Perpetration of Intimate Partner Violence Associated With Sexual Risk Behaviors Among Young Adult Men

Anita Raj, PhD, M. Christina Santana, MPH, Ana La Marche, BA, Hortensia Amaro, PhD, Kevin Cranston, MDiv, and Jay G. Silverman, PhD

Objective. We assessed the association between intimate partner violence (IPV) perpetration and sexual risk behaviors and fatherhood (having fathered children) among young men.

Methods. Sexually active men aged 18 to 35 years who visited an urban community health center and who reported having sexual intercourse with a steady female partner during the past 3 months (N = 283) completed a brief self-administered survey about sexual risk behaviors, IPV perpetration, and demographics. We conducted logistic regression analyses adjusted for demographics to assess associations between IPV and sexual risk behaviors and fatherhood.

Results. Participants were predominantly Hispanic (74.9%) and Black (21.9%). Participants who reported IPV perpetration during the past year (41.3%) were significantly more likely to report (1) inconsistent or no condom use during vaginal and anal sexual intercourse, (2) forcing sexual intercourse without a condom, (3) having sexual intercourse with other women, and (4) having fathered 3 or more children.

Conclusion. IPV perpetration was common among our sample and was associated with increased sexual risk behaviors. Urban community health centers may offer an important venue for reaching this at-risk population. (*Am J Public Health.* 2006;96:1873–1878. doi:10.2105/AJPH.2005.081554)

Extensive evidence from diverse populations of women has shown that intimate partner violence (IPV) victimization—a health issue estimated to affect 1 in 4 US women[1–7]—is significantly associated with low contraceptive and condom use and adverse sexual and reproductive health outcomes (e.g., pelvic pain, menstrual abnormalities, sexually transmitted disease (STD)/HIV, unwanted pregnancy, and multiple abortions).[8–10] This research has primarily been limited to studies of female IPV victims and has rarely included reports from male perpetrators. Although research that has included women's and girls' reports of male partner behavior shows a potential association between high rates of IPV perpetration and sexual risk behaviors among young adult men,[11–18] there has been little direct study of whether abusive male partners pose a greater sexual risk to women because of the men's own risky sexual behaviors. Within qualitative studies, battered women have reported that abusive male partners prevented them from using contraception and thus, forced them to have unprotected sex, sometimes for the purposes of conception.[19,20] The sole study of sexual risk behaviors and IPV that was conducted with men showed that IPV perpetration was associated with sexual infidelity, multiple sexual partners, and unprotected anal sexual intercourse.[21] This sample was drawn from a methadone treatment clinic and thus limited generalizability of the study findings. No published study to date has assessed the association between IPV perpetration and fatherhood (i.e., having fathered children) among men. Our goal was to build upon the previous studies by assessing the association of IPV perpetration with sexual risk behaviors and fatherhood among a sample of young adult men who attended a large urban community health center.

METHODS

English- and/or Spanish-speaking men aged 18 to 35 years who reported having sexual intercourse with a female partner during the past 3 months were recruited from a large urban community health center in Boston, Mass, that primarily serves lower-income Hispanic and Black clients. On the basis of these inclusion criteria, men who entered the health center were screened at registration by trained research staff who were fluent in both Spanish and English. Men were screened if they came to the health center for their own care *or* if they were accompanying someone else. Those who agreed to participate in a brief, anonymous men's health survey were then escorted by research staff to a private room, where individuals were screened for a second time to verify eligibility. Upon obtaining oral consent, the self-report paper survey was administered; oral rather than written consent was used to eliminate the need for participants' signatures and to better ensure anonymity. The consent procedures, informed consent information sheet, and survey were offered in either English or Spanish; the Spanish versions were professionally back-translated for use in our study. After survey completion (approximately 20 minutes), participants were given $15 for their time and were informed about health center services, including HIV counseling and testing, STD testing, and social services related to substance abuse and IPV.

Participation

Participants were recruited from April 2004 to February 2005. Of the 432 men who were approached, 354 were eligible; 29 refused to participate, which resulted in a 92% participation rate. Forty-eight percent of the participants were at the health center for their own health care, 46% were accompanying a female partner or child to appointments for their own heath care, and 6% were attending a health fair. After the surveys were reviewed, 18 of the 325 survey participants

were excluded because of their age (n=6) or because they had not had sexual intercourse with a female partner during the past 3 months (n=12). Of the remaining 307 participants, 92.2% (n=283) reported that they had a steady female partner and that they had had vaginal sexual intercourse during the past 3 months with this partner. Our analyses were limited to these individuals.

Survey Measures

Single items assessed participants' age, race/ethnicity, education level, income, employment, relationship status, length of relationship, English language fluency, nativity, and length of residence in the continental United States. Single items also assessed sexual risk behaviors with the reported main female sexual partner during the past 3 months (inconsistent or no condom use during vaginal sexual intercourse; inconsistent or no condom use during anal sexual intercourse; vaginal or anal sexual intercourse, or both, with other female sexual partners; and inconsistent or no condom use with non–main female sexual partners). All these items were created for use in previous research that was conducted with young women of similar demographics who were recruited within the same health center as our study.[22,23]

Forced sexual intercourse without a condom during the past year was assessed with a single item from the Conflict Tactics Scale-2 (CTS-2), a 39-item inventory of abusive behaviors.[24] Fatherhood was assessed with a single question about the number of children respondents had fathered, and 2 variables were created from this question: having fathered any children and having fathered 3 or more children. Having fathered 3 or more children was created as a variable to indicate higher than average fertility in accordance with US Census 2000 data, which showed that the average number of children in both US and Massachusetts households with children was 1.9,[25] and the average number of minor children was close to equivalent across racial/ethnic groups.[26]

Participants' perpetration of physical violence and sexual violence during the past year and ever were assessed with the perpetration items from the CTS-2,[24] which was developed to assess psychological, physical, and sexual aggression by partners who are in dating, cohabitating, or marital relationships. We used the CTS-2 because of its reliability and validity with diverse samples of men and women, including Hispanic and Black men, and with diverse languages, including English and Spanish.[27] The CTS-2 was used in a population-based study of IPV in the United States,[7] and it was used to assess IPV perpetration in a community clinic–based study of US men.[28]

For regression analyses, we summed and dichotomized responses as IPV perpetration or no IPV perpetration during the past year; for descriptive analyses, we summed and dichotomized responses as IPV perpetration ever or never. Consistent with previous research that used this measure across diverse populations,[24,27,28] the CTS-2 showed strong internal reliability with our sample; Cronbach alphas were 0.93 for IPV perpetration during the past year and 0.96 for IPV perpetration ever. The item that assessed forced sexual intercourse without a condom was not included in this scale to allow for assessment of this item as a sexual risk outcome; it is the only item in the scale that assesses a sexual risk behavior.

Data Analyses

Frequencies were generated for IPV perpetration, sexual risk behaviors and fatherhood variables, and demographics. Crude logistic regression analyses assessed the bivariate associations between past-year IPV perpetration and outcome variables, sexual risk behaviors during the past 3 months (unprotected vaginal sexual intercourse with primary partner, unprotected anal sexual intercourse with primary partner, other female sexual partners in addition to primary partner), forced unprotected sexual intercourse during the past year, and fatherhood (having fathered any children, having fathered 3 or more children). We then conducted adjusted logistic regression analyses to assess associations between past-year IPV perpetration and sexual risk behaviors and fatherhood after we adjusted for demographics (age, race/ethnicity, income, continental US nativity, length of residence in the continental United States, and length of relationship). We used adjusted odds ratios (OR) and 95% confidence intervals (CI) to assess significance in final models.

RESULTS

Sample Demographics

The median age of participants was 24 years; 74.9% of participants were Hispanic and 21.9% were Black. The majority of the sample was born in the continental United States (44.5%) or Latin America (53.4%). Almost one third of participants (29.3%) was born in the Dominican Republic; 16.3% were born in Puerto Rico; 7.8% were born in Mexico, South America, Central America, or Cuba. Of those who were not born in the continental United States, 10.2% had lived in the United States for 1 year or less, and 65.0% had lived in the United States for more than 5 years. More than one third (37.5%) were unemployed; 53.4% reported an income of $800 or less per month; and 28.0% did not have a high-school degree or general equivalency diploma (high rates of unemployment and low income and low education level may in part be attributable to the young sample, which likely included high-school students). Approximately 1 in 6 (15.2%) were married; the median length of relationship for the sample was 2 years, and 65% reported having been in their relationship for 1 year or longer.

Sexual Risk Behaviors and Having Fathered Children

Inconsistent or no condom use was reported by the majority who reported vaginal sexual intercourse (80.2%) and anal sexual intercourse (79.2%) with their main female partner. One quarter of participants (24%) reported having forced sexual intercourse without a condom; 16.3% reported engaging in this behavior within the past year. Forty-three percent reported sexual intercourse with a non–main female partner during the past 3 months; 49.2% reported inconsistent or no condom use with these partners. Although sexual intercourse with a male partner was less commonly reported (6.9%) than sexual intercourse with a non–main female partner, 12 of the 19 men who reported sexual intercourse with a male partner also reported sexual intercourse with a non–main female

TABLE 1—Sexual Risk Behaviors and Pregnancy Involvement Among Men in a Steady Relationship With a Female Partner (N = 283)

	%
Condom use during vaginal sexual intercourse with main partner in past 3 months	
None	45.6
Inconsistent	34.6
Consistent	19.8
Condom use during anal sexual intercourse with main partner[a] in past 3 months	
None	61.3
Inconsistent	17.9
Consistent	20.8
Forced sexual intercourse without condom during past year	17.5
Number of non–main female sexual partners during past 3 months	
0	54.1
1	19.1
2 or more	24.0
Number of non–main male sexual partners during past 3 months	
0	85.5
1	3.9
2 or more	3.0
Having fathered children, ever	49.1
Having fathered 3 or more children	16.3

Note. Responses do not add up to 100%, because 2.8% of participants did not respond to the question on number of other female sexual partners in the past 3 months and 7.6% of participants did not respond to the question on male sexual partners in the past 3 months.
[a]Among those who reported anal sexual intercourse (n = 106).

TABLE 2—IPV Perpetration Among Men in a Steady Relationship With a Female Partner (N = 283)

	Past Year, %	Ever, %
Physical IPV perpetration		
Pushed or shoved partner	14.1	23.7
Twisted partner's arm or hair	12.4	18.7
Threw something at partner that could hurt her	11.3	20.8
Grabbed partner	11.0	16.6
Threatened to hit or throw something at partner	8.1	12.7
Slapped partner	7.8	12.7
Slammed partner	6.0	12.4
Punched or hit partner with something that could hurt her	5.7	11.7
Choked partner	4.9	9.9
Used a knife or gun on partner	3.5	7.8
Kicked partner	3.5	7.8
Beat up partner	3.5	7.1
Total physical IPV perpetration	27.6	41.3
Sexual IPV perpetration		
Insisted partner have oral or anal sexual intercourse but did not use physical force	20.5	31.4
Insisted on sexual intercourse when partner did not want to but did not use physical force	14.8	28.6
Used force[a] to make partner have oral or anal sexual intercourse	6.7	9.9
Used threats to make partner have sexual intercourse	5.7	6.7
Used threats to make partner have oral or anal sexual intercourse	4.9	7.1
Used force[a] to make partner have sexual intercourse	4.2	6.7
Total sexual IPV perpetration	28.3	43.8
IPV perpetration resulting in injury/need for medical services		
Partner had small cut, sprain, or bruise due to fight with participant	8.8	16.6
Partner passed out when hit in the head during fight with participant	6.0	6.7
Partner went to doctor due to fight with participant	4.9	8.8
Partner needed to go to doctor due to fight with participant but did not	4.2	7.4
Partner still felt physical pain the next day due to fight with participant	3.9	10.0
Partner had broken bone due to fight with participant	3.5	4.9
Burned or scalded partner on purpose	3.2	6.0
Total IPV perpetration resulting in injury/need for medical services	13.8	22.6

Note. IPV = intimate partner violence.
[a]Force described as "like hitting, holding down, or using a weapon."

partner during the past 3 months. Half of the sample (49.1%) reported having fathered at least 1 child; 16.3% reported having fathered 3 or more children (Table 1).

Partner Violence and Sexual Assault

IPV perpetration of some kind (physical, sexual, injury-related, required medical services) during the past year was reported by 41.3% of the sample; 58.7% reported IPV perpetration ever. Physical abuse of a partner during the past year was reported by 27.6% of the sample; physical abuse of a partner ever was reported by 41.3%. The most common types of reported physical IPV perpetration were pushing or shoving a partner (past year = 14.1%; ever = 23.7%), twisted arm or hair (past year = 12.4%; ever = 18.7%), threw something at partner that could hurt her (past year = 11.3%; ever = 20.8%), and grabbed a partner (past year = 11.0%; ever = 16.6%) (Table 2).

Sexual abuse of a partner during the past year was reported by 28.3% of the sample; sexual abuse of a partner ever was reported by 43.8%. The most common types of reported sexual IPV perpetration were insisting on but not forcing oral or anal sexual intercourse (past year = 20.5%; ever = 31.4%) and insisting on but not forcing sexual intercourse when a partner did not want to have sexual intercourse (past year = 14.8%; ever = 28.6%). One in 10 participants (9.9%) reported a history of having forced a partner to have oral or anal sexual intercourse, and 1 in 16 (6.7%) reporting having forced a partner to have vaginal sexual intercourse.

Partner's injury from, or need for medical services because of, participant's abuse during the past year was reported by 13.8% of the sample; 22.6% reported ever perpetrating

IPV that resulted in their partner's injury or need for medical services. The most common types of reported IPV-related partner injuries or need for medical services during the past year included partner's cut, sprain, or bruise (8.8%) and partner's passing out because of a hit on the head (6.0%); the most common types of partner injuries or need for medical services as a result of participants' IPV ever included partner's cut, sprain, or bruise (16.6%) and partner's pain the day after a fight (10%).

Associations Between IPV and Sexual Risk Behaviors and Having Fathered Children

Crude regression analyses showed that men who reported IPV perpetration during the past year were significantly more likely to report forced sexual intercourse without a condom during the past year (OR=4.6; 95% CI=2.3, 9.3) and sexual intercourse with at least 1 other woman during the past 3 months (OR=2.0; 95% CI=1.2, 9.3). Other assessed outcomes were not significantly associated with IPV perpetration in the crude analyses. Adjusted logistic regression analyses showed that participants who reported IPV perpetration during the past year were significantly more likely to report inconsistent or no condom use during vaginal sexual intercourse (OR_{adj}=2.4; 95% CI=1.1, 4.9) and anal sexual intercourse (OR_{adj}=3.3; 95% CI=1.1, 10.1) during the past 3 months, forcing sexual intercourse without a condom during the past year (OR_{adj}=5.2; 95% CI=2.5, 10.9), sexual intercourse with other women during the past 3 months (OR_{adj}=2.2; 95% CI=1.3, 3.7), and having fathered 3 or more children (OR_{adj}=2.5; 95% CI=1.2, 5.5) (Table 3).

DISCUSSION

Findings from our study show that men who reported IPV perpetration during the past year were more likely than those who did not report such perpetration to engage in risky sexual behaviors with main female partners, including unprotected vaginal and anal sexual intercourse, forced unprotected sexual intercourse, and sexual intercourse with other women. These findings among lower-income urban men support previous work that has documented higher rates of sexual infidelity and unprotected anal sexual intercourse among men who were recruited from a methadone treatment facility and who reported IPV.[21] Overall, these findings show a notable association between IPV perpetration and sexual risk behaviors among young men, and they support previous studies with women that suggested abusive male partners may pose greater STD/HIV risk to women compared with nonabusive men.[12,23]

A novel finding from our study is that male perpetrators of IPV were more likely to report having fathered 3 or more children compared with those who reported no IPV during the past year. Quantitative research with women has documented associations between IPV and unwanted and rapid repeat pregnancies,[29–32] and qualitative research has documented a link between IPV and forced pregnancy.[19,20] Hence, these findings from studies with women suggest that a greater number of offspring by abusive men may be a consequence of these men blocking their female partners' reproductive control. However, our findings did not directly assess forced pregnancy; thus, it remains unclear as to why young men who reported IPV perpetration were more likely to have fathered a greater number of children. This issue warrants further exploration and should include an examination of whether men are more likely to report having a greater number of children within the context of an abusive relationship, particularly because of the evidence that there is an association between women's IPV experiences and poorer maternal and child health outcomes.[33–44]

Although further research with larger and more generalizable samples is needed to confirm our findings, additional study also is needed to clarify why these findings may exist. There is some evidence that young men's traditional masculine gender role ideologies—particularly ideas about male hypersexuality, impregnation as a sign of masculinity, and adversarial heterosexual dyadic norms—are associated with IPV perpetration, unprotected sex, and multiple sex partners.[45–48] Larger-scale research with diverse samples is needed to understand the extent to which and how masculine gender role ideologies may be associated with men's perpetration of IPV and sexual risk behaviors within steady relationships with female partners. Understanding such associations will be critical to developing effective prevention programming in this area.

Although findings from our study show an association between IPV perpetration and sexual risk behaviors among young men, crude analyses did not yield significant findings for either unprotected vaginal and anal sexual intercourse or having fathered 3 or more children. Only adjusted analyses showed significant findings for these variables, which indicates that demographics may obscure the association between IPV and some sexual risk

TABLE 3—Logistic Regression Analyses, Crude and Adjusted for Demographics, to Assess Associations Between IPV Perpetration During the Past Year and Sexual Risk Behaviors and Fatherhood

Sexual Risk Behaviors or Fatherhood	OR (95% CI)	OR_{adj} (95% CI)[a]
Inconsistent or no condom use during vaginal sexual intercourse with main partner in past 3 months	1.6 (0.9, 3.0)	2.4 (1.1, 4.9)
Inconsistent or no condom use during anal sexual intercourse with main partner in past 3 months	2.0 (0.8, 5.3)	3.3 (1.1, 10.1)
Forced sexual intercourse without a condom during past year	4.6 (2.3, 9.3)	5.2 (2.5, 10.9)
Sexual intercourse with other women during past 3 months	2.0 (1.2, 9.3)	2.2 (1.3, 3.7)
Having fathered children, ever	0.8 (0.5, 1.4)	0.9 (0.5, 1.5)
Having fathered 3 or more children	1.6 (0.8, 3.0)	2.5 (1.2, 5.5)

Note. IPV = intimate partner violence; OR = odds ratio; CI = confidence interval.
Fatherhood is defined as having fathered children.
[a]Adjusted for age, Hispanic ethnicity, income, length of continental US residency, and length of relationship.

behaviors. Even for those sexual risk behaviors that were significantly associated with IPV perpetration in the crude analyses (i.e., forced unprotected sexual intercourse and sexual intercourse with other women), the point estimate changed notably between crude and adjusted analyses. Our findings are consistent with findings from previous racially/ethnically diverse population-based research of sexual risk behaviors that showed age, relationship status, and cultural factors are major correlates of men's sexual risk behaviors.[49]

Although the associations between IPV and sexual risk behaviors and fatherhood are notable, the importance of these findings is amplified by the pervasiveness of IPV perpetration that was reported by our sample. More than half of our participants (59%) reported that they had perpetrated IPV against a female partner at some point in their lifetime. A previous study of IPV in a health care setting identified a 14% past-year IPV perpetration prevalence rate[28]; in contrast, 41% of our health center sample reported IPV perpetration during the past year. Higher rates of IPV among our sample compared with the previous study of a health center sample is likely a consequence of our sample being younger and urban, i.e., demographic groups that have an elevated risk for IPV perpetration.[50]

Limitations

A major limitation to our study is generalizability of study findings, which is exemplified by our substantially higher rate of IPV perpetration compared with the previous study.[28] Use of a single community health center that serves predominantly lower-income Hispanic and Black men in an urban area within the Northeast likely limits generalizability of findings to other populations. Furthermore, although our health center is typical of other urban community health centers within the region in terms of its location in a lower-income area and its predominantly racial/ethnic minority and lower-income client population, it reaches a larger segment of Hispanic immigrants than many other health centers. Additionally, our study included men who either sought care at the health center or accompanied others; therefore, our findings cannot be generalized to those who sought care.

In addition to generalizability limitations, there are a number of study design limitations. Our research was cross-sectional; thus, causality cannot be inferred from the findings. Reliance on self-reported data made our data subject to social desirability and recall biases, and lack of data from female partners further inhibited verification of the self-reports. However, these biases would likely result in underreporting rather than overreporting of sensitive issues, such as perpetration of IPV, unprotected sexual intercourse, and sexual infidelity. Because of the nature of the questions, we were unable to assess whether the reported sexual risk behaviors and fatherhood occurred within the context of an abusive relationship. A previous study with an antenatal clinic-based sample of young women in South Africa found that abusive men were more likely than nonabusive men to infect female partners with HIV,[12] which suggests that sexual risk behaviors occur within the context of abusive relationships. Longitudinal study of these issues with men and heterosexual couples is needed; future research also must include relationship-specific assessments about sexual risk behaviors and IPV to more directly assess these associations.

Conclusions

Male perpetrators of recent IPV were more likely than other men to have engaged in risky sexual behaviors and to have fathered 3 or more children, which placed these men and their partners at increased risk for STD/HIV. High rates of having fathered children among abusive men was consistent with reported lack of reproductive control among abused women,[19,20,29–32] and thus must be further explored to both understand and address these associations. Our findings support previous research with women that documented higher rates of sexual risk behaviors among abusive male partners, which showcases the need for interventions that integrate IPV and STD/HIV prevention.

The high rates of IPV and sexual risk behaviors in our sample also show that community health centers may be an important venue for reaching men who are at risk for both IPV perpetration and STD/HIV. Previous studies have recommended screening and referral for IPV perpetration among clinic-based samples of men[28,51–53] and HIV interventions for men in urban health care settings.[54,55] However, clinic-based interventions that integrate IPV and STD/HIV prevention among US men are absent from published literature. These interventions must be developed and evaluated, because IPV and STD/HIV are important public health issues. ■

About the Authors

Anita Raj and M. Christina Santana are with the Department of Social and Behavioral Sciences, Boston University School of Public Health, Mass. Ana La Marche is with the Martha Eliot Health Center, Boston. Hortensia Amaro is with the Bouve College of Health Sciences, Northeastern University, Boston. Kevin Cranston is with the HIV/AIDS Bureau, Department of Public Health, Boston. Jay G. Silverman is with the Department of Society, Human Development, and Health and the Division of Public Health Practice, Harvard University School of Public Health, Boston.

Requests for reprints should be sent to Anita Raj, PhD, Boston University School of Public Health, 715 Albany St, T2W, Boston, MA 02118 (e-mail: anitaraj@bu.edu).

This article was accepted November 9, 2005.

Contributors

A. Raj originated the study, wrote the paper, and analyzed the data; she also was principal investigator of the study from which these data were obtained. M.C. Santana oversaw all data collection and assisted with writing the paper and interpreting study findings. A. La Marche, H. Amaro, and K. Cranston assisted with interpreting study findings and developing the discussion section of this paper. J. Silverman assisted with originating the study, writing the paper, and analyzing the data; he also provided IPV expertise to the study from which these data were obtained.

Acknowledgments

This project was funded through a grant from the Massachusetts Department of Public Health. We would like to thank all the staff and providers at the Martha Eliot Health Center who helped facilitate study recruitment for this project; we would particularly like to thank David Holder, Catherine MacAuley, and Ana Ortiz for their support and guidance in implementing the study at the Martha Eliot Health Center.

Human Participant Protection

This study was approved by the institutional review boards of the Boston University Medical Center and the Children's Hospital of Boston.

References

1. Centers for Disease Control and Prevention. Lifetime and annual incidence of intimate partner violence and resulting injuries—Georgia, 1995. *MMWR Morb Mortal Wkly Rep.* 1998;47:849–853.

2. Centers for Disease Control and Prevention. Intimate partner violence among men and women—South Carolina, 1998. *MMWR Morb Mortal Wkly Rep.* 2000; 49:691–694.

3. Centers for Disease Control and Prevention. Prevalence of intimate partner violence and injuries—Washington, 1998. *MMWR Morb Mortal Wkly Rep.* 2000;49:589–592.

4. Plichta SB. Violence, health and use of health services. In: Falik MM, Collins KS, eds. *Women's Health and Care Seeking Behavior: The Commonwealth Fund Survey.* Baltimore, Md: Johns Hopkins University Press; 1996:237–270.

5. Schafer J. Caetano R, Cook CL. Rates of intimate partner violence in the United States. *Am J Public Health.* 1998;88:1702–1704.

6. Straus MA, Gelles RJ. Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *J Marriage Fam.* 1986;48:465–479.

7. Tjaden P, Thoennes N. Full report of the prevalence, incidence, and consequences of violence against women: findings from the National Violence Against Women Survey. Available at: http://www.ncjrs.org/pdffiles/172837.pdf. Accessed May 26, 2005.

8. Amaro H, Raj A. Theoretical and measurement issues in the study of women's relational power in HIV risk reduction. *Sex Roles.* 2000;42:723–749.

9. Heise L, Ellsberg M. Ending violence against women. Available at: http://www.infoforhealth.org/pr/l11edsum.shtml. Accessed May 26, 2005.

10. Schmuel E, Schenker JG. Violence against women: the physician's role. *Eur J Obstet Gynecol Reprod Biol.* 1998;80:239–245.

11. Bauer HM, Gibson P, Hernandez M, Kent C, Klausner J, Bolan G. Intimate partner violence and high-risk sexual behaviors among female patients with sexually transmitted diseases. *Sex Transm Dis.* 2002; 29:411–416.

12. Dunkle KL, Jewkes RK, Brown HC, Gray GE, McIntryre JA, Harlow SD. Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet.* 2004;363:1415–1421.

13. He H, McCoy HV, Stevens SJ, Stark MJ. Violence and HIV sexual risk behaviors among female sex partners of male drug users. *Women Health.* 1998;27:161–75.

14. Rickert VI, Wiemann CM, Harrykissoon SD, Berenson AB, Kolb E. The relationship among demographics, reproductive characteristics, and intimate partner violence. *Am J Obstet Gynecol.* 2002;187: 1002–1007.

15. Roberts TA, Auinger P, Klein JD. Intimate partner abuse and the reproductive health of sexually active female adolescents. *J Adolesc Health.* 2005;36:380–385.

16. Silverman JG, Raj A, Mucci LA, Hathaway JE. Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *JAMA.* 2001;286: 572–579.

17. Silverman JG, Raj A, Clements K. Dating violence and sexual risk in a representative sample of high school students. *Pediatrics.* 2004;114:e220–225.

18. Wingood GM, DiClemente RJ. Consequences of having a physically abusive partner on the condom use and sexual negotiation practices of young adult African-American women. *Am J Public Health.* 1997; 87:1016–1018.

19. Hathaway JE, Willis G, Zimmer B, Silverman JG. Impact of partner abuse on women's reproductive lives. *J Am Med Women's Assoc.* 2005;60:42–45.

20. Raj A, Liu R, McCleary-Sills J, Silverman JG. South Asian victims of intimate partner violence more likely than non-victims to report sexual health concerns. *J Immigr Health.* 2005;7:85–91.

21. El-Bassel N, Fontdevila J, Gilbert L, Voisin D, Richman BL, Pitchell P. HIV risks of men in methadone maintenance programs who abuse their intimate partners: a forgotten issue. *J Subst Abuse.* 2001;12:29–43.

22. Raj A, Amaro H, Cranston K, Martin B, Cabral H, Navarro A, Conron K. Is a general health program as effective as an HIV program in reducing HIV risk among Latinas? *Pub Health Rep.* 2002;116:599–607.

23. Raj A, Silverman JG, Amaro H. Abused women report greater male partner risk and gender-based risk for HIV: findings from a community-based study with Hispanic women. *AIDS Care.* 2004;16:519–529.

24. Straus MA, Hamby SL, Boney-McCoy S, Sugarman DB. The revised Conflict Tactics Scales (CTS2). *J Fam Issues.* 1996;17:283–316.

25. US Census 2000. Table ST-FI-2000. Average number of children per family and per family with children, by state. Available at: http://www.census.gov/population/socdemo/hh-fam/tabst-f1-2000.pdf. Accessed October 24, 2005.

26. US Census 2000. TableAVG2. Average number of people per family household by race and Hispanic origin, marital status, age and education of householder. Available at: http://www.census.gov/population/socdemo/hh-fam/cps2001/tabavg2.pdf. Accessed October 24, 2005.

27. Straus M. Cross-cultural reliability and validity of the Revised Conflict Tactics Scales: a study of university student dating couples in 17 nations. *Cross-Cult Res.* 2005;38:407–432.

28. Oriel KA, Fleming MF. Screening men for partner violence in a primary care setting. A new strategy for detecting domestic violence [see comment]. *J Fam Pract.* 1998;46:493–498.

29. Pallitto CC, O'Campo P. Relationship between intimate partner violence and unintended pregnancy: analysis of a national sample from Colombia. *Intl Fam Plan Persp.* 2004;30:165–173.

30. Hillard PJA. Physical abuse in pregnancy. *Obstet Gynecol.* 1985;66:185–190.

31. Stewart DE, Cecutti A. Physical abuse in pregnancy. *CMAJ.* 1993;149:1257–1263.

32. Jacoby M, Gorenflo D, Black E, Wunderlich C, Eyler AE. Rapid repeat pregnancy and experiences of interpersonal violence among low-income adolescents. *Am J Prev Med.* 1999;16:318–321.

33. Connelly CD, Newton RR, Landsverk J, Aarons GA. Assessment of intimate partner violence among high-risk postpartum mothers: concordance of clinical measures. *Women Health.* 2000;31:21–37.

34. Neggers Y, Goldenberg R, Cliver S, Hauth J. Effects of domestic violence on preterm birth and low birthweight. *Acta Obstet Gynecol Scand.* 2004;83:455–460.

35. Altarac M, Strobino D. Abuse during pregnancy and stress because of abuse during pregnancy and birthweight. *J Am Med Womens Assoc.* 2002;57:208–214.

36. Boy A, Salihu HM. Intimate partner violence and birth outcomes: a systematic review. *Int J Fertil.* 2004; 49:159–163.

37. Campbell J, Jones AS, Dienemann J, et al. Intimate partner violence and physical health consequences. *Arch Intern Med.* 2002;162:1157–1163.

38. Campbell JC, Woods AB, Chouaf KL, Parker B. Reproductive health consequences of intimate partner violence. A nursing research review. *Clin Nurs Res.* 2000;9:217–237.

39. Cokkinides VE, Coker AL, Sanderson M, Addy C, Bethea L. Physical violence during pregnancy: maternal complications and birth outcomes. *Obstet Gynecol.* 1999;93:661–666.

40. Covington DL, Hage M, Hall T, Mathis M. Preterm delivery and the severity of violence during pregnancy. *J Reprod Med.* 2001;46:1031–1039.

41. Curry MA, Perrin N, Wall E. Effects of abuse on maternal complications and birthweight in adult and adolescent women. *Obstet Gynecol.* 1998;92:530–534.

42. Grimstad H, Schei B, Backe B, Jacobsen G. Physical abuse and low birthweight: a case-control study. *Br J Obstet Gynecol.* 1997;104:1281–1287.

43. Jagoe J, Magann EF, Chauhan SP, Morrison JC. The effects of physical abuse on pregnancy outcomes in a low-risk obstetric population. *Am J Obstet Gynecol.* 2000;182:1067–1069.

44. Martin SL, Mackie L, Kupper LL, Buescher PA, Moracco KE. Physical abuse of women before, during and after pregnancy. *JAMA.* 2001;285:1581–1584.

45. Pleck JH, O'Donnell LN. Gender attitudes and health risk behaviors in African-American and Latino early adolescents. *Matern Child Health J.* 2001;5: 265–272.

46. Pleck JH, Sonenstein FL, Ku LC. Masculinity ideology: its impact on adolescent males' heterosexual relationships. *J Soc Issues.* 1993;49:11–29.

47. Shearer CL, Hosterman SJ, Gillen MM, Lefkowitz ES. Are traditional gender role attitudes associated with risky sexual behavior and condom-related beliefs. *Sex Roles.* 2005;52:311–324.

48. Moore TM, Stuart GL. A review of the literature on masculinity and partner violence. *Psychol Men Masculinity.* 2005;6:46–61.

49. Catania J, Coates T, Kegeles S, et al. Condom use in multi-ethnic neighborhoods of San Francisco: the population-based AMEN (AIDS in Multi-Ethnic Neighborhoods) study. *Am J Public Health.* 1992;82: 284–287.

50. Gorman-Smith D, Tolan PH, Sheidow AJ, Henry DB. Partner violence and street violence among urban adolescents: do the same family factors relate? *J Res Adolesc.* 2001;11:273–295.

51. Chelmowski M, Hamberger LK. Screening men for domestic violence in your medical practice. *Wis Med J.* 1994;93:623–626.

52. Conway T. The internist's role in addressing violence. *Arch Intern Med.* 1996;156:951–956.

53. Mintz HA, Cornett FW. When your patient is a batterer: what you need to know before treating perpetrators of domestic violence. *Postgrad Med.* 1997;101: 219–228.

54. Kalichman SC, Rompa D, Coley B. Lack of positive outcomes from a cognitive-behavioral HIV and AIDS prevention intervention for inner-city men: lessons from a controlled pilot study. *AIDS Educ Prev.* 1997;9:299–313.

55. Kalichman SC, Cherry C, Browne-Sperling F. Effectiveness of a video-based motivational skills-building HIV risk-reduction intervention for inner-city African American men. *J Consult Clin Psychol.* 1999;67: 959–966.