 [0.67, 1.26]	1.01 [0.62, 1.65]	1.32 [0.84, 2.07]	1.02 [0.51, 2.05]	0.93 [0.40, 2.20]	1.70 [0.58, 4.96]		
High (ref)	—	—	—	—	—	—		
Unemployed	—	—	—	—	—	—		
No (ref)	—	—	—	—	—	—		
Yes	1.25 [0.87, 1.80]	0.99 [0.57, 1.74]	1.37 [0.81, 2.31]	1.52 [0.81, 2.84]	1.64 [0.71, 3.79]	1.40 [0.51, 3.86]		
Marital history								
Never married (ref)	—	—	—	—	—	—		
Previously married	1.10 [0.79, 1.52]	<b>0.61 [0.38, 0.97]</b>	1.50 [0.93, 2.40]	1.37 [0.73, 2.58]	0.90 [0.41, 1.97]	0.69 [0.25, 1.87]		
Alcohol use ever								
No (ref)	—	—	—	—	—	—		



Forms of Violence	Men (n = 1,116)				Women (n = 226)			
	12-Month Psychological		12-Month Physical		12-Month Psychological		12-Month Physical	
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	
Yes	<b>1.90 [1.44, 2.51]</b>	<b>1.86 [1.20, 2.89]</b>	<b>2.16 [1.47, 3.18]</b>	1.22 [0.66, 2.28]	1.58 [0.72, 3.43]	0.84 [0.30, 2.33]		
Childhood physical violence								
No (ref)	—	—	—	—	—	—	—	
Yes	<b>3.06 [1.76, 5.32]</b>	<b>2.84 [1.43, 5.63]</b>	1.64 [0.81, 3.33]	1.34 [0.19, 9.52]	1.65 [0.18, 15.48]	<b>22.78 [2.41, 215.58]</b>		
Childhood sexual violence								
No (ref)	—	—	—	—	—	—	—	
Yes	<b>2.99 [1.83, 4.87]</b>	<b>3.41 [1.87, 6.22]</b>	1.63 [0.87, 3.05]	2.51 [0.64, 9.79]	<b>4.82 [1.26, 18.39]</b>	4.75 [0.95, 23.86]		
Social support: friend/relative to discuss personal problem								
No (ref)	—	—	—	—	—	—	—	
Yes	<b>1.68 [1.16, 2.45]</b>	1.04 [0.60, 1.82]	1.69 [0.98, 2.93]	1.95 [0.72, 5.28]	1.38 [0.39, 4.90]	1.39 [0.28, 6.76]		
Social support: friend/relative who provided money or other items								
No (ref)	—	—	—	—	—	—	—	
Yes	1.26 [0.92, 1.73]	0.80 [0.50, 1.27]	<b>1.72 [1.07, 2.77]</b>	1.02 [0.50, 2.11]	1.12 [0.43, 2.94]	1.19 [0.35, 3.99]		

Note. IPV = intimate partner violence; OR = odds ratios accounting for clustered nature of data; CI = confidence interval; SES = socioeconomic status.

Bolded values are statistically significant ( $\alpha = .50$ )

Associations Between Sociodemographic and Risk/Protective Factors and Perpetration of IPV Among Sexually Active Men ( $n = 1,113$ ) and Women ( $n = 226$ ).

Table 4

Forms of Violence	Men ( $n = 1,116$ )			Women ( $n = 226$ )		
	12-Month Psychological	12-Month Physical	12-Month Sexual	12-Month Psychological	12-Month Physical	12-Month Sexual
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]
Age (years)						
15-19	0.95 [0.54, 1.66]	0.88 [0.45, 1.73]	0.92 [0.41, 2.08]	<b>8.85 [2.14, 36.58]</b>	<b>11.83 [1.19, 117.74]</b>	—
20-24	1.03 [0.67, 1.58]	1.22 [0.75, 1.99]	0.91 [0.48, 1.74]	<b>4.06 [1.06, 15.54]</b>	2.09 [0.18, 24.85]	—
25-29	<b>1.59 [1.06, 2.37]</b>	1.33 [0.83, 2.13]	1.26 [0.69, 2.30]	<b>4.64 [1.16, 18.6]</b>	6.60 [0.69, 63.30]	—
30+ (ref)	—	—	—	—	—	—
Education						
Primary school or less	0.87 [0.52, 1.44]	1.21 [0.8, 1.83]	0.78 [0.37, 1.65]	0.31 [0.10, 1.01]	0.95 [0.10, 8.81]	0.61 [0.06, 5.83]
Some secondary school	1.01 [0.59, 1.72]	1.33 [0.71, 2.49]	0.95 [0.43, 2.08]	0.67 [0.21, 2.21]	1.21 [0.12, 12.15]	0.29 [0.02, 5.01]
Secondary school completed + (ref)	—	—	—	—	—	—
SES						
Low	<b>0.59 [0.39, 0.90]</b>	0.85 [0.53, 1.38]	0.62 [0.33, 1.18]	1.11 [0.40, 3.13]	0.41 [0.05, 3.65]	—
Medium	<b>0.67 [0.47, 0.95]</b>	0.75 [0.50, 1.14]	0.82 [0.48, 1.39]	0.96 [0.39, 2.37]	0.99 [0.26, 3.81]	—
High (ref)	—	—	—	—	—	—
Unemployed	—	—	—	—	—	—
No (ref)	—	—	—	—	—	—
Yes	<b>1.94 [1.23, 3.06]</b>	1.23 [0.76, 1.99]	1.35 [0.70, 2.60]	0.93 [0.42, 2.06]	0.75 [0.21, 2.65]	3.40 [0.39, 29.99]
Marital history						
Never married (ref)	—	—	—	—	—	—
Previously married	0.88 [0.62, 1.26]	0.72 [0.49, 1.08]	1.24 [0.70, 2.20]	1.38 [0.61, 3.15]	1.98 [0.49, 8.03]	1.41 [0.25, 7.96]
Alcohol use ever						
No (ref)	—	—	—	—	—	—
Yes	<b>2.28 [1.67, 3.12]</b>	<b>2.24 [1.55, 3.24]</b>	<b>1.71 [1.07, 2.75]</b>	0.88 [0.38, 1.99]	0.64 [0.16, 2.62]	1.72 [0.34, 8.80]

Forms of Violence	Men (n = 1,116)				Women (n = 226)			
	12-Month Psychological		12-Month Physical		12-Month Psychological		12-Month Physical	
	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]	
Childhood physical violence								
No (ref)	—	—	—	—	—	—	—	—
Yes	<b>1.99 [1.11, 3.57]</b>	<b>2.74 [1.48, 5.06]</b>	1.90 [0.83, 4.35]	<b>11.19 [1.76, 71.01]</b>	<b>19.68 [1.86, 208.16]</b>	—	—	—
Childhood sexual violence								
No (ref)	—	—	—	—	—	—	—	—
Yes	<b>3.28 [2.00, 5.37]</b>	<b>4.05 [2.42, 6.81]</b>	<b>3.04 [1.59, 5.81]</b>	<b>5.04 [1.32, 19.27]</b>	5.81 [0.99, 34.18]	—	—	—
Social support: friend/relative to discuss personal problem								
No (ref)	—	—	—	—	—	—	—	—
Yes	<b>1.63 [1.06, 2.49]</b>	<b>1.65 [0.98, 2.77]</b>	1.83 [0.90, 3.73]	1.32 [0.37, 4.71]	—	—	—	—
Social support: friend/relative who provided money or other items								
No (ref)	—	—	—	—	—	—	—	—
Yes	<b>1.51 [1.05, 2.17]</b>	<b>1.66 [1.06, 2.58]</b>	<b>1.86 [1.01, 3.43]</b>	1.85 [0.61, 5.64]	—	—	—	—

Note. IPV = intimate partner violence; OR = odds ratios accounting for clustered nature of data; CI = confidence interval; SES = socioeconomic status. Bolded values are statistically significant ( $\alpha = .05$ )