
Journal of Urban Health: Bulletin of the New York Academy of Medicine Vol. 80, No. 3, September 2003

Does HIV Status Make a Difference in the Experience of Lifetime Abuse? Descriptions of Lifetime Abuse and Its Context Among Low-Income Urban Women

Karen A. McDonnell, Andrea Carlson Gielen, and Patricia O'Campo

ABSTRACT *Women living in poor urban communities are doubly disadvantaged with regard to increased risk for two major public health crises in the United States today—HIV/AIDS (human immunodeficiency virus/acquired immunodeficiency syndrome) and violence. This study moves beyond the comparison of rates of lifetime abuse among women to incorporate contextual information of the abusive situation and experiences of HIV-positive women and a sample of sociodemographically similar HIV-negative women. A total of 611 women, 310 of whom were diagnosed as HIV positive, provided interviews integrating quantitative data and qualitative text on their lifetime experience of abuse. Quantitative results yielded few statistically significant differences between the lifetime experiences of violence between HIV-positive women and their HIV-negative counterparts. Of the women, 62% reported intimate partner violence, and 38% reported experiencing nonpartner abuse as an adult. A majority of the abused women reported that their alcohol or drug use or their partner's alcohol or drug use was associated with the abuse experienced. Significant differences were found between HIV-positive women and HIV-negative women in the pattern of abuse experienced as a child, the frequency of abuse as an adult, and the involvement of women's drinking before or during a violent episode. Qualitative excerpts from the interviews were found to differ thematically and were integrated with the quantitative data to provide a more comprehensive understanding of the women's contextual situation in understanding interpersonal violence experienced by both HIV-positive and HIV-negative women.*

KEYWORDS *Childhood abuse, Drugs and alcohol, Females, HIV/AIDS, Intimate partner violence, Physical abuse, Sexual abuse.*

INTRODUCTION

Women living in poor, urban communities are doubly disadvantaged with regard to increased risk for two major public health crises in the United States today—HIV/AIDS (human immunodeficiency virus/acquired immunodeficiency syndrome)

Dr. McDonnell is with the George Washington University School of Public Health and Health Services, Maternal and Child Health Program; Dr. Gielen is with Johns Hopkins University, School of Public Health, Department of Health Policy Management; and Dr. O'Campo is with Johns Hopkins University, School of Public Health, Department of Population and Family Health Sciences.

Correspondence: Dr. Karen A. McDonnell, Maternal and Child Health Program, George Washington University SPHHS, 2175 K Street NW Suite 700, Washington, DC 20037. (E-mail: sphkxm@gwumc.edu)

and violence. The problems of HIV and interpersonal violence have become linked as evidence mounts to suggest that HIV infection is an undeniably important risk factor and potential consequence for violence against women.[1–19] A comprehensive review of the available literature on the intersection between HIV and violence provides evidence for several different links between the epidemics of HIV and violence.[11] Interpersonal violence can take the form of either a direct or indirect relationship with women and HIV. In a direct route, women may become infected with HIV as a result of forced unprotected sex with an infected individual, or women may be abused as a result of disclosure of positive HIV status.[1,4,9]

The experience of interpersonal violence may be an important indirect risk factor for becoming HIV infected among women, particularly those in minority populations most affected by the HIV epidemic. Previous research has found a robust association between the experience of abuse as a child, abuse as an adult, and HIV infection as an adult.[19–21] However, Vlahov et al.[18] interviewed 765 HIV-positive and 367 at-risk HIV-negative women in a recent study and found that childhood physical and sexual abuse rates were similar for the two groups (41% HIV-positive women experienced physical abuse vs. 43% HIV-negative women).

The relationship between HIV and violence can be mediated by the practice of other potentially risky behaviors, such as the use of alcohol and drugs. The use of alcohol and drugs may act as coping mechanisms to deal with abuse or conversely may place women at risk for abuse from intimate partners and others; the administration of a drug may be an avenue for HIV infection if needles are shared.[4,5,13,16,19,22–29]

Whether the prevalence of adult abuse differs between HIV-positive women and sociodemographically similar HIV-negative women is also not clear. Zierler et al.[10] found that HIV-positive women had a somewhat higher prevalence of being raped as an adult than at-risk HIV-negative women (35% vs. 28%). In Vlahov's study,[18] HIV-positive and at-risk HIV-negative women were comparable with the prevalence of physical abuse (66% HIV-positive; 69% HIV-negative women) and sexual abuse (46% HIV-positive, 49% HIV-negative women) as an adult. Cohen et al.[17] found similar rates of lifetime abuse between HIV-positive (66%) and HIV-negative (67%) women. The prevalence of abuse among these samples of low-income, urban women appears to be substantially higher than rates (8%–18%) typically found in nationally representative samples.[30–33]

The state of the research on women's experience of abuse needs more information, not only with regard to the conflicting evidence on the prevalence of physical versus sexual abuse in women who are already HIV infected relative to those that are at-risk of HIV infection, but also on the complexities of the abusive experiences. Use of a combination of qualitative and quantitative techniques to obtain information regarding the type of perpetrator, the frequency of the abusive episodes, and the involvement of alcohol and drugs regarding HIV-positive and HIV-negative women has not been previously reported. Such knowledge will help better develop and implement programs that focus on the prevention of abuse among vulnerable, underserved populations.

Therefore, the purposes of this article are to expand on the preliminary quantitative research to date and to qualitatively and quantitatively examine the experience of abuse among HIV-positive and HIV-negative women. Specific goals of the article are to (1) describe and compare the perpetrator, prevalence, and frequency of interpersonal violence between HIV-positive and HIV-negative women living in a poor urban community; (2) examine the relationship between having experienced childhood abuse and the prevalence of adult physical or sexual abuse; and (3) ex-

amine the relationships between the use of alcohol and drugs and experiencing adult physical and sexual abuse. Excerpts from in-depth qualitative interviews were used to enrich and help in the interpretation of the empirical results.

METHODS

Study Population and Data Collection

A sampling frame was developed to ensure recruitment of adequate numbers of HIV-positive women and a comparison group of HIV-negative women with a similar sociodemographic profile. Participants were recruited from the following Baltimore, Maryland, locations: (1) a hospital-based obstetrics and gynecology clinic (N = 98); (2) an outpatient drug treatment center (N = 115); (3) a homeless shelter for women (N = 56); (4) Healthy Start, a community center that is part of a national infant mortality prevention demonstration project (N = 61); and (5) a hospital-based HIV primary care clinic (N = 281).

At each of the recruitment sites, interviewers established contact with the person responsible for registering patients/clients and secured permission to recruit eligible women into the study. On the basis of information provided by the site registrars, interviewers were deployed to the recruitment sites on days and times expected to capture representative samples of clinic/program enrollees. Interviewers approached women in the waiting rooms and invited those who met eligibility criteria (i.e., over 18 years of age, not pregnant, English speaking) to participate in the study. To avoid missing eligible women if the interviewer was absent or working with a client, posters describing the project (i.e., as a women's health study) and inviting women to call the study office for more information were also placed at each recruitment site.

The interviewers employed in the study were women with extensive experience interviewing women from the community in this topic area using qualitative and quantitative techniques. The interviewers explained the study and obtained informed consent according to a protocol approved by the Johns Hopkins Joint Committee on Clinical Investigation. Due to confidentiality concerns, names of women who had been contacted but refused to participate could not be maintained. Whereas a woman could not be interviewed more than one time, a woman could have been approached and refused more than once; therefore, a reliable and valid refusal rate cannot be calculated. Participants completed a single interview, lasting approximately 1 hour, either on site or at an appointment made to complete the interview at the study offices. Women were reimbursed $25 for their time and transportation costs.

Measurement

Quantitative Interview The interview instrument measured sociodemographic characteristics; the lifetime prevalence of violence, including childhood, intimate partner violence and violence perpetrated by someone other than an intimate partner; and the use of alcohol and drugs in the context of the abusive events, as described below.

Sociodemographic characteristics. Data were collected from each participant regarding current age (18–29, 30–39, 40 years and older), self-reported race/ethnicity identification (African American, other), highest level of educational attainment

(less than high school, high school or equivalent, more than high school), and per capita income level based on 100% below federal poverty rates equal to $300 per month. All of the women resided in the Baltimore City area and qualified for medical assistance. Women were also asked if they had ever engaged in any illicit use of drugs. Drug use included any form of administration (e.g., snorting, injection) of heroin, cocaine, crack, or any derivative of the three.

Physical and sexual abuse as a child. Due to Maryland State reporting requirements, women were informed of the study's obligations and were then asked if they were comfortable answering the questions about abuse as a child. Any disclosed abuse in childhood is reportable to the Department of Social Services in Maryland. Therefore, women were read the following statement prior to being asked these questions:

> If we learn that you were abused as a child the law says that we must report it to social services. Social services needs to be told about all cases of child abuse, no matter when it happened, because children might still be at risk from that person. . . . if you want us to make a specific report about someone, or if you want to get in touch with support services for women who were abused as children, we can help you do that.

The majority (88%) of the women stated that they were comfortable answering the questions; however, 45 women (33 HIV positive; 12 HIV negative) declined. No statistically significant differences were found between women who chose not to answer and women who did answer the child abuse questions on age, per capita income level, education level, drug use in the last 30 days, and race/ethnicity. An additional 28 women (17 HIV positive and 11 HIV negative) were recruited into the study prior to the inclusion of the child abuse questions and therefore were not included in the analysis regarding child abuse.

Questions about abuse as a child concerned whether women had been (1) physically abused before the age of 18 years and (2) sexually abused before the age of 18. The relation of the perpetrator (mother, father figure, male relative, female relative, other) and the number of times it happened (once or twice, more than twice) were asked for each of the two types of abuse.

Intimate partner abuse as an adult. Women were first asked if they had ever been in a relationship in which they were repeatedly called names or yelled at, belittled in public, or had their social life controlled by an intimate partner. To assess women's experience of physical abuse, women were asked, "Have you ever been hit, slapped, kicked, pushed or shoved, or otherwise physically hurt" by an intimate partner? To assess women's experience of sexual abuse, women were asked, "Have you ever been forced into sexual activities" by an intimate partner? Both the physical and sexual abuse questions were followed by more specific questions that ascertained how often the abuse occurred (once or twice, three or more times), whether alcohol was involved (any drinking, if the woman was drinking, if the partner was drinking), and if drugs were used during the abusive episode (any drug use, if the woman had been using drugs, if the partner had been using drugs).

Nonpartner abuse as an adult. Women were asked about the occurrence of physical or sexual abuse by someone other than an intimate partner. The first set of questions asked women if someone other than an intimate partner had ever physically assaulted them (i.e., slapped, punched, shoved, hit, beat). Affirmative answers were followed by questions that asked who the perpetrator was (male

friend, female friend, relative, or a stranger) and the number of times it happened (once, two or more times). The second set of questions asked women about the occurrence of sexual abuse by someone other than an intimate partner and followed the format of the previous questions about physical abuse.

Qualitative Interview The use of qualitative research methodologies permitted the collection of rich data and the development of a more comprehensive understanding of the women's contextual situation. Following completion of the quantitative portion, women who were either currently involved in or had a recent history of an abusive relationship were randomly selected to participate in the in-depth interview process. In total, 78 women, half of whom were HIV positive, participated in the qualitative portion of the interview. Most of the women who participated in the qualitative portion of the interview were African American (91%), had an average age of 36 years (SD 6.04), had completed high school or the equivalent (67%), and had an income of less than $300 per month (64%).

Interviewers were trained to gather contextual information from the women about specific abusive experiences, and they followed a comprehensive interview guide. Specific attention was paid to probing issues such as the experience of physical and sexual abuse as an adult, the relative frequency of the abuse experienced, the involvement of alcohol and drugs, and any abuse the women experienced as a child.

Data Analyses

Quantitative Analyses The interview was completed by 310 HIV-positive and 301 HIV-negative women. We first used contingency table and chi-square analyses to examine the distribution and association of each of the sociodemographic and psychosocial variables with HIV status. Age was modeled as a categorical variable with three levels (18–29, 30–39, 40 and older) and per capita income as a dichotomous variable ($300 or less per month, over $300 per month).

The two groups of women (HIV positive and HIV negative) were found to differ on age and income (Table 1), and these characteristics of age and income were significantly related to the experience of abuse as an adult. Consequently, we ensured that all comparisons of HIV-positive and HIV-negative women were adjusted for these two factors.

We accomplished this in two ways. First, in all regression analyses, which we used for statistical testing for differences between HIV-positive and HIV-negative women, we made sure that all models included age and income. Second, when examining prevalence of various outcomes between the HIV-positive and HIV-negative women, we used age and income-adjusted percentage rates.

To obtain these adjusted rates, we weighted the HIV-positive sample to more closely resemble the HIV-negative sample with regard to age and income. Significance testing, however, was performed using regression analysis as noted above. Therefore, all tables present weighted prevalence data and results from the adjusted regression analyses as a means of testing for significance between HIV-positive and HIV-negative women. The association between HIV status and categorical violence outcomes were measured using contingency table and chi-square analyses.

Qualitative Analysis The qualitative segments of the interviews were audiotaped and then transcribed. Text sections of the transcripts of qualitative interviews were coded

TABLE 1. Association of sociodemographic characteristics and HIV status of 611 participants (proportion within HIV status is presented)

Demographic characteristics	HIV positive (N = 310)	HIV negative (N = 301)	Total (N = 611)
Age,* years			
18–30	**0.13**	**0.38**	**0.25**
30–40	**0.47**	**0.39**	**0.43**
Over 40	**0.39**	**0.23**	**0.31**
Race			
African American	0.95	0.98	0.96
Other	0.05	0.02	0.04
Education			
<High school	0.40	0.37	0.39
High school	0.45	0.46	0.45
>High school	0.05	0.17	0.16
Per capita income*			
<$300/month	**0.59**	**0.68**	**0.64**
>$300/month	**0.41**	**0.32**	**0.36**
Ever use heroin/crack/cocaine*			
No	**0.10**	**0.28**	**0.19**
Yes	**0.90**	**0.72**	**0.81**

*$P < .05$.

by pairs of study investigators and research assistants using thematic codes consistent with the study goals and aims. Any discrepancies in coding were resolved by discussion with the principal investigators (authors A. G. and P. O.). QRS NUD*IST,[34] a computer software package, was used to manage, index, and explore the qualitative interview data.

RESULTS

Interviews were completed by 310 HIV-positive and 301 HIV-negative women living in Baltimore City from July 1997 to May 1999. The HIV-positive sample was similar in age and race distributions to reported cases of females with AIDS in Baltimore City (December 1998 data, Maryland State AIDS Administration). Overall, the two groups of women were similar in respect to race and education attainment. However, significant differences were found between the groups with respect to age (HIV-positive mean 38.40 years, HIV-negative mean 33.73 years), per capita income level, and drug use. HIV-positive women were older, more likely to have a per capita income of over $300 per month, or to have ever engaged in drug use.

Childhood Abuse

Similar rates were found for the two groups with regard to the prevalence of childhood physical abuse (21% for HIV-positive, 18% for HIV-negative women) (Table 2). In addition, there were no statistically significant differences as to the perpetrator of the abuse. Respondents' mothers were the most common perpetrator; 53% of HIV-positive and 49% of HIV-negative women reported their mother as the perpetrator of the physical abuse. Father figures (father, step-father) were also men-

TABLE 2. Proportion of HIV-positive (n = 258) and HIV-negative women (n = 278) who were abused during childhood

Characteristics	HIV positive (N = 258)	HIV negative (N = 278)	Adjusted OR* (95% CI)
Physical abuse as a child			
Physically abused	0.21	0.18	1.17 (0.75–1.82)
Perpetrator			
Mother	0.53	0.49	1.43 (0.62–3.02)
Father	0.38	0.47	0.60 (0.26–1.39)
Other	0.15	0.18	0.54 (0.17–1.71)
Abused two or more times	0.89	0.86	1.64 (0.81–1.80)
Sexual abuse as a child			
Sexually abused	0.30	0.26	1.21 (0.81–1.80)
Perpetrator			
Father figure	0.38	0.32	1.18 (0.58–2.40)
Male relative	0.33	0.32	1.05 (0.51–2.17)
Other	0.35	0.38	0.97 (0.48–1.96)
Abused two or more times	0.60	0.56	1.00 (0.50–1.98)
Combined abuse as a child			
No child abuse	**0.62**	**0.64**	**chi square = 6.30†**
Child physical abuse only	**0.07**	**0.10**	
Child sexual abuse only	**0.17**	**0.18**	
Child both physical and sexual abuse	**0.15**	**0.09**	

*Odds ratio (ORs) and 95% confidence intervals (CIs) adjusted for age and per capita income.
†$P < .05$.

tioned frequently (27% HIV-positive, 39% HIV-negative women). The vast majority of HIV-positive and HIV-negative women who reported childhood abuse reported being physically abused as a child more than twice (89%, 86%, respectively).

Approximately one third (30%) of HIV-positive women and one quarter (26%) of HIV-negative women were sexually abused before the age of 18 years. There was no difference between HIV-positive and HIV-negative women regarding the prevalence of perpetrator of sexual abuse. Father figures were the most frequently cited perpetrator (38% HIV-positive and 32% HIV-negative women); male relatives were reported by 32% of the women who had been sexually abused, and 35% of HIV-positive and 38% of HIV-negative women reported that someone other than a father figure or male relative had sexually abused them before the age of 18 years. The majority of the HIV-positive and HIV-negative women who were sexually abused reported that this occurred more than twice during their childhood. HIV-positive women were more likely to report having experienced both physical and sexual abuse as a child than HIV-negative women (15% vs. 9%, respectively).

Abuse as an Adult

Both HIV-positive and HIV-negative women in the study were equally as likely to report the experience of intimate partner abuse as an adult (see Table 3). Over half of the women (55% HIV positive and 53% HIV negative) reported being emotionally abused or physically abused (56% HIV-positive and 64% HIV-negative women), whereas approximately a fifth of the women reported being sexually abused by

TABLE 3. Proportion and odds ratios (ORs) of intimate partner and nonpartner abuse experienced as an adult

Type of abuse	HIV positive (N = 310)	HIV negative (N = 301)	Adjusted OR* (95% CI)
Intimate partner abuse			
Emotional abuse	0.55	0.53	1.01 (0.71–1.42)
Physical abuse	0.56	0.64	0.75 (0.52–1.07)
Physical abuse three or more times†	**0.82**	**0.73**	**2.15‡ (1.19–3.86)**
Sexual abuse	0.20	0.22	0.84 (0.56–1.26)
Sexual abuse three or more times†	0.74	0.59	1.76 (0.79–3.91)
Nonpartner abuse			
Physical abuse	0.29	0.32	1.05 (0.74–1.50)
Physical abuse more than once	0.46	0.40	1.38 (0.70–3.91)
Sexual abuse	0.17	0.13	1.29 (0.82–2.05)
Sexual abuse more than once	0.41	0.18	2.90 (0.94–8.98)
Combined abuse as an adult			
Intimate partner abuse			
No abuse	0.42	0.34	chi square = 3.88
Physical or sexual abuse	0.41	0.47	
Physical and sexual abuse	0.18	0.19	
Nonpartner abuse			
No abuse	0.63	0.61	chi square = 3.02
Physical or sexual abuse	0.28	0.33	
Physical and sexual abuse	0.09	0.06	
Total adult abuse			
No abuse	0.31	0.26	chi square = 2.62
Physical or sexual abuse	0.41	0.48	
Physical and sexual abuse	0.28	0.26	

*Odds ratios and 95% confidence intervals (CIs) adjusted for age and per capita income.
†Includes only those women who reported type of abuse.
‡$P < .05$.

an intimate partner. Overall, similar proportions of HIV-positive (58%) and HIV-negative (66%) women experienced some form of intimate partner abuse as an adult.

No differences were found with regard to HIV status of the woman and her experience of nonpartner abuse. Approximately one third of the sample of women had been physically abused by someone other than an intimate partner. Women reported that the perpetrator of the physical abuse was most likely to be a male friend (27%), a female friend (33%), a relative (26%), or a stranger/someone unknown to them (33%). There were 17% of the HIV-positive and 13% of the HIV-negative women who reported nonpartner sexual abuse. Male acquaintances (47% HIV positive, 54% HIV negative) were reported most frequently as the perpetrator of the sexual abuse, followed closely by male strangers (50% HIV positive, 44% HIV negative). Overall, similar rates of either physical or sexual abuse by a nonpartner were reported by HIV-positive and HIV-negative women (37% and 39%, respectively). The pattern of total adult abuse, combining physical and sexual abuse across intimate partners and nonpartners, did not differ between HIV-positive and HIV-negative women.

Frequency of Abuse There were statistically significant differences between the two groups of women in the number of times the abuse occurred (Table 3). HIV-positive women who were abused were significantly more likely than HIV-negative women to report being physically abused by an intimate partner three or more times (82% vs. 73%; odds ratio [OR] 2.15; $P < .05$). HIV-positive women were also somewhat more likely than HIV-negative women to report being sexually abused by an intimate partner three or more times (74% vs. 59%, respectively; OR 1.76). HIV-positive women were also more likely than HIV-negative women to report being physically abused on more than one occasion by a nonpartner, although the results were not statistically significant. However, HIV-positive women were three times as likely as HIV-negative women to report being sexually abused on more than one occasion by a nonpartner (36% vs. 18%, respectively; OR 2.90).

Qualitative interviews. Findings from the qualitative interviews provide a description of the kinds of experiences women were referring to when talking about their abuse. HIV-negative women were much more likely than HIV-positive women to discuss a singular abusive event. The first quotation is from an HIV-negative woman talking about her experience of abuse by an intimate partner as something that happened one time before she ended the relationship:

> Because I just can't see a man beatin' me, and I can't trust him not to do it again. Once . . . it happened once . . . it's like I can't walk around on eggshells waitin' to find out if he's gonna do it again or wait to see or don't know what I have to do or what I'll do to make him do it again. So, it's just like forget it. I can't live like that. Just forget it all together.

This is in sharp contrast to the qualitative interviews with HIV-positive women, who tended to report more experiences of repeated abuse, such as the following:

> The abuse started around 1979. . . . It lasted up to, off and on anyway, about til '97. He had thrown me out a window . . . he actually shot at my mother because me and him had gotten into an argument, and I was scared to go downstairs. . . . He shot at my mother to get her out of the way. . . . He was always shouting and hollering at me.

One theme that occurred in a number of the qualitative interviews with HIV-positive women that was not evident in the quantitative interviews was the direct association that a woman's HIV status had on her acceptance of the abuse perpetrated by her partner. The circumstances in which abused HIV-positive women are placed are evidenced by one woman's words about how her HIV status influenced her staying in an abusive relationship: "After I found out I was positive, I let him do what he wanted. It didn't make a difference, I was just going to stay."

Combined Lifetime Abuse The majority of the sample (78%) experienced some form of abuse during their lifetime, and almost one third (30%) of the sample reported experiencing both child and adult abuse; these rates did not differ by HIV status. Women who were abused as a child were significantly more likely to be abused as an adult than those women who had not been abused as a child (Table 4). For all forms of adult abuse, both intimate partner abuse (emotional, physical, and sexual) and nonpartner abuse (physical and sexual), women who had been abused as children were significantly more likely to be abused as adults after adjusting for age and income. HIV status was not significant in any of the models.

TABLE 4. Proportion and odds ratios (ORs) for abuse as a child among women who experienced abuse as an adult

Adult abuse	No (N = 344)	Yes (N = 193)	Adjusted OR* (95% CI)
Intimate partner abuse			
Emotional abuse	**0.64**	**0.70**	**2.88† (1.95–4.25)**
Physical abuse	**0.54**	**0.72**	**2.53† (1.68–3.80)**
Sexual abuse	**0.12**	**0.33**	**3.51† (2.28–5.40)**
Nonpartner abuse			
Physical abuse	**0.25**	**0.39**	**2.37† (1.63–3.46)**
Sexual abuse	**0.10**	**0.26**	**3.08† (1.92–4.95)**

CI, confidence interval.
*Odds ratios adjusted for HIV status, age, and per capita income.
†$P < .05$.

Qualitative interviews. Excerpts from the qualitative interviews highlight the importance of the relationship between women's abuse as children and their later revictimization as adults. The words of an HIV-positive woman who had been raped at the age of 12 years and later abused by an intimate partner illustrate this quantitative finding:

> Even though he [intimate partner] was abusive to me, I still loved him because I was brought up where I felt that I wasn't loved. I was looking for someone to love me. . . . I was the main one that was being abused by the family, my mother's boyfriends and babysitters. Each of my mom's boyfriends saw me as a sex symbol. . . . I have been sexually abused by a few of her boyfriends.

The words of another HIV-positive woman who had also been abused as a child and as an adult characterize her thought processes about this relationship:

> If you ask me, it started when I was 12 years old with the actual rape. . . . I had a dislocated jaw, I had four broken ribs, I was stabbed, I was thrown into a lake. . . . I do think that abuse [as a child] had something to with the adult abuse. Then when you take sex and use it as a weapon, and you take men's physical size, what's the message I got? Men are always stronger. If I had been taught how to empower myself back then, then none of this [adult abuse] would have been possible.

Role of Alcohol and Drugs in Intimate Partner Abuse While no significant differences were found between the HIV-positive and HIV-negative women in overall rates of alcohol involvement in the occurrence of physical abuse (63% vs. 53%, respectively), HIV-positive women were significantly more likely to report that they had been drinking prior to or during the abuse (Table 5). HIV-positive women were also more likely to report that their drug use and their partner's drug use had been involved in the physical abuse, although these relationships were found to be significant at the $P < .10$ level.

A majority of the women who had been sexually abused reported that alcohol and drug use had been involved in the abuse (71%), although rates did not differ between HIV-positive and HIV-negative women for any of these comparisons. Both

TABLE 5. Proportion and odds ratios (ORs) of alcohol and drug use during physical and sexual abuse perpetrated by an intimate partner between HIV-positive and HIV-negative women

Type of abuse	HIV positive (N = 191)	HIV negative (N = 191)	Adjusted OR* (95% CI)
Physical abuse			
Any alcohol involved (no) yes	0.63	0.53	1.36 (0.87–2.12)
Her drinking involved (no) yes	**0.36**	**0.27**	**1.60† (1.02–2.50)**
His drinking involved (no) yes	0.61	0.51	1.35 (0.84–2.01)
Any drug use involved (no) yes	0.75	0.71	1.24 (0.76–2.03)
Her drug use involved (no) yes	0.56	0.47	1.47 (0.96–2.26)
His drug use involved (no) yes	0.71	0.62	1.54 (0.97–2.42)
Sexual abuse	(N = 67)	(N = 65)	
Any alcohol involved (no) yes	0.72	0.71	1.04 (0.49–2.22)
Her drinking involved (no) yes	0.37	0.23	1.86 (0.85–4.04)
His drinking involved (no) yes	0.70	0.67	1.11 (0.51–2.39)
Any drug use involved (no) yes	0.70	0.69	1.11 (0.53–2.32)
Her drug use involved (no) yes	0.51	0.41	1.49 (0.73–3.04)
His drug use involved (no) yes	0.69	0.64	1.29 (0.61–2.73)

CI, confidence interval.
*Adjusted for age and per capita income.
†$P < .05$.

groups of women consistently reported higher rates of drug and alcohol use by the partners relative to the woman's own reported use of substances.

Qualitative interviews. The widespread involvement of alcohol and drugs and intimate partner abuse was a critical theme in many of the interviews. The following excerpts are used to exemplify the words of many of the women interviewed. In the words of one HIV-negative woman,

> If he did coke, he would get more violent with me. Because when he was high off of heroin he was more laid back, and he would just be to himself. But if he shot coke for a speedball [both heroin and cocaine] I could see the difference. He would get more violent. I don't know . . . he just was real crazy when he did [coke and] heroin. I could always tell when he did it. He would get real violent, and that is when most of our fights would start.

The use of drugs as an instigating factor in abusive situations is evidenced in the following words of an abused HIV-positive woman: "We used cocaine and heroin. . . . And if he felt like I was having more than he did, then a fight and greediness would come."

DISCUSSION

Does HIV status make a difference in the experience of abuse over a woman's lifetime? Yes and no. This study demonstrated high rates of abuse experienced by inner-city women regardless of HIV status. Three quarters of the sociodemographically similar groups of HIV-positive and HIV-negative women in our study experi-

enced physical or sexual abuse at some point in their lifetimes, rates that are much greater than those reported in national representative surveys.

The Commonwealth Fund survey of a nationally representative sample of women aged 18 to 64 years found that 18.3% of the 2,052 respondents had experienced some form of physical or sexual abuse as a child,[30] which is roughly one half of the rate reported by the HIV-positive (38%) and HIV-negative (36%) women in our study. Likewise, reports in the literature[30–33,35,36] are that the rates of adult physical and sexual abuse among women are between 20% and 50%, which is substantially lower than the adult abuse rates we found of 69% for HIV-positive women and 74% for HIV-negative women. However, our findings on the rate of childhood and adult abuse are comparable to those found by other studies that investigated abuse among vulnerable populations of HIV-positive and at-risk HIV-negative women.[10,17,18,37]

When prevalence rates of abuse were compared between the two groups of women, there were no statistically significant differences found, which is consistent with two other similar studies.[18,38] However, our study extends this area of research by including interview items that help to describe the complexities of abusive situations, including the type of perpetrator, the number of times the abuse occurred, and the involvement of substance use, both alcohol and drugs.

With the inclusion of additional, more comprehensive pieces of information into the interview of the women, the answer to the question, "Does HIV status make a difference in the lifetime experience of abuse?" is also "Yes." The quantitative and qualitative results provide statistical and contextual evidence that there are indeed differences in the abuse experiences of HIV-positive and HIV-negative women. Significant differences were found between HIV-positive women and HIV-negative women in the pattern of abuse experienced as a child, the frequency of abuse as an adult, and the involvement of women's drinking before or during a violent episode.

The possible reasons for the greater violence reported by HIV-positive women compared to HIV-negative women are probably as varied as the number of abused women and are not the focus of this study. However, some light is shed by the experiences of women provided for in the qualitative portion of the interview. Issues related to HIV, such as social isolation, economic dependence, drug use dependence, and low self-esteem, were themes found often in the transcripts of HIV-positive women. From women's words, there was the potential for abused HIV-positive women to believe that they are not worthy of a better relationship because of their HIV status, and that they are forced to stay with their abusive partner for fear of being alone.

HIV-positive women in the study were also more likely to report their involvement with substance use in the abusive situations. Specifically, HIV-positive women were more likely to report that they had been drinking or using drugs prior to or during the physical abuse perpetrated by an intimate partner. These results are not surprising given that HIV-positive women in the study were also significantly more likely to report that they had ever used any type of hard drug (cocaine, crack, heroin) than the HIV-negative women.

In addition, although not statistically significant, HIV-positive women in the study were also more likely to report that their intimate partners had been using drugs prior to or during the physical abuse. However, regardless of women's HIV status, what is apparent from the results is that, in all instances, the rate of intimate partner's use of alcohol and drugs is far higher than the women's reported use.

Partner's drug and alcohol use had been implicated as a probable reason behind

the increased injury to women as a result of domestic violence.[39] Along a similar vein,[40] a case-control study found that intimate partners who abuse women are more likely to use cocaine than nonabusive partners. These two recent studies, along with our study findings, demonstrate the need in domestic violence research to investigate further the involvement of intimate partner's alcohol and drug use in the instigation, progression, and outcomes of abuse toward women.

These findings have implications on many clinical and research fronts. Many current HIV prevention programs for at-risk women have neglected to take into consideration the multifaceted, complex contexts of the women's lives. Research examining the intersection of these two epidemics suggests that HIV prevention services need to be expanded to include violence and other elements of women's lives, such as sexual power imbalances, economic dependence, and the priorities of daily life.[41,42]

For example, Wingood and DiClemente[43] found that, among a sample of African American women, those women in abusive relationships were more likely to report never using condoms. Women with abusive partners were more likely than women without abuse to report experiencing verbal abuse from their partners following a request to use condoms. Our own work had similar findings, demonstrating that more frequent abuse was a significant risk factor for not using condoms with the abusive partner, even after adjusting for women's HIV status and other covariates.[41] Of additional concern is how women's fear of potential violence affects their willingness or ability to broach the topic with sexual partners. While our results stand on their own, underscoring the importance of violence as a threat to the well-being of low-income, urban women, the potential that such violence may increase women's HIV risk makes the issue an even more urgent one to address.

The finding that childhood abuse was a significant risk factor for adult abuse, even adjusting for age, income, and HIV status, is noteworthy. Earlier work has shown that childhood sexual abuse is a risk factor for HIV.[10] The mechanisms by which childhood abuse affect subsequent risk for HIV or domestic violence remain to be elucidated in future research. In the meantime, advocates and service providers in the often-disparate fields of child abuse, domestic violence, and HIV need to coordinate their efforts. Enhanced early intervention services are clearly needed to reduce the chances that survivors of child abuse become victims of domestic violence or infected with HIV.

The cross-sectional nature of the study design is a potential limitation of the study, although we are not drawing causal inferences, but rather comparing estimated rates. In addition, the women included in the study are representative of the HIV-positive women residing in the Baltimore City area and may not be representative of the experiences of all women in the United States. The state of Maryland had instituted rigorous reporting requirements for childhood abuse and may have hampered our ability to compare our rates of abuse to those found in other surveys. Due to the reporting requirements, a rather conservative rate of abuse would be expected to be reported by the women. Therefore, the astonishing rates that we did find with regard to childhood abuse should be tempered by the potential increase in the reality of the prevalence of this type of abuse among HIV-positive and at-risk HIV-negative women.

Relying on women's recall is another limitation, although we would argue that the salience of abuse is probably higher than for many other health problems. Moreover, we followed conventions and state-of-the-art items so that our results are comparable to others in the literature.

A strength of the study was the incorporation of various forms of abuse, including the less widely studied emotional abuse, as well as abuse perpetrated outside the confines of an intimate partner relationship. To develop a more complete picture of low-income women's experiences of abuse, women were also asked about the lifetime prevalence and frequency of physical and sexual abuse. If the study interview instrument had only asked women about the prevalence of various forms of abuse, the results would have indicated that there were no discernible differences between HIV-positive and HIV-negative women with regard to the experience of abuse.

Whereas even the one-time abuse of a woman is too much for society to bear, our results indicate that HIV-positive women are significantly more likely to endure repeated abusive situations than HIV-negative women. In addition, the increased rate of partner's alcohol and drug use prior to or during abusive events over women's use points to a possible instigating factor to intimate partner abuse in need of longitudinal, prospective study. Similarly, the field of HIV and lifetime abuse is in need of increased comprehensive investigation as it is widely reported that abuse experienced as a child and abuse experienced as an adult carry damaging consequences for a woman's quality of life.[3,44]

ACKNOWLEDGEMENT

This study was supported by the National Institute of Mental Health (2RO1MH53821).

We wish to acknowledge and thank the participating recruitment sites and women who gave us their time and insights and Jessica Burke, Mary Garza, Elizabeth Tyler, Vivian Tyler, Molene Martin, Suzanne Maman, Pamela Fischer, Mary McCaul, and Jacqueline Campbell for their assistance.

REFERENCES

1. Gielen AC, McDonnell KA, Burke JG, O'Campo P. Women's lives after and HIV positive diagnosis: disclosure and violence. *Matern Child Health J*. 2000;4:111–120.
2. Choi KH, Binson D, Adelson M, Catania J. Sexual harassment, sexual coercion and HIV risk among US adults 18–49 years. *AIDS Behav*. 1998;2:33–40.
3. Gielen AC, McDonnell KA, Wu A, Faden R, O'Campo P. Psychosocial correlates of quality of life among women living with HIV: implications for intervention. *Soc Sci Med*. 2001;52:315–322.
4. Gielen AC, O'Campo P, Faden RR, Eke A. Women's disclosure of HIV status: experiences of mistreatment and violence in an urban setting. *Women Health*. 1997;25:19–31.
5. Kalichman SC, Williams EA, Cherry C, Belcher L, Nachimson D. Sexual coercion, domestic violence and negotiating condom use among low-income African American women. *J Womens Health*. 1998;85:1251–1525.
6. Molina L, Basinait-Smith C. Letters to the editor: revisiting the intersection between domestic abuse and HIV risk. *Am J Public Health*. 1998;88:1267–1268.
7. North RL, Rothenberg KH. Partner notification and the threat of domestic violence against women with HIV infection. *N Engl J Med*. 1993;329:1194–1196.
8. Rothenberg KH, Paskey SJ, Reuland MM, Zimmerman SI, North RL. Domestic violence and partner notification: Implications for treatment and counseling of women with HIV. J Am Med Womens Assoc. 1995;50:87–93.
9. Zierler S, Cunningham WE, Andersen R, et al. Violence victimization after HIV infection in a US probability sample of adult patients in primary care. *Am J Public Health*. 2000;90:208–215.
10. Zieler S, Witbeck B, Mayer K. Sexual violence against women living with or at risk for HIV infection. *Am J Prev Med*. 1996;12:304–310.

11. Maman S, Campbell J, Sweat MD, Gielen AC. The intersections of HIV and violence: directions for future research and interventions. *Soc Sci Med*. 2000;50:459–478.
12. Wyatt GE, Myers HF, Williams JK, et al. Does a history of trauma contribute to HIV risk for women of color? Implication for intervention and policy. *Am J Public Health*. 2002;92:660–665.
13. Kimerling R, Goldsmith R. Links between exposure to violence and HIV-infection: implications for substance abuse treatment with women. *Alcohol Treat Q*. 2000;18:61–69.
14. Garcia-Moreno C, Watts C. Violence against women: its importance for HIV/AIDS. *AIDS*. 2000;14:S253–S265.
15. El-Bassel N, Gilbert L, Rajah V, Foleno A, Frye V. Fear and violence: raising the HIV stakes. *AIDS Educ Prev*. 2000;12:154–170.
16. Wyatt GE, Axelrod J, Chin D, et al. Examining patterns of vulnerability to domestic violence among African American women. *Violence Against Women*. 2000;6:495–514.
17. Cohen M, Deamant C, Barkan S, et al. Domestic violence and childhood sexual abuse in HIV-infected women and women at risk for HIV. *Am J Public Health*. 2000;90: 560–565.
18. Vlahov D, Wientge D, Moore J, et al. Violence against women with or at risk for HIV infection. *AIDS Behav*. 1998;2:53–60.
19. Axelrod J, Myers HF, Durvasula R, et al. The impact of relationship violence, HIV, and ethnicity on adjustment in women. *Cultur Divers Ethni Minor Psychol*. 1999;5: 263–275.
20. Lodico M, DiClemente R. The association between childhood sexual abuse and prevalence of HIV-risk related behaviors. *Clin Pediatr*. August 1994:498–502.
21. Wingood GM, DiClemente RJ. Rape among African American women: sexual psychological, and social correlated predisposing survivors to risk of STD/HIV. *J Womens Health*. 1998;7:77–84.
22. Zierler S, Feingod L, Laufer D, et al. Adult survivors of childhood sexual abuse and subsequent risk of HIV infection. *Am J Public Health*. 1991;81:572–575.
23. El-Bassel N, Witte SS, Wada T, Gilbert L, Wallace J. Correlates of partner abuse among female street-based sex workers: substance abuse, history of childhood abuse and HIV risks. *AIDS Patient Care STDs*. 2001;15:41–51.
24. Smith JW. Addiction medicine and domestic violence. *J Subst Abuse Treat*. 2000;19: 329–338.
24. Augerbraun M, Wilson TE, Allister L. Domestic violence reported by women attending a sexually transmitted disease clinic. *Sex Transm Dis*. 2001;28:143–147.
25. Brewer DD, Fleming CB, Haggerty KP, Catalano RF. Drug use predictors of partner violence in opiate-dependent women. *Violence Vict*. 1998;13:107–115.
27. Martin SL, Clark KA, Lynch SR, Kupper LL, Cilenti D. Violence in the lives of pregnant teenage women: associations with multiple substance use. *Am J Drug Alcohol Abuse*. 1999;25:425–440.
28. Bhatt RV. Domestic violence and substance abuse. *Int J Gynaecol Obstet*. 1998;63: S25–S31.
29. 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;27:161–175.
30. Plichta SB. Violence and abuse: implications for women's health. In Falik MM, Collins KS, eds. *Women's Health: The Commonwealth Survey*. Baltimore, MD: Johns Hopkins University Press; 1996:237–272.
31. Plichta SB, Falik M. Prevalence of violence and its implication for women's health. *Womens Health Issues*. 2001;11:244–258.
32. Jones AS, Gielen AC, Campbell JC, et al. Annual and lifetime prevalence of partner abuse in a sample of female HMO enrollees. *Womens Health Issues*. 1999;9:295–305.
33. Tjaden P, Thoennes N. *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey*. Washington, DC: National Institute of Justice, Centers for Disease Control and Prevention; 1998.

34. *QSR NUD*IST. Software for Qualitative Data Analysis*. Thousand Oaks, CA: Scolari; 1997.
35. Crowell NA, Burgess, AW. *Understanding Violence Against Women*. Washington, DC: National Academy of Sciences, American Psychological Association; 1996.
36. Heise L, Ellsberg M, Gottenmoeller M. *Ending Violence Against Women*. Population Reports, Series L, No. 11. Baltimore, MD: Johns Hopkins University, School of Public Health, Population Information Program; 1999.
37. Gilbert L, El-Bassel N, Schilling RF, Friedman E. Childhood abuse as a risk factor for partner abuse among women in methadone maintenance. *A J Drug Alcohol Abuse*. 1997;23:581–595.
38. Koenig LJ, Whitaker DJ, Royce RA, Wilson TE, Callahan MR, Fernandez MI. Violence during pregnancy among women with or at risk for HIV infection. *Am J Public Health*. 2002;92:367–370.
39. Kyriacou DN, Anglin D, Taliaferro E, et al. Risk factors for injury to women from domestic violence. *N Engl J Med*. 1999;341:1892–1898.
40. Grisso JA, Schwarz DF, Hirschinger N, et al. Violent injuries among women in an urban area. *N Engl J Med*. 1999;341:1899–1905.
41. Gielen AC, McDonnell KA, O'Campo P. Intimate partner violence, HIV status, and sexual risk reduction. *AIDS Behav*. 2002;6:107–116.
42. Zierler S, Krieger N. Reframing women's risk: social inequalities and HIV infection. *Annu Rev Public Health*. 1997;18:401–436.
43. Wingood G, DiClemente R. The effects of an abusive primary partner on the condom use and sexual negotiation practices of African-American women. *Am J Public Health*. 1997;87:1016–1018.
44. McDonnell KA, Gielen AC, Wu A, O'Campo P, Faden R. Measuring health related quality of life among women living with HIV. *Qual Life Res*. 2000;9:931–940.