



Published in final edited form as:

J Aggress Maltreat Trauma. 2008 ; 16(3): 296–310. doi:10.1080/10926770801925726.

Patterns in Relationship Violence Among African American Women: Future Research and Implications for Intervention

John K. Williams, MD [Assistant Professor],

Psychiatry & Biobehavioral Sciences, David Geffen School of Medicine, University of California, Los Angeles, CA and is Associate Director, UCLA Sexual Health Program.

Gail E. Wyatt, PhD [Professor],

Psychiatry & Biobehavioral Sciences, David Geffen School of Medicine, University of California, Los Angeles, CA and is a Clinical Psychologist and Sex Therapist. Dr. Wyatt is also Director, UCLA Sexual Health Program and Principal Investigator and Director, UCLA Center for Culture, Trauma and Mental Health Disparities.

Hector F. Myers, PhD [Professor],

Clinical Area Chair of Psychology, Department of Psychology, University of California, Los Angeles, CA and is Co-Principal Investigator, UCLA Center for Culture, Trauma and Mental Health Disparities.

K. Nicole Presley Green, EdM, PhD [Counseling Psychologist], and

University of California, Los Angeles, Student Psychological Services, Los Angeles, CA and has worked as research associate in the UCLA Sexual Health Program. Dr. Green is also Adjunct Faculty, Marriage and Family Therapy program, University of Southern California Rossier School of Education.

Umme S. Warda, MS [Senior Statistician]

University of California, Los Angeles, Integrated Substance Abuse Programs, Semel Institute for Neuroscience, Los Angeles, CA.

Abstract

The impact of intimate partner violence (IPV) on those most at risk, HIV-positive women of color, has received little attention. This study examined IPV in HIV-positive and HIV-negative African American women. Victim characteristics and factors contributing to IPV and psychological sequelae were identified. Structured interviews were administered and analyzed at baseline, at 6 months, and at 12 months. HIV-positive women were less educated, were less employed, had lower incomes, had more depressive symptoms at all time points, and were more likely to report IPV at baseline and 6 months compared to HIV-negative women. Among HIV-positive depressed women, those reporting IPV were more depressed than those without IPV. Suggestions for studies with couples examining relationship dynamics, including risks for IPV and HIV transmission, and for interventions are discussed.

Keywords

HIV/AIDS; African American women; intimate partner violence; child sexual abuse; depression

INTRODUCTION

Understanding the impact of domestic violence on the lives of women and their families is a greatly needed area of research. Domestic violence, specifically intimate partner violence (IPV), is defined as any physical, emotional, psychological, or sexual abuse or psychological coercion or degradation that occurs between domestic or intimate partners (Campbell, 2002; Mahoney, Williams, & West, 2001; Roth, 1997; Walton-Moss, Manganello, Frye, & Campbell, 2005). Current evidence indicates that rates of IPV are relatively high, with as many as one in seven U.S. couples having at least one episode of male-to-female violence in the preceding 12 months (Schafer, Caetano, & Clark, 1998; Straus & Gelles, 1990; Walton-Moss et al.). Between 25% and 41% of women report having had at least one incident of IPV during their lifetime and 1.4% to 17% report IPV in the previous year (Campbell, 2002; Rennison, 2003; Richardson et al., 2002). This is especially true for African American women and other women of color and those who are HIV-positive (Axelrod, Myers, Durvasula, Wyatt, & Cheng, 1999; Wyatt et al, 2002). Studies also suggest that exposure to IPV is associated with significant physical and psychological consequences, including higher rates of major depression (Campbell & Lewandowski, 1997; Koss, Koss, & Woodruff, 1991; Tollestrup et al., 1999; Wisner, Gilmer, Saltzman, & Zink, 1999) and posttraumatic stress disorder (PTSD; Axelrod et al., 1999; Campbell, 2002; Campbell & Lewandowski, 1997). These functional consequences are exacerbated by socioeconomic deprivation (Axelrod et al., 1999) and by concurrent chronic medical conditions such as HIV/AIDS (Campbell, Kub, Belkap, & Templin, 1997; Cascardi, O'Leary, & Schlee, 1999; Golding, 1999; McCauley et al., 1995; Riger, Raja, & Camacho, 2002; Silva, McFarlane, Soeken, Parker, & Reel, 1997).

Relatively little attention has been given to the impact IPV has on the functioning and well-being of women at risk for or affected by HIV/ AIDS, and few, if any, current HIV-risk reduction and prevention programs address this issue. Research indicates that IPV may lessen the likelihood that women can negotiate safer sex strategies, particularly condom use, due to fear of being harmed (Wingood & DiClemente, 2000). Therefore, relationship violence is likely to be an important but currently understudied risk factor for the transmission of HIV and STDs among women.

The purpose of this study is to address issues that need to be understood in order to prevent IPV in relationships with both HIV-positive and HIV-negative African American women. Specifically, those factors that are associated with enhanced risk for IPV and some of the psychological sequelae of IPV in African American women as a function of HIV-serostatus are examined. We believe that understanding the characteristics of African American women who are physically abused by their partners within the dyadic relationship context and the associated psychological sequelae will be important in guiding the development of more effective HIV/STD risk-reduction interventions for African American women.

Violence and Health of African American Women

Wyatt, Axelrod, Chin, Carmona, and Loeb (2000) reported that African American women were at significant risk for histories of violence, HIV/ AIDS, and chronic health problems. In Los Angeles County, African American women make up only 5% of the total population but account for 35% of women living with AIDS (Centers for Disease Control and Prevention [CDC], 2002; Los Angeles County Department of Health Services, 2000; Los Angeles County Department of Health Services, HIV Epidemiology Program, 2006). Whereas considerable attention has been given to identifying many social and behavioral factors that might account for this disproportionate burden of risk, less attention has been given to determining whether being HIV-positive increases a woman's risk for partner violence. More research that examines whether being in an abusive relationship and, for

example, being coerced into high-risk sexual behaviors serves as an independent risk factor for HIV and STDs is needed (Wingood & DiClemente, 2000). The evidence to date indicates that women who are at greatest risk for domestic violence and IPV specifically were those with male partners who were unemployed or intermittently employed, those who had less than a high school education, and those who had continuous contact with abusive former or estranged husbands or with abusive former boyfriends (Kyriacou et al., 1999). Other characteristics of those at highest risk were that they were older than 24 years, married to the abuser but not currently living with him, and pregnant (Wolf, Holt, Kernic, & Rivara, 2000). These factors were associated with a pattern of socioeconomic and socio-emotional dependence that contributed to the women's vulnerability to violence. Unfortunately, there is very little research that has investigated these issues in HIV-infected women or that has explored the long-term physical and psychological consequences to these women when they must cope with both relationship violence and their disease.

The research on domestic violence among African American populations, which suggests that African American women are at significantly greater risk than European American women, has been inconsistent and widely criticized (Huang & Gunn, 2001; Straus, 1994). In at least one study, when controlling for social class African American women were not more likely to be involved in abusive relationships than European American women (Huang & Gunn, 2001). Other studies suggest that socioeconomic status, particularly the lack of financial stability, places women, especially low-income women of color, at substantial risk for domestic violence (Heron, Twomey, Jacobs, & Kaslow, 1997; Marsh, 1993; Wyatt et al., 2000). Additional research is needed to better understand the role relationship violence plays in HIV-risk and in HIV-related psychological and physical sequelae. For a discussion on African American women experiencing higher rates of domestic violence, see Hampton, LaTaillade, Dacey, and Marghi (2008, in this issue).

Purpose of the Study

This study examined domestic violence in HIV-positive and HIV-negative African American women. Specifically, we (a) identified the characteristics of African American women who are survivors of interpersonal violence and (b) identified the psychological sequelae associated with IPV histories.

METHODS

The UCLA-Drew Women and Family Project (WFP) was one of the first National Institute of Mental Health (NIMH)-funded longitudinal HIV studies that included an ethnically diverse sample of HIV-positive and HIV-negative women in a county with high HIV/AIDS prevalence rates (CDC, 2002; Los Angeles County Department of Health, 2006). Conducted from 1994 to 2001, this study examined HIV-related and non-HIV-related life stressors, sexual functioning, coping mechanisms, and HIV disease progression among women of five major ethnic groups.

A community sample of 490 women was recruited from HIV and other service agencies in Los Angeles County. HIV-positive women responded to flyers, radio and print advertisements, and personal contacts. In addition, a stratified random sample of HIV-negative women matched on ethnicity, age, education, marital status, and geographic residence was recruited using random-digit dialing and 1990 U.S. Census track data. Eligible women were invited to participate in five face-to-face interviews every 6 months for a period of 2 years.

Women who agreed to participate in the WFP and who reported being in a relationship for at least 3 months were contacted. A comprehensive battery of psychosocial, psychiatric, and

behavioral measures was administered in a 3-hour face-to-face interview by trained, ethnically and linguistically matched female interviewers. All female participants were paid \$50 per session (see Wyatt & Chin, 1999 for a detailed description of the study).

Participants

Prospective seropositive and seronegative participants were screened and enrolled if they were female, 18 years of age or older, self-identified as members of the five major ethnic groups, and showed no evidence of severe psychiatric, neurocognitive, or other physical limitations. Over 600 women were screened, and a sample of 457 African American, European American, and Latinas (299 HIV-positive and 158 HIV-negative) were enrolled. In this report, only data from the three time points including baseline and 6-month and 12-month follow-up assessments of the 155 African American women (108 HIV-positive and 47 HIV-negative) were analyzed and reported.

The African American women were relatively young ($M = 36.8$ years, $SD = 8.3$), high school educated ($M = 12.5$ years of education, $SD = 2.1$), poor (average per capita monthly income = \$634, $SD = \$962$), underemployed (81% unemployed or employed part-time), and unmarried/unattached (90% had no current partner). All of the women had been sexually active in the past, with 40% ($n = 62$) reporting 5 or fewer lifetime sexual partners, 25% ($n = 39$) between 6 and 10 lifetime sexual partners, 14% ($n = 21$) up to 30 lifetime sexual partners, and 21% ($n = 33$) more than 30 lifetime sexual partners.

Measures

A comprehensive structured interview was administered to all participants in private sessions by trained, ethnically matched female interviewers. This procedure was used in order to reduce possible culturally mediated obstacles to effective communication. For purposes of this study, baseline data relevant to the following variables were reported. Age was defined by birth data, ethnicity was self-identified, and education was recorded as the number of years of formal schooling completed. Employment was coded as not working (0) and working full or part-time (1). Per capita income was calculated as total monthly household income divided by the number of dependents living in the household. Marital status was coded as single (0) and married/living with a partner (1). HIV-serostatus was determined by enzyme linked immunoabsorbent assay (ELISA), confirmed by Western Blot, and coded as HIV-negative (0) or HIV-positive (1).

Sexual history was assessed using the Revised Wyatt Sex History Questionnaire (WSHQ-R; Wyatt, 1984), a 478-item structured interview that includes open- and closed-ended items that assessed sexual decision-making about consensual and nonconsensual experiences. Test-retest reliability on closed-ended items ($r = 0.90$) and inter-rater reliability on open-ended items were established on a weekly basis ($r = 0.95$; Wyatt, Lawrence, Vodounon, & Mickey, 1992).

Number of Sexual Partners in Previous 6 Months was obtained at baseline and at 6-month and 12-month follow-up interviews and categorized as *no sexual partners* or *one or more sexual partners*.

Number and severity of depressive symptoms were measured at baseline and at 6-month and 12-month follow-up interviews with the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). This is a widely used, 20-item self-report symptom measure that has good psychometric properties (i.e., Cronbach $\alpha = 0.85$). A score of 18 or above was used as the criterion for clinically meaningful levels of depressive symptoms.

Relationship violence was assessed using four items from the Conflict Tactics Scale (Straus & Hamby, 1997). Respondents were asked whether in the last 6 months her partner threw, smashed, hit, or kicked something; slapped/physically attacked/hurt her; or threatened her with or used a knife or gun; and whether these incidents occurred during pregnancy. An overall IPV sum score was calculated (Cronbach $\alpha = 0.78$).

History of child sexual abuse was also assessed with the WSHQ-R (Wyatt, 1984), which includes a series of questions assessing for noncon-sensual sexual experiences before age 18 with an adult and consensual sexual experiences with someone at least five years older. Five questions assessed incidents of fondling, frottage, attempted or completed intercourse, oral sex, and type of penetration. Responses were coded as *yes* to any of the questions (1) or *no* to any of the questions (0).

RESULTS

First, a series of analyses of variance and Chi-square tests were conducted assessing for group differences as a function of serostatus and child sexual abuse histories (CSA) on demographic characteristics, relationship conflict, sexual history, and depressive symptoms. Except for sexual history (i.e., number of lifetime partners), the comparisons were conducted at baseline and 6- and 12-months. All analyses were performed using SAS version 8 (SAS Institute, Cary, NC).

Group Differences in Background Characteristics

As shown in Table 1, results of tests for group differences by HIV serostatus on demographic characteristics indicated no differences on age. However, HIV-negative women reported significantly more years of education, were significantly more likely to be employed, and reported both significantly higher mean unadjusted monthly family incomes and monthly per capita incomes than HIV-positive women. Overall, the majority of the women were single (90%), with the HIV-positive women slightly more likely to be single than HIV-negative women (92.6% vs. 83%), $\chi^2(1, N = 155) = 3.27, p = 0.07$. These background data suggest that this sample of African American women was experiencing significant socioeconomic deprivation and that this socioeconomic burden was greater among those who were HIV infected.

Group Differences in Sexual History

Whereas the HIV-negative women had fewer sexual partners in the previous 6 months at baseline ($M = 1.32$ vs. 3.91) and at 6-month follow-up ($M = 1.14$ vs. 1.18) than the HIV-positive women, this difference was not significant. This pattern was slightly reversed at 12-month follow-up: HIV-positive women reported slightly fewer sexual partners than the HIV-negative women ($M = 1.33$ vs. 1.35). However, this difference was also not significant. Further, at all three time points, more HIV-positive women were sexually inactive (approximately one in three) as compared to the HIV-negative women (one in four); this difference was also not significant.

These results suggested that, at least in this sample, the African American women, regardless of their HIV serostatus, were unlikely to report being sexually active at each assessment point. In addition, and although not significant, these results also suggested that women who were HIV-positive were more likely to be sexually abstinent than their uninfected counterparts.

Group Differences in Relationship Violence

Comparisons of relationship violence between the HIV-negative and HIV-positive women indicated that the HIV-positive women were more likely to report at least one incident of domestic violence involving physical contact at each time point than the HIV-negative women. As shown in Table 2, these differences were significant at baseline and at 6-months, whereas a strong trend was noted at 12-months, $t(75.1) = -1.85, p = 0.07$.

Group Differences in Depressive Symptoms

Comparison of HIV serostatus differences in depressive symptoms was conducted at baseline and at 6- and 12-month follow-up. As shown in Table 3, HIV-positive African American women were significantly more likely to report symptoms of depression at all three time points compared to the HIV-negative women.

Group Differences in Depressive Symptoms Among Abused African American Women

Comparisons of depressive symptomatology between African American women with and without histories of IPV were conducted by HIV serostatus. HIV-positive African American women reported severe symptoms of depression (scores greater than 18) and those who reported having been physically abused reported the most severe depressive symptoms at all three time points. At baseline, abused HIV-positive women reported marginally significantly greater depressive symptoms than nonabused HIV-positive African American women, $t(71.8) = -1.89, p = 0.06$. The demographic profile of the HIV-positive African American women who reported interpersonal violence was similar to the overall sample of HIV-positive women (M age = 38.7 years [$SD = 8.1$]; M education = 11.9 years [$SD = 1.8$]; 84% unemployed [$n = 26$]; M income per capita = \$393; and 90% single [$n = 28$]). Therefore, it does not appear that their greater risk for IPV is attributable to some characteristic that distinguishes them demographically. Unfortunately, small sample size precluded conducting similar comparisons among the HIV-negative women over time.

DISCUSSION

This study examined the histories of IPV in 108 HIV-positive and 47 HIV-negative African American women at baseline and at 6- and 12-month follow-up assessments of a longitudinal, natural history study. The purpose of the larger study was to examine how HIV affects the sexual and drug-related risk-taking and adjustment of African American, European American, and Latina women and their partners. Although somewhat limited by relatively small samples, especially among women who reported IPV at all three time points, these findings offer some valuable insights. Few studies of domestic violence include adequate numbers of African American women who are diverse with respect to demographic characteristics and life experiences. Even fewer studies are longitudinal in nature so that patterns of interpersonal violence over time can be examined. Investigating patterns of IPV and its sequelae in African American women can inform the development of more specific risk and harm reduction interventions for women who carry the dual burden of coping with both chronic disease such as HIV/AIDS and an abusive relationship.

Our results indicated that HIV-positive African American women were significantly more disadvantaged overall than the HIV-negative African American women. The HIV-positive women had significantly less education, were less likely to be employed, were more likely to be single or unattached, and reported lower annual incomes. Because we did not have socioeconomic data on the women prior to becoming infected, it was not possible to determine whether the greater socioeconomic deprivation experienced by the seropositive women placed them at greater risk for HIV infection or whether becoming seropositive

resulted in loss of socioeconomic status. Both alternatives were possible but have different implications for interventions and prevention.

HIV-positive women also reported having slightly greater numbers of sexual partners than the HIV-negative women (except at 12 months) and were more likely to be sexually inactive than HIV-negative women. However, these differences were not significant. These results were somewhat contrary to expectations given the prevailing view that African American women, especially those from lower socioeconomic status backgrounds, are more promiscuous than their more affluent counterparts (Wyatt, 1997). Our results indicated that a large percentage of these women, regardless of their HIV serostatus, were celibate, at least temporarily. This may have been due, at least in part, to the fact that the majority of the women were single or unattached at the time of the study.

The finding that HIV-positive women were not any less likely to be sexually active than the HIV-negative women is consistent with previous reports (Wyatt, Moe, & Guthrie, 1999). These findings suggest that, given their greater number of sexual partners, the sexual lifestyles of the HIV-positive women may have become more similar overtime to that of their seronegative counterparts. This is consistent with the sexual behavior changes reported by HIV-positive African American men who have sex with men (MSMs; Myers et al., 1997; Wyatt, Myers, Ashing-Giwa, & Durvasula, 1999).

Finally, at each measurement point, the HIV-positive women reported experiencing significantly more IPV and greater depressive symptoms than the HIV-negative women. Although it is not possible to conclude from these data that the higher rate of depressive symptoms among the HIV-positive women was caused by greater exposure to IPV, this association was strong and consistent over time. These results confirm previous findings that relationship violence contributes to psychological distress and dysfunction in victims (Axelrod et al., 1999; Golding, 1999; Riger et al., 2002; Wyatt et al., 2002). However, it is very likely that the burden of distress and depression may be due to multiple co-occurring factors, including socioeconomic deprivation and dependence, the burden of HIV, and the burden of coping with IPV. Additional studies with larger samples over time will be needed to clarify the relative contribution IPV makes to the risk for depression and related distress taking into account other psychosocial and socioeconomic risk factors for depression.

IMPLICATIONS OF THE STUDY

Understanding HIV related risks to African American women is important given the increasing rates of infection among heterosexual women. However, greater attention needs to be given to the nature of the relationships these women have with their partners. Studies with urban minority women are only now starting to examine IPV as a predictor of elevated risks for HIV infection (Wu, El-Bassel, Witte, Gilbert, & Chang, 2003). The fact that most of the women in our current sample were single or unattached limited our ability to explore the relationship between IPV and depressive symptoms. Further, additional research is needed to understand men in relationships with women at risk for and living with HIV/AIDS. It is important to examine the relationship dynamics between African American couples that differ with respect to HIV serostatus (i.e., those that are HIV concordant versus those that are HIV serodiscordant). It is also important to understand how interpersonal violence may contribute to increased HIV and STD transmission risks. Such research should be preliminary to developing interventions that address HIV and domestic violence prevention programs for both African American men and women in committed relationships.

We also need to examine how IPV affects the lives of the people connected to the female victim. IPV not only affects the woman but affects her relationships with her family and

friends and her ability to function in her social environment (Riger et al., 2002). Further, we need policies and programs that help couples and families affected by IPV to establish educational and financial security so that relationships can be based less on economic dependence, a risk factor for IPV. These policies and programs must emphasize and provide the basis for relationships to be founded on love, support, and quality family life.

Acknowledgments

This research was funded by the National Institute of Mental Health (grant R01 MH48269). We also acknowledge support provided by the Behavioral Adherence, Recruitment and Retention and Biostatistical Core of the University of California, Los Angeles, AIDS Institute (CFAR grant A128697).

REFERENCES

- Axelrod J, Myers HF, Durvasula RS, Wyatt GE, Cheng M. The impact of relationship violence, HIV, and ethnicity on adjustment in women. *Cultural Diversity & Ethnic Minority Psychology*. 1999; 5(3):263–275.
- Campbell JC. Health consequences of intimate partner violence. *Lancet*. 2002; 359(9314):1331–1336. [PubMed: 11965295]
- Campbell JC, Kub J, Belknap RA, Templin TN. Predictors of depression in battered women. *Violence Against Women*. 1997; 3(3):271–293.
- Campbell JC, Lewandowski LA. Mental and physical health effects of intimate partner violence on women and children. *Psychiatric Clinics of North America*. 1997; 20(2):353–374. [PubMed: 9196919]
- Cascardi M, O'Leary KD, Schlee KA. Co-occurrence and correlates of posttraumatic stress disorder and major depression in physically abused women. *Journal of Family Violence*. 1999; 14(3):227–249.
- Centers for Disease Control and Prevention. HIV Surveillance Report: AIDS cases by race and ethnicity. US Department of Health and Human Services, National Center for HIV, STD, and TB Prevention, Division of HIV/AIDS; 2002. from <http://www.cdc.gov/hiv/stats.htm> [January 14, 2003]
- Golding JM. Intimate partner violence as a risk factor for mental disorders: A meta-analysis. *Journal of Family Violence*. 1999; 14(2):99–132.
- Hampton RL, LaTaillade JJ, Dacey A, Marghi JR. Evaluating domestic violence interventions for Black women. *Journal of Aggression, Maltreatment, and Trauma*. 2008; 16(3):330–353.
- Heron RL, Twomey HB, Jacobs DP, Kaslow NJ. Culturally competent interventions for abused and suicidal African American women. *Psychotherapy*. 1997; 34(4):410–424.
- Huang CJ, Gunn T. An examination of domestic violence in an African American community in North Carolina: Causes and consequences. *Journal of Black Studies*. 2001; 31(6):790–811.
- Koss MP, Koss PG, Woodruff WJ. Deleterious effects of criminal victimization on women's health and medical utilization. *Archives of Internal Medicine*. 1991; 151(2):342–347. [PubMed: 1992961]
- Kyriacou DN, Anglin D, Taliaferro E, Stone S, Tubb T, Linden JA, et al. Risk factors for injury to women from domestic violence against women. *New England Journal of Medicine*. 1999; 341(25):1892–1898. [PubMed: 10601509]
- Los Angeles County Department of Health Services. [January 14, 2003] An epidemiologic profile of HIV and AIDS. 2000. from <http://lapublichealth.org/hiv/reports/epipro/2000/epipro00.pdf>
- Los Angeles County Department of Health Services, HIV Epidemiology Program. HIV/AIDS Surveillance Summary [Pamphlet]. Author; Los Angeles, CA: Jan. 2006 p. 1-29.
- Mahoney, P.; Williams, LM.; West, CM. Violence against women by intimate relationship partners.. In: Renzetti, CM.; Edleson, JL.; Bergen, RK., editors. *Sourcebook on violence against women*. Sage; Thousand Oaks, CA: 2001. p. 143-178.
- Marsh CE. Sexual assault and domestic violence in the African American community. *Western Journal of Black Studies*. 1993; 17(3):149–155.

- McCauley J, Kern DE, Kolodner K, Dill L, Schroeder AF, DeChant HK, et al. The “battering syndrome”: prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. *Annals of Internal Medicine*. 1995; 123(10):737–746. [PubMed: 7574191]
- Myers HF, Satz P, Miller BE, Bing EG, Evans G, Richardson MA, et al. The African American health project (AAHP): Study overview and select findings on high risk behaviors and psychiatric disorders in African American men. *Ethnicity & Health*. 1997; 2(3):183–196. [PubMed: 9426983]
- Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*. 1977; 1(3):385–401.
- Rennison, CM. [August 24, 2006] Intimate partner violence, 1993–2001.. Bureau of Justice Statistics Crime Data Brief. 2003. from, <http://www.ojp.usdoj.gov/bjs>
- Richardson J, Coid J, Petrukevitch A, Chung WS, Moorey S, Feder G. Identifying domestic violence: Cross sectional study in primary care. *British Medical Journal*. 2002; 324(7332):274. [PubMed: 11823360]
- Riger S, Raja S, Camacho J. The radiating impact of intimate partner violence. *Journal of Interpersonal Violence*. 2002; 17(2):184–205.
- Roth, JK. *Encyclopedia of social issues*. First Printing; Tarrytown, NY: 1997.
- Schafer J, Caetano R, Clark CL. Rates of intimate partner violence in the United States. *American Journal of Public Health*. 1998; 88(11):1702–1704. [PubMed: 9807541]
- Silva C, McFarlane J, Soeken K, Parker B, Reel S. Symptoms of post-traumatic stress disorder in abused women in a primary care setting. *Journal of Women's Health*. 1997; 6(5):543–552.
- Straus MA. State to state differences in social inequality and social bonds in relation to assaults on wives in the United States. *Journal of Comparative Family Studies*. 1994; 25:7–24.
- Straus, M.; Gelles, R. *Physical violence in American families: Risk factors and adaptation to violence in 8,145 families*. Transaction Publishing; New Brunswick, NJ: 1990.
- Straus, MA.; Hamby, SL. Measuring physical and psychological maltreatment of children with the Conflict Tactics Scales.. In: Kantor, GK.; Jasinski, JL., editors. *Out of darkness: Contemporary perspectives on family violence*. Sage; Thousand Oaks, CA: 1997. p. 119-135.
- Tollestrup K, Sklar D, Frost FJ, Olson L, Weybright J, Sandvig J, et al. Health indicators and intimate partner violence among women who are members of a managed care organization. *Preventive Medicine*. 1999; 29(5):431–440. [PubMed: 10564635]
- Walton-Moss BJ, Manganello J, Frye V, Campbell C. Risk factors for intimate partner violence and associated injury among urban women. *Journal of Community Health*. 2005; 30(5):377–389. [PubMed: 16175959]
- Wingood GM, DiClemente RJ. Application of the theory of gender and power to examine HIV-related exposures, risk factors, and effective interventions for women. *Health Education & Behavior*. 2000; 27(5):539–565. [PubMed: 11009126]
- Wisner CL, Gilmer TP, Saltzman LE, Zink TM. Intimate partner violence against women: Do victims cost health plans more? *Journal of Family Practice*. 1999; 48(6):439–443. [PubMed: 10386487]
- Wolf ME, Holt VL, Kernic MA, Rivara FP. Who gets protection orders for intimate partner violence? *American Journal of Preventive Medicine*. 2000; 19(4):286–291. [PubMed: 11064233]
- Wu E, El-Bassel N, Witte SS, Gilbert L, Chang M. Intimate partner violence and HIV risk among urban minority women in primary health care settings. *AIDS & Behavior*. 2003; 7(3):291–301. [PubMed: 14586191]
- Wyatt, G. *The Wyatt Sex History Questionnaire*. University of California; Los Angeles: 1984.
- Wyatt, G. *Stolen women: Reclaiming our sexuality, taking back our lives*. Wiley; New York: 1997.
- Wyatt GE, Axelrod J, Chin D, Carmona JV, Loeb TB. Examining patterns of vulnerability to domestic violence among African American women. *Violence Against Women*. 2000; 6(5):495–514.
- Wyatt G, Chin D. HIV and ethnic minority women, families, and communities: An overview. *Cultural Diversity & Ethnic Minority Psychology*. 1999; 5(3):179–182.
- Wyatt GE, Lawrence J, Vodounon A, Mickey MR. The Wyatt Sex History Questionnaire: A structured interview for female sexual history taking. *Journal of Child Sexual Abuse*. 1992; 1(4):51–68.
- Wyatt GE, Moe A, Guthrie D. The gynecological, reproductive, and sexual health of HIV-positive women. *Cultural Diversity & Ethnic Minority Psychology*. 1999; 5(3):183–196.

- Wyatt, G.; Myers, HF.; Ashing-Giwa, K.; Durvasula, RS. Socio-cultural factors affecting sexual risk-taking in African American men and women: Results from two empirical studies.. In: Staples, R., editor. *The Black family: Essays and studies*. Sage; Newbury Park, CA: 1999. p. 45-58.
- Wyatt GE, Myers HF, Williams JK, Kitchen CR, Loeb T, Carmona JV, et al. Does a history of trauma contribute to HIV risk for women of color? Implications for prevention and policy. *American Journal of Public Health*. 2002; 92(4):660–665. [PubMed: 11919068]

TABLE 1

Group differences of African American women by serostatus on background characteristics

Variable	HIV+ (n = 108)	HIV- (n = 47)
Age (M years)	38.1 (SD = 15.0)	32.5 (SD=25.0)
Education (M highest grade completed)	12.0 (SD = 2.0)	13.5 (SD=2.2) *
Employment		
Unemployed	85% (n = 92)	36% (n = 17)
Part or Full time	15% (n = 16)	64% (n = 30) *
Income (M per month)		
Income/capital	\$386 (SD = 262.5)	\$1218 (SD = 1583.9) *
Household income	\$865 (SD = 724.7)	\$3120 (SD = 3409.4) *
Marital Status		
Single	92.6% (n = 100)	83% (n = 39)
Married/together	7.4% (n = 8)	17% (n = 8)
# of Partners (Previous 6 months)	<u>Baseline</u> (n = 108)	<u>Baseline</u> (n = 47)
None	33% (n = 36)	26% (n = 12)
One or more	67% (n = 72)	74% (n = 36)
# of Partners (Previous 6 months)	<u>6 Month</u> (n = 87)	<u>6 Month</u> (n = 47)
None	33% (n = 29)	23% (n = 11)
One or more	67% (n = 58)	77% (n = 36)
# of Partners (Previous 6 Months)	<u>12 Month</u> (n = 79)	<u>12 Month</u> (n = 47)
None	28% (n = 22)	21% (n = 10)
One or more	72% (n = 57)	79% (n = 37)

* $p < 0.001$, a comparison between HIV- women to HIV+ women with t-tests.

TABLE 2

Incidents of relationship conflict/violence by serostatus in African American women

Time point	HIV+ (n = 108)	HIV- (n = 47)	p
Baseline	<i>M</i> = 2.96 (<i>SD</i> = 5.2)	<i>M</i> = 1.34 (<i>SD</i> = 3.0)	<i>p</i> = 0.01
6 Month	<i>M</i> = 1.70 (<i>SD</i> = 3.7)	<i>M</i> = 0.44 (<i>SD</i> = 1.7)	<i>p</i> = 0.02
12 Month	<i>M</i> = 1.46 (<i>SD</i> = 3.7)	<i>M</i> = 0.41 (<i>SD</i> = 1.4)	<i>p</i> = 0.07

TABLE 3

Center for Epidemiologic Studies Depression Scale by serostatus in African American women

Time point	HIV+ (n = 108)	HIV- (n = 47)	p
Baseline	<i>M</i> = 20.58 (<i>SD</i> = 12.9)	<i>M</i> = 10.57 (<i>SD</i> = 8.1)	<i>p</i> = 0.0001
6 Month	<i>M</i> = 19.07 (<i>SD</i> = 11.8)	<i>M</i> = 13.11 (<i>SD</i> = 8.2)	<i>p</i> = 0.002
12 Month	<i>M</i> = 20.10 (<i>SD</i> = 12.8)	<i>M</i> = 10.60 (<i>SD</i> = 9.5)	<i>p</i> = 0.0001