ORIGINAL ARTICLE

Intimate partner violence prevalence and HIV risks among women receiving care in emergency departments: implications for IPV and HIV screening

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Objective: To examine (1) the prevalence of experiencing physical, injurious and sexual intimate partner violence (IPV) and (2) the associations between HIV risks and different types of IPV among women receiving care in an inner city emergency department (ED).

Methods: A cross-sectional survey that elicited self-reported HIV risks and IPV among a random sample of 799 women receiving ED care. Multiple logistic regression was used to examine the associations between HIV risk and IPV, with covariance adjustment for potentially confounding sociodemographics.

Results: 49.6% of the women reported a history of any form (ie, minor and severe type) of physical, injurious and/or sexual IPV, 15% severe sexual coercion (rape) over life time and 11.8% IPV in the past 6 months. Women who reported engaging in sex with a HIV-infected partner or an injecting drug user (IDU), having multiple partners in the past 12 months and injecting drugs were significantly more likely to have experienced any form of physical/injurious IPV, severe physical/injurious IPV and any form of sexual IPV in the past 6 months. In addition, women with multiple partners in the past 12 months and women who reported injecting drugs were significantly more likely to indicate having experienced a severe form of sexual IPV in the past 6 months.

Conclusion: For many women receiving care in EDs, IPV and several HIV risk behaviours are frequent, co-occurring health problems. HIV testing and routine IPV inquiry in ED settings offer an important opportunity to identify women who are affected by these overlapping epidemics and refer them to appropriate treatment services.

Over the past decade, the co-occurrence of HIV and intimate partner violence (IPV) has emerged as a significant public health problem.^{1–11} This co-occurrence is particularly salient in inner city emergency departments (EDs), which function as primary sources of care for women infected with HIV,^{12–14} those at risk of infection¹⁰ and for women experiencing IPV.¹⁵

Past studies have found that 20–50% of the women seeking care in EDs reported lifetime IPV, and 11–14% reported IPV in the past 12 months,^{15–17} with the variability in estimates appearing to depend on methods of assessing IPV as well as on size and geographical location of the ED.¹⁶ Every year, one to four million women seek ED care for IPV-related injuries,¹⁸ a staggering finding that underscores the fact that, for many abused women, the ED is the first, and sometimes, only link to the healthcare system.¹⁵ There is growing evidence that urban women with low income who experience IPV and are at high risk for HIV transmission often lack access to healthcare and use EDs as their predominant source of medical treatment.^{12–19} Research has shown that ED staff often fail to assess for and document IPV, especially if no visible injuries are presented.^{16–20–21} This failure is of particular concern in the light of the aforementioned research indicating that women who have a history of IPV are at a high risk of engaging in HIV sexual risk behaviours or of being HIV-infected. Anonymous HIV prevalence surveys in EDs have found that 1–13% of ED patients do not know their HIV status.^{14–22–23}

Moreover, research suggests that IPV is associated with a number of sexual HIV risk factors, including: (1) engaging in unprotected sex^{1–3–6–8–10–24–25}; (2) higher rates of sexually transmitted infections (STIs)¹²; (3) sex with multiple partners^{12–26}; (4) disclosure of a STI or a positive HIV status^{27–28}; (5) trading

sex for money or drugs^{5–29}; (6) having a risky sexual partner (eg, a person who injects drugs, is HIV positive, has had an STI and/or has had sex with multiple partners)^{10–25–29–30}; and (7) injecting drugs.³² It has also been shown that women who attempt to protect themselves from HIV—for example, by requesting condoms or refusing to have sex without a condom—experience higher rates of IPV.¹²

To date, research on the relationship between HIV risks and IPV among women receiving care in EDs has been conducted exclusively with small and non-representative samples. This sampling limitation is significant in the light of the prevalence of co-occurring HIV and IPV in women seen in EDs. To address this gap, we examine: (1) the prevalence rates of physical, injurious and sexual IPV among a random sample of 799 women receiving care in an ED located in a low-income, urban neighbourhood in the Bronx, New York; and (2) the associations between HIV risk behaviours and experiencing of physical, injurious and sexual IPV among this sample of women.

METHODS

Design, sampling and participants

Data for this study were collected from a New York City Hospital ED in the South Bronx that serves a catchment area of 1.1 million residents. From August 2001 to April 2003, participants were recruited during randomly selected 6 h time blocks. In 2002, during the enrolment period, a total of 18 045

Abbreviations: CTS2, Revised Conflict Tactic Scale 2; ED, emergency department; GED, General Equivalency Diploma; IDU, injecting drug user; IPV, intimate partner violence; RA, research assistant; STI, sexually transmitted infection

unduplicated female patients aged >18 years visited the ED (unpublished data from the ED 2002 records). A total of 215 time blocks were selected, including 03:00–09:00 (7 blocks, 3%), 09:00–15:00 (118 blocks, 55%), 15:00–21:00 (77 blocks, 36%) and 21:00–03:00 (13 time blocks, 6%). Among those selected time blocks, 29% occurred on a weekend. The probability of a specific time block being selected was adjusted to match the proportion of patients seen in the ED (according to ED census data from the previous year) based on the day of the week and time of day.

Recruitment procedures selected based on prior success with similar studies in other ED settings^{16 32 33} were as follows: female research assistants (RAs), fluent in Spanish and English, approached every female patient who was admitted to the ED during the designated time blocks before or immediately after medical care. The RAs introduced the study to potential participants who, if interested, were asked to provide informed consent before data collection. On obtaining informed consent, the RA conducted the survey interview with the female participant in a private room in the ED. Arrangements were made with the doctors and nurses on duty so that participating women would not lose their positions in the treatment queue while being interviewed.

Eligibility criteria for this study included being a female aged >18 years and being admitted to the ED during a time block selected for inclusion in the study. Women who were admitted for psychiatric emergencies and women who showed severe cognitive or psychological impairment were excluded from the study because of their inability to give informed consent. For female patients in the ED who were designated as severe triage or moderate triage which required hospitalisation, interviews were conducted within 2 weeks' of their ED visit in the patient's hospital room before discharge, or in another private setting after discharge. All participants were compensated US\$5 for their time and information. Study protocols were approved by the institutional review boards of the research institution and the study site.

Measurement

The RAs conducted a 10 min, structured interview. The assessment interview was designed to elicit self-reported data on the variables listed below.

Sociodemographics

Sociodemographic variables included: age, race/ethnicity and education, marital status, having children aged <18 years, experience of homelessness in the past 12 months, current employment status, and the reason for admission to the ED.

Sexual behaviours

Participants provided self-reported data on the number, type and gender of intimate partner(s) in the past 12 months, and frequency of vaginal sex in the past 6 months.

HIV risk indicators

HIV risks in the past 6 months that were assessed included: having had an STI or STI symptoms, injecting drugs, frequency of condom use during vaginal sex and having had sex with an injecting drug user (IDU) or a HIV-infected partner. Participants were asked whether they had been tested for HIV and their HIV serostatus.

Intimate partner violence

Experiencing IPV was assessed using the physical, sexual and injurious subscales from the Revised Conflict Tactics Scale (CTS2).³⁴ The CTS2 also classifies behaviours as minor or severe. Examples of items from each of the three subscales are: minor

(eg, "Has a partner ever twisted your arm or hair?") and severe physical IPV (eg, "Has a partner ever choked you?"); minor (eg, "Have you ever had a sprain, bruise, or small cut because of a fight with your partner?") and severe injurious IPV (eg, "Have you ever passed out from being hit on the head by your partner in a fight?"); and minor (eg, "Has a partner ever insisted on having vaginal, anal or oral sex [but didn't use physical force]?") and severe sexual IPV (ie, rape, eg, "Has a partner ever used threat of force [like hitting, holding down, or using a weapon] to make you have vaginal, oral or anal sex?"). Participants were asked about IPV that occurred in their lifetime and in the past 6 months.

Statistical analysis

Univariate statistics were used to describe the sociodemographic characteristics, prevalence of HIV-risk behaviours and different types of IPV. Multivariate logistic regression analysis was used to obtain estimates regarding the association between HIV-risk-related behaviours and experiencing IPV in the past 6 months. For multivariate analyses, IPV items were combined as follows: (1) any physical and/or injurious IPV (ie, combining across severe and minor subscale items); (2) any severe physical and/or injurious IPV; (3) any sexual IPV (ie, combining minor and severe subscale sexual IPV items); and (4) severe sexual IPV. The CTS2 sexual IPV item, "Has a partner ever made you have vaginal, anal or oral sex without a condom?" was removed from the multivariate analysis to eliminate overlap between the construct of sexual IPV and HIV risk behaviours. In order to have meaningful comparisons for HIV sexual risk behaviours, those women who did not have any vaginal sex in the past 6 months were excluded from those analyses. Multivariate analyses also included covariance adjustments for age, ethnicity, high-school diploma/General Equivalency Diploma (GED; which is the high-school equivalency diploma), marital status, having children aged <18 years, employment and homelessness. Adjusted odds ratios (ORs) with their 95% confidence intervals (CIs) are reported.

RESULTS

Of the 1251 female patients approached by interviewers during the selected time blocks, 452 refused to participate, yielding a final study sample of 799 (65%) women; 6% of the interviews were conducted in Spanish. The majority of the women who refused to participate stated that they felt too ill to take part in the study.

Sociodemographics

Table 1 shows the descriptive statistics for the study sample. The majority of participants were identified as Latina, followed by African-American. Slightly more than half had a high-school diploma or GED. More than half were single or never married and about a quarter were divorced, widowed or separated. About a half reported having children aged <18 years. Two-fifths were currently employed. More than 1 in 10 reported having experienced homelessness in the past 12 months. About 1 in 40 women reported that the reason they visited the ED was due to IPV-related injuries.

Sexual behaviours

The prevalence rates of sexual behaviour among the sample are presented in table 2, part A. About 68% of the women had had vaginal intercourse in the past 6 months. The majority (87.6%) of female participants had only male sexual partners, 3.5% had only female partners, 3.3% had both male and female partners and 5.6% had no sexual partners during the past 12 months.

Table 1 Sociodemographic characteristics (n = 799)

	%
Mean age (years)	37.1
Race/ethnicity	
African-American	34.7
Latina	58.4
White/other	6.9
High school/GED	54.6
Marital status	
Single, never married	57.7
Divorced, widowed or separated	26.0
Married	16.3
Have children under 18 years of age	51.7
Currently employed	40.2
Homeless in the past 12 months	14.0
ED visit due to injuries from IPV	2.5

ED, emergency department; GED, General Equivalency Diploma; IPV, intimate partner violence

HIV risk

As shown in table 2, part B, about half of the women reported that they had never or sometimes used condoms during vaginal sex in the past 6 months. 3.4% had had vaginal sex with an IDU or a HIV-positive man in the past 6 months and 6.5% had had more than one intimate partner in the past 12 months. Moreover, almost 3% reported a diagnosis of STI or exhibited STI symptom(s) in the past 6 months. About 4 in 5 women had been tested for HIV, with 2.5% of women reporting HIV-positive status. 20.9% indicated that they did not know their HIV status. Of the total sample, 1.3% of women reported intravenous drug use in the past 6 months.

Intimate partner violence

As shown in table 3, almost half (49.6%) of the women reported a history of any form (minor and severe) of physical, injurious and/or sexual IPV, while 38.7% experienced severe physical, injurious and/or sexual IPV. Furthermore, 11.8% of the women reported any form of physical, injurious and/or sexual IPV in the past 6 months and 8% experienced severe physical, injurious and/or sexual IPV in the past 6 months. With respect to sexual IPV lifetime prevalence rates, about one-fifth (22%) of the sample reported minor sexual IPV and 15% experienced severe sexual IPV (ie, rape). In addition, 5.6% of the women stated that they had been forced to have sex by an intimate partner in the past 6 months, and 2.4% reported that they were raped by an intimate partner in the past 6 months.

Association between HIV risk and experiencing IPV

Several HIV risk behaviours were significantly associated with experiencing physical and/or injurious IPV, sexual IPV and all types of IPV in the past 6 months (table 4). Women who reported engaging in sex with an HIV-infected partner or an IDU in the past 6 months were significantly more likely to have experienced any form of physical/injurious IPV, severe physical/injurious IPV (adjusted OR = 3.1 and 4, respectively) and any form of sexual IPV (adjusted OR = 3.6) in the past 6 months than women who did not have sex with such partners. Furthermore, women who reported having had more than one intimate partner in the past 12 months were significantly more likely to indicate experiencing any form of physical/injurious IPV and severe physical/injurious IPV in the past 6 months (adjusted OR = 5.2 and 4.7, respectively) as well as any form and severe form of sexual IPV in the past 6 months (adjusted OR = 6.5 and 9.9, respectively) than women who did not have multiple partners. In addition, women who reported injecting drugs in the past 6 months were significantly more likely to experience any form of physical/injurious IPV and

Table 2 Prevalence of sexual behaviour and HIV risk indicators (n = 799)

	%
A. Sexual behaviours	
Had vaginal sex in the past 6 months	
Yes	68.0
No	22.9
No male partner	9.1
Sexual partners in the past 12 months	
Only men	87.6
Women and men	3.3
Only women	3.5
No sexual partner	5.6
B. HIV risk-related indicators	
Condom use during vaginal sex in the past 6 months	
Never	33.4
Sometimes	19.0
Always	15.5
No vaginal sex	32.0
Had vaginal sex with HIV-infected men or IDU in the past 6 months	
Yes	3.4
No	64.6
No vaginal sex	32.0
>1 intimate partner in the past 12 months	6.5
Had STI or STI symptoms in the past 6 months	2.9
Had been tested for HIV	81.0
HIV status (self-reported)	
Negative	76.6
Positive	2.5
Unknown	20.9
Injection drug use in the past 6 months	1.3

IDU, injecting drug user; STI, sexually transmitted infection.

severe physical/injurious IPV (adjusted OR = 4.5 and 5.6, respectively) and any form of sexual IPV and severe sexual IPV (adjusted OR = 6.7 and 8.7, respectively) in the past 6 months than those who had not.

Furthermore, one of the socioeconomic status indices, homelessness, was found to be a significant confounding variable in almost all of the multivariate models (except in 2 out of 28 models).

DISCUSSION

To our knowledge, this is the first study to examine the associations between HIV risk behaviours and experiencing IPV

Table 3 Prevalence of intimate partner violence (IPV) in the past 6 months and lifetime (n = 799)

IPV type	Lifetime (%)	Past 6 months (%)
All types: physical/injurious/sexual		
Any (minor and severe)	49.6	11.8
Minor	46.9	10.8
Severe	38.7	8.0
Physical		
Any (minor and severe)	44.2	8.9
Minor	40.3	7.4
Severe	33.9	6.8
Injurious		
Any (minor and severe)	36.2	7.3
Minor	33.3	6.3
Severe	26.4	5.1
Physical/injurious		
Any (minor and severe)	46.6	9.6
Minor	43.7	8.3
Severe	37.9	7.8
Sexual		
Any (minor and severe)	24.9	6.4
Minor	22.0	5.6
Severe	15.0	2.4

Table 4 Predictors of experiencing intimate partner violence (IPV) in the past 6 months: adjustment† ORs and 95% CIs

HIV risk indicators	Physical/injurious IPV, adjusted OR† (95% CI)		Sexual IPVs OR† (95% CI)	
	Any	Severe	Any	Severe
Always used condom‡	1.1 (0.6 to 2.1)	1.1 (0.5 to 2.2)	0.7 (0.3 to 1.7)	0.8 (0.3 to 2.7)
Never used condom‡	0.6 (0.3 to 1.1)	0.5 (0.3 to 1.0)	1.0 (0.5 to 2.1)	0.7 (0.2 to 1.9)
Had sex with an HIV-infected partner or an IDU‡	3.1 (1.2 to 7.9)*	4.0 (1.5 to 10.8)**	3.6 (1.3 to 10.1)*	2.7 (0.6 to 11.6)
Had more than one partner	5.2 (2.7 to 10.2)**	4.7 (2.3 to 9.7)**	6.5 (3.1 to 14.0)**	9.9 (3.4 to 28.4)**
Had STI or STI symptoms	2.0 (0.7 to 5.9)	1.9 (0.6 to 6.3)	0.6 (0.1 to 4.6)	1.8 (0.2 to 15.3)
HIV positive vs negative	1.3 (0.4 to 5.1)	1.7 (0.4 to 6.4)	2.7 (0.7 to 10.1)	1.3 (0.1 to 10.8)
Injected drugs	4.5 (1.2 to 17.8)*	5.6 (1.4 to 22.5)*	6.7 (1.5 to 29.9)*	8.7 (1.4 to 53.1)*

IDU, injecting drug user; STI, sexually transmitted infection.

* $p < 0.05$; ** $p < 0.01$.

†The adjusted covariates were age, ethnicity, education, marital status, children <18 years, employment and homelessness.

‡Those who did not have any vaginal sex were excluded.

§The item "Has a partner ever made you have vaginal, anal or oral sex without a condom?" was taken out from sexual IPV in logistic regression analyses.

among a random sample of predominantly low income, ethnic minority women receiving care at an urban ED. Consistent with rates found in other studies,^{1 15-17} the findings show that a substantial number of female patients in the ED reported experiencing sexual, physical and/or injurious IPV both in the past 6 months and over their lifetime. These IPV rates underscore the severity of the problem among female patients in the ED, in particular the high rates (15%) of severe sexual coercion (rape). Women who are sexually abused clearly are at high risk for HIV transmission because safe sex and use of condoms are not practised during forced sex. The finding that the majority of the sample was sexually active, but that less than one-fifth always used condoms also highlights these women's significant risk for HIV/STI transmission. Consistent with the findings of other studies in ED settings, HIV seropositivity was high in our sample of women.^{14 22 23}

Several HIV risk behaviours were significantly associated with experiencing IPV, including: having had sex with a HIV-positive partner or an IDU, having had sex with more than one partner and injection drug use. Dovetailing with several previous studies,^{5 10 25 35 36} this study found that women seen in an inner city ED who have had sex with a HIV positive partner or an IDU have an increased likelihood of experiencing IPV. Recent research findings have indicated that the relationship stress created over a partner's injection drug use or HIV status may escalate into IPV.^{29 30} Moreover, the significant relationship between having multiple sexual relationships and experiencing IPV, a finding which is consistent with previous studies,^{7 10 12} suggests that a partner's perception of a woman's additional sexual affairs may trigger IPV, or, conversely, that a woman's experience of IPV may lead her to engage in outside relationships. Finally, the significant relationship between a woman's IDU and experiencing any type of IPV and any severe IPV is consistent with previous studies that propose that gender-based inequalities often pervade the practice of injecting drugs.^{1 4 5 37 38} According to our research, women are forced to use and in some cases inject drugs with their male partner for several reasons: (1) to obtain financial support from him for household expenses, (2) to obtain protection against other drug users in her social network, (3) out of fear of losing the relationship and (4) for other financial and social dependencies.^{4 5} This finding could also indicate that psychological distress and physical pain from IPV may lead women to inject drugs as a means to cope with IPV.

This study is limited by the following factors:

1. The non-response rate in this study limits the generalisability of the study findings. For example, the exclusion of women who were admitted because of psychiatric emergencies, which has been found to be associated with a range of mental health problems may underestimate the rate of IPV.³⁹⁻⁴¹

2. The cross-sectional design of this study prohibits drawing conclusions about the causal relationships between HIV risks and IPV.

3. Research shows that IPV is associated with a number of health problems not adjusted for in the analysis.

4. Collecting sensitive, person-identifiable data and paying study participants may potentially bias results.

5. The study would have been strengthened by the use of a validated scale for socioeconomic status, rather than the use of education, employment and homelessness as markers of socioeconomic status.

Despite these limitations, the study findings underscore that IPV is a health-related risk factor that needs to be addressed as a public health problem by health professionals, in particular ED staff. Furthermore, our findings build on what are known clinical indicators of IPV (eg, multiple injuries, drunkenness, depression and post-traumatic stress disorder (PTSD))⁴² by identifying HIV risk behaviours as potential "abuse indicators" that should prompt inquiry into abuse, particularly when consultation time with patients is limited. While some researchers argue that there is insufficient empirical evidence to show that identification of abused women contributes to either reduction of IPV or improvement in quality of life,^{43 44} today, many professional associations in the US and England⁴⁵⁻⁵⁰ recommend routine inquiry for IPV for all patients who visit EDs and other healthcare settings—a recommendation also supported by epidemiological data.⁵¹⁻⁵⁵ Research has also recognised a number of challenges that include time constraints, professional discomfort with raising the topic, the patient's fear of disclosure, staff attitudes toward women who experience IPV, lack of staff training on the topic and lack of evidence on effective IPV interventions that can be used to help women. These challenges, while significant, should not obviate the goal of routine inquiry for IPV, but should lead to identifying effective ways to safely conduct inquiry, and to develop more effective interventions to address IPV.^{50 56-59} HIV testing and IPV routine inquiry for women in ED settings, in particular for women who disclose IPV or report HIV risk behaviours or positive HIV serostatus, would offer an important window of opportunity to initiate treatment and referral for services for women affected by these overlapping epidemics.

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REFERENCES

- Amaro H. Love, sex, and power. Considering women's realities in HIV prevention. *Am Psychol* 1995;**50**:437-47.
- Amaro H, Fried LE, Cabral H, et al. Violence during pregnancy and substance use. *Am J Public Health* 1990;**80**:575-9.
- Cunningham RM, Stiffman AR, Dore P, et al. The association of physical and sexual abuse with HIV risk behaviors in adolescence and young adulthood: implications for public health. *Child Abuse Negl* 1994;**18**:233-45.
- El-Bassel N, Gilbert L, Rajah V. The relationship between drug abuse and sexual performance among women on methadone. Heightening the risk of sexual intimate violence and HIV. *Addict Behav* 2003;**28**:1385-403.
- El-Bassel N, Gilbert L, Rajah V, et al. Fear and violence: raising the HIV stakes. *AIDS Educ Prev* 2000;**12**:154-70.
- Fernandez MI. *Latinas and AIDS: challenges to HIV prevention efforts*. New York: Plenum, 1995.
- Gilbert L, El-Bassel N, Rajah V, et al. The converging epidemics of mood-altering drug use, HIV, HCV, and partner violence: a conundrum for methadone maintenance treatment. *J Mt Sinai Hosp NY* 2000;**67**:452-64.
- Wingood GM, DiClemente RJ. The effects of an abusive primary partner on the condom use and sexual negotiation practices of African-American women. *Am J Public Health* 1997;**87**:1016-18.
- Worth D. Sexual decision-making and AIDS: why condom promotion among vulnerable women is likely to fail. *Stud Fam Plann* 1989;**20**:297-307.
- El-Bassel N, Gilbert L, Witte S, et al. Intimate partner violence and substance abuse among minority women receiving care from an inner-city emergency department. *Women's Health Issues* 2003;**13**:16-22.
- Wyatt GE. Child sexual abuse and its effects on sexual functioning. *Annu Rev Sex Res* 1991;**2**:249-66.
- El-Bassel N, Gilbert L, Krishnan S, et al. Partner violence and sexual HIV-risk behaviors among women in an inner-city emergency department. *Violence Vict* 1998;**13**:377-93.
- Haukoos JS, Witt MD, Zeumer CM, et al. Emergency department triage of patients infected with HIV. *Acad Emerg Med* 2002;**9**:880-8.
- Kelen GD, Hexter DA, Hansen KN, et al. Trends in human immunodeficiency virus (HIV) infection among a patient population of an inner-city emergency department: implications for emergency department-based screening programs for HIV infection. *Clin Infect Dis* 1995;**21**:867-75.
- Dearwater SR, Coben JH, Campbell JC, et al. Prevalence of intimate partner abuse in women treated at community hospital emergency departments. *JAMA* 1998;**280**:433-8.
- Abbott J, Johnson R, Koziol-McLain J, et al. Domestic violence against women. Incidence and prevalence in an emergency department population. *JAMA* 1995;**273**:1763-7.
- McFarlane J, Parker B. Preventing abuse during pregnancy: an assessment and intervention protocol. *MCN Am J Matern Child Nurs* 1994;**19**:321-4.
- Straus MA, Gelles RJ. Societal change and change in family violence from 1975 to 1985 as revealed by the national surveys. *J Marriage Fam* 1986;**48**:465-78.
- Goldberg WG, Carey A. Domestic violence victims in the emergency setting. *Top Emerg Med* 1982;**3**:65-76.
- Goldberg WG, Tomlanovich MC. Domestic violence victims in the emergency department. New findings. *JAMA* 1984;**251**:3259-64.
- Stark E, Flitcraft A, Zuckerman D, et al. Wife abuse in the medical setting: an introduction for health personnel. In: *Domestic violence monograph No.7*. Washington, DC: U, S. Department of Health and Human Services, Administration for Children, Youth and Family, Office of Domestic Violence, 1981.
- Muehlenhard CL, Goggins MF, Jones JM, et al. *Sexual violence and coercion in close relationships*. Hillsdale, NJ: Lawrence Erlbaum Associates, 1991.
- Rothman RE, Ketlogetswe KS, Dolan T, et al. Preventive care in the emergency department: should emergency departments conduct routine HIV screening? A systematic review. *Acad Emerg Med* 2003;**10**:278-85.
- Wyatt GE, Dunn KM. Examining predictors of sex guilt in multiethnic samples of women. *Arch Sex Behav* 1991;**20**:471-85.
- Gilbert L, El-Bassel N, Shilling RF, et al. Partner violence and sexual HIV risk behaviors among women in methadone treatment. *AIDS Behav* 2000;**4**:261-9.
- Wu E, El-Bassel N, Witte SS, et al. Intimate partner violence and HIV risk among urban minority women in primary health care settings. *AIDS Behav* 2003;**7**:291-301.
- North RL, Rothenberg KH. Partner notification and the threat of domestic violence against women with HIV infection. *N Engl J Med* 1993;**329**:1194-6.
- Rothenberg KH, Paskey SJ. The risk of domestic violence and women with HIV infection: implications for partner notification, public policy, and the law. *Am J Public Health* 1995;**85**:1569-76.
- El-Bassel N, Gilbert L, Wu E, et al. HIV and intimate partner violence among methadone-maintained women in New York City. *Soc Sci Med* 2005;**61**:171-83.
- El-Bassel N, Gilbert L, Schilling RF, et al. Drug abuse and partner violence among women in methadone treatment. *J Fam Violence* 2000;**15**:209-25.
- El-Bassel N, Fontdevila J, Gilbert L, et al. HIV risks of men in methadone maintenance treatment programs who abuse their intimate partners: a forgotten issue. *J Subst Abuse* 2001;**13**:1-15.
- Roberts GL, O'Toole BI, Lawrence JM, et al. Domestic violence victims in a hospital emergency department. *Med J Aust* 1993;**159**:307-10.
- Roberts GL, O'Toole BI, Raphael B, et al. Prevalence study of domestic violence victims in an emergency department. *Ann Emerg Med* 1996;**27**:741-53.
- Straus MA, Hamby SL, Boney-McCoy S, et al. The revised conflict tactics scales (CTS2): development and preliminary psychometric data. *J Fam Issues* 1996;**17**:283-316.
- Beadnell B, Baker SA, Morrison DM, et al. HIV/STD risk factors for women with violent male partners. *Sex Roles* 2000;**42**:661-89.
- Gielen A, McDonnell K, O'Campo P. Intimate partner violence, HIV status, and sexual risk reduction. *AIDS Behav* 2002;**6**:107-16.
- Etorre E. *Women and substance use*. London: Macmillan, 1991.
- Richie B. *Compelled to crime: the gender entrapment of battered black women*. New York: Routledge, 1996.
- Dansky BS, Byrne CA, Brady KT. Intimate violence and post-traumatic stress disorder among individuals with cocaine dependence. *Am J Drug Alcohol Abuse* 1999;**25**:257-68.
- Schiff M, El-Bassel N, Engstrom M, et al. Psychological distress and intimate physical and sexual abuse among women in methadone maintenance treatment programs. *Soc Serv Rev* 2002;**76**:302-20.
- Wathen CN, MacMillan HL. Interventions for violence against women: scientific review. *JAMA* 2003;**289**:589-600.
- Campbell JC. Health consequences of intimate partner violence. *Lancet* 2002;**359**:1331-6.
- Wathen CN, MacMillan HL. Interventions for violence against women: scientific review. *JAMA* 2003;**289**:598-600.
- Nelson H, Nygren P, McInerney Y, et al. Screening women and elderly adults for family and intimate partner violence: a review of the evidence for the U.S. Preventive Services Task Force. *Ann Intern Med* 2004;**140**:387-96.
- The AAFP Commission on Special Issues and Clinical Interests. Family violence: an AAFP white paper. *Am Fam Physician* 1994;**50**:1636-40.
- American College of Obstetricians and Gynecologists. ACOG technical bulletin. Domestic violence. Number 209--August 1995 (replaces no. 124, January 1989). *Int J Gynecol Obstet* 1995;**51**:161-70.
- anonymous. Violence against women. Relevance for medical practitioners. Council on Scientific Affairs, American Medical Association. *JAMA* 1992;**267**:3184-9.
- anonymous. Emergency medicine and domestic violence. American College of Emergency Physicians. *Ann Emerg Med* 1995;**25**:442-3.
- Quillian J. Screening for spousal or partner abuse in community health settings. *J Am Acad Nurse Pract* 1996;**8**:155-60.
- Ramsay J, Richardson J, Carter Y, et al. Should health professionals screen women for domestic violence in health settings. *BMJ* 2002;**325**:314-26.
- Olson C, Ancil C, Fullerton L, et al. Increasing emergency physician recognition of domestic violence. *Ann Emerg Med* 1996;**27**:741-6.
- McFarlane J, Greenberg L, Weltge A, et al. Identification of abuse in emergency departments: effectiveness of two-question screening tool. *J Emerg Nurs* 1995;**21**:391-4.
- Dutton M, Mitchell B, Haywood Y. The emergency department as a violence prevention center. *J Am Med Womens Assoc* 1996;**51**:92-5.
- Abbott J. Injuries and illnesses of domestic violence. *Ann Emerg Med* 1997;**29**:781-5.
- Larkin G, Hyman K, Mathias, et al. Universal screening for intimate partner violence in the emergency department: importance of patient and provider factors. *Ann Emerg Med* 1999;**33**:669-75.
- Friedman LS, Samet JH, Roberts MS, et al. Inquiry about victimization experiences: a survey of patient preferences and physician practices *Arch Intern Med* 1992;**152**:1186-90.
- Williamson E. *Domestic violence and health: the response of the medical profession*. Bristol: Policy Press, 2000.
- Taket A, Nurse J, Smith K, et al. Routinely asking women about domestic violence in health settings. *BMJ* 2003;**327**:673-6.
- Larkin GL, Rolniak S, Hyman KB, et al. Effect of an administrative intervention on rates of screening for domestic violence in an urban emergency department. *Am J Public Health* 2000;**90**:1444-8.