

# Childhood Sexual Abuse and Risk Behaviors Among Men at High Risk for HIV Infection

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Mounting research evidence suggests that men with a history of unwanted sexual activity during childhood are more likely than those without such a history to engage in sexual practices that place them at risk for contracting HIV. For example, Zierler et al.<sup>1</sup> found that, in comparison with men not reporting childhood sexual abuse, male survivors of childhood sexual abuse were nearly 8 times more likely to report involvement in prostitution, 2.4 times more likely to have multiple partners, and 1.2 times more likely to have anonymous sexual partners. Bartholow et al.<sup>2</sup> found that gay and bisexual men who indicated that they had been victims of forced sexual contact as children engaged in unprotected receptive anal intercourse, exchanged sex for money or drugs, and had higher rates of positive tests for syphilis and HIV than did men not reporting such abuse.

Carballo-Diequez and Dolezal<sup>3</sup> studied the association between unwanted sexual activity during childhood and HIV risk practices among Puerto Rican men who have sex with men. Participants who reported having unwanted sexual activity before age 13 with a partner 4 or more years older than themselves were more likely than other men in the sample to report unprotected receptive anal intercourse. Studies also have shown that men who report a history of unwanted sexual activity during childhood are more likely to practice behaviors, including substance abuse, that increase their risk of engaging in unprotected sex.<sup>2,4</sup>

Recent increased attention has focused on the study of unwanted sexual activity during childhood among men. Although studies addressing unwanted sexual activity during childhood among men have been conducted over the past 20 years, most included a relatively small number of participants—primarily men reporting sexual activity with men or men undergoing treatment for mental illness. If we are to fully understand the asso-

**Objectives.** This study examined the association between unwanted sexual activity during childhood and risky behaviors among a sample of predominantly African American and Hispanic men.

**Methods.** Data were obtained from baseline interviews completed by 2676 men enrolled in a multisite HIV prevention trial.

**Results.** Approximately 25% of the men reported unwanted or uninvited sexual activity before 13 years of age, with Hispanic men more likely than African American men to report unwanted sexual activity during childhood. Men with a history of unwanted sexual activity during childhood were more likely to report unwanted sexual activity since age 13, the buying and selling of sex, problems with alcohol, and drug use. Men who reported unwanted sexual activity during childhood also reported a significantly greater frequency of unprotected sexual acts and more partners.

**Conclusions.** Among men at high risk for HIV infection, unwanted sexual activity during childhood is more widespread than previously described and can increase the risk of participating in harmful health practices during adulthood, including risky sexual behaviors. (*Am J Public Health.* 2002;92:214-219)

ciation between unwanted sexual activity during childhood and risky sexual behaviors, then it is important to examine unwanted sexual activity during childhood among other groups of men, particularly those who are at most risk for contracting sexually transmitted diseases (STDs), including HIV. Understanding the nature of this relationship can have significant implications for the development of HIV prevention and counseling programs for those at greatest risk.

The purpose of the current study was (1) to determine whether men with a history of unwanted sexual activity during childhood engaged in more high-risk sexual behaviors and reported more problems with alcohol and drug use than did men without such a history and (2) to determine the relative contribution of unwanted sexual activity during childhood and other risky health practices to high-risk sexual behaviors. Data for this study were obtained from the National Institute of Mental Health (NIMH) Multisite HIV Prevention Trial, a national study that enrolled predominantly African American and Hispanic or Latino men and women recruited from STD clinics and health service organizations.

## METHODS

The NIMH Multisite HIV Prevention Trial was designed to test the efficacy of an HIV prevention intervention among adults at high risk for contracting HIV (see NIMH Multisite HIV Prevention Trial<sup>5</sup> for a more complete description of the trial). Researchers recruited men and women from 37 STD clinics and women from health services organizations in 7 regional sites located in or near the following cities: Atlanta, Ga; Baltimore, Md; Milwaukee, Wis; Los Angeles, Calif; and New York City. Eligibility criteria included unprotected vaginal or anal intercourse in the past 90 days and having at least 1 of the following during the past 90 days: an STD, sex with a new partner, more than 1 sexual partner, sex with a partner they knew also had other sexual partners, sex with an injection drug user, or sex with a person infected with HIV.

Before being randomized to treatment and control groups, participants gave written informed consent and completed a baseline assessment that was administered by trained interviewers. Participants received \$10 to \$20 for their time. A total of 6022 men and women meeting the inclusion criteria completed the baseline assessment. Because the

focus of the current study was on men, only data from the 2676 men who completed this assessment were included in the present analyses.

## Measures

*Unwanted sexual activity during childhood.* We measured unwanted sexual activity during childhood by response to the following item: “Before you were 13, did you ever have unwanted or uninvited sexual activity with anyone who was 5 or more years older than you?” We classified participants replying in the affirmative as having unwanted sexual activity during childhood.

*Sexual risk behaviors.* We assessed 2 different sexual risk behaviors: number of unprotected sexual acts and number of partners. Interviewers asked participants a series of questions about their sexual practices during the past 90 days. The first question determined the number of partners with whom the participants had had sexual intercourse. Interviewers next asked how many times a participant had had intercourse with the first 5 partners and, for each act, whether a condom was used. Interviewers then asked participants with more than 5 partners to estimate the number of times they had had sex and the number of times they had used a condom with these additional partners. Researchers computed the number of unprotected sexual acts and the number of partners based on these answers.

*Bartering sex.* In response to further questioning, participants indicated whether, during the past 90 days, they had (1) received money or drugs in exchange for sex, (2) given money or drugs in exchange for sex, or (3) received food or a place to stay in exchange for sex.

*Unwanted sexual activity during adulthood.* To assess unwanted sexual activity during adulthood, interviewers asked participants 3 questions:

1. Since you turned 13, did anyone ever use verbal pressure or verbal threats to make you have unwanted or uninvited sex?

2. Since you turned 13, has anyone used physical force or a weapon to force you to have any sex?

3. During the past 90 days, have you had unwanted or uninvited sex with someone be-

cause he or she threatened you or physically forced you?

Participants who answered “yes” to any 1 of the 3 items were classified as having had unwanted sexual activity as an adult.

*Alcohol use problems.* The study assessed problems related to alcohol use during the past 90 days with the CAGE, a 4-item screening instrument.<sup>6</sup> Respondents answer “yes” or “no” to each of the following questions:

- Have you ever felt that you ought to Cut down on your drinking?
- Have you ever been Annoyed by people criticizing your drinking?
- Have you ever felt Guilty about your drinking?
- Have you ever had a drink first thing in the morning (Eye opener) to steady your nerves or get rid of a hangover?

The instrument allows researchers to add affirmative responses to yield total possible scores ranging from 0 to 4. Previous researchers have shown that CAGE scores of 2 or more are sensitive and specific for identifying individuals with chronic alcohol use problems.<sup>7</sup>

*Drug use.* A series of drug use questions determined whether, during the past 90 days, participants had used any of the following: marijuana or hashish, sedatives or barbiturates, tranquilizers, phencyclidine, hallucinogens, nitrites or poppers, crack or free base, sniffing or snorting cocaine or heroin, inhalants, amphetamines, or Ecstasy. Another query determined whether participants had injected any drug in the past 90 days. Participants reporting “yes” to any of these items were classified as using drugs. Because research has shown that cocaine, heroin, and injection drugs are associated with sexual risk behavior,<sup>8</sup> participants were further classified by type of drug used: (1) participants reporting use of cocaine or heroin in any form or injection of drugs and (2) participants reporting use of any other drug.

*Demographics.* The interviewers also obtained information about each participant’s sex, racial/ethnic background, age (<25, 25–35, >35), partner status (living with a partner; not living with a partner), and educa-

tion (high school degree or more; less than a high school degree).

## Data Analysis

Frequencies and percentages were calculated for all study variables. For the first set of analyses, a series of 4 logistic regression models were fit to assess the relation between unwanted sexual activity during childhood and the following dependent variables one at a time: unwanted sexual activity during adulthood; exchange of sex for money, drugs, or food or a place to stay; alcohol problems (CAGE score of 2 or more); and drug use. In each model, the dependent variable was coded 0 for participants not reporting the activity and 1 for those reporting the activity. In addition to the unwanted sexual activity during childhood indicator, independent variables included in each logistic regression model were age, race/ethnicity, education, partner status, and study site. All were entered as categorical variables with categories as defined above.

Next, a series of linear regression models were used to examine the effect of unwanted sexual activity during childhood on risky sexual behavior. Five sequential models were fit to each of the 2 sexual risk behaviors—frequency of unprotected sexual acts and number of partners. Model 1 included only the unwanted sexual activity during childhood indicator. All subsequent models included the unwanted sexual activity during childhood indicator, age, race/ethnicity, education, partner status, and study site as independent variables. In addition to these core variables, model 3 included effects for alcohol problems and drug use, model 4 included exchange of sex (for money, drugs, or food or a place to stay) variables in addition to the core set, and model 5 included the unwanted sexual activity during adulthood indicator in addition to the core variables.

## RESULTS

The 2676 male participants ranged in age from 18 to 70 (mean age=32 years; SD=8.8). Overall, 73.4% of the male participants were Black non-Hispanic, and 16.6% were Hispanic. Of the male respondents, 61% had a high school degree, and 29.6% were living

**TABLE 1—Prevalence of Risk Behaviors Among Men Reporting Unwanted Sexual Activity During Childhood (USC) and Men Not Reporting USC**

	Men Without USC % Reporting Behavior	Men With USC % Reporting Behavior	USC/No USC	Odds Ratio <sup>a</sup> 95% CI
Unwanted sexual activity during adulthood	6.66	34.42	6.79**	5.34, 8.63
Exchange of sex				
Bought sex	26.29	35.16	1.59**	1.30, 1.95
Sold sex	7.11	14.09	2.22**	1.67, 2.95
Traded sex for food or place to stay	3.51	5.64	1.61*	1.07, 2.44
Alcohol problems	44.96	50.60	1.23*	1.02, 1.48
Drug use				
Cocaine, heroin, injection	38.06	47.33	1.64**	1.34, 2.00
Other, marijuana	25.74	22.85	0.84	0.67, 1.06

Note. CI = confidence interval.

<sup>a</sup>Odds ratio and 95% CI from logistic regression models were fit to each variable and included age, USC, race/ethnicity, education, partner status, and study site as independent variables.

\* $P < .05$ ; \*\* $P < .001$ .

with their sexual partner. All participants reported at least 1 sexual act within the previous 90 days. One quarter (25.2%) of the sample reported unwanted or uninvited sexual activity before they were 13 years of age. No differences were noted between men reporting a history of unwanted sexual activity during childhood and those not reporting such a history with respect to age, education, or partner status. However, Hispanic men were more likely than non-Hispanic Black men to report unwanted sexual activity before age 13.

The results shown in Table 1 indicate that for most behaviors examined, the percentage of the respondents reporting these behaviors was higher among those with a history of unwanted sexual activity during childhood than among those without such a history. Men with a history of unwanted sexual activity during childhood were 6.79 times as likely as those without such a history to report unwanted sexual activity since age 13. They were also 1.59 times as likely to buy sex, 2.22 times as likely to sell sex, and 1.61 times as likely to trade sex for food or a place to stay. In regard to substance use, men who experienced unwanted sexual activity during childhood were 1.23 times as likely to report problems with alcohol and 1.64 times as likely to use cocaine, heroin, or injection drugs as were men who did not experience such events.

With respect to sexual behaviors that place men at risk for contracting HIV, the average number of unprotected acts during the past 90 days was 31.9 (SE=2.1, median=14) for men reporting unwanted sexual activity during childhood and 26.5 (SE=0.95, median=12) for men not reporting such experiences. The average number of partners was 6.4 (SE=0.53, median=3) for men with a history of unwanted sexual activity during childhood and 5.0 (SE=0.30, median=2) for men without such a history.

In the series of regression analyses, we found a significant association when frequency of unprotected sexual acts was regressed on unwanted sexual activity during childhood (Table 2). This association remained significant when demographic variables alone and when substance use variables were added in separate models. However, when exchange of sex for money or drugs and unwanted sexual activity after age 13 were each added separately to the model with unwanted sexual activity during childhood and demographic variables, unwanted sexual activity during childhood was no longer a significant predictor of frequency of unprotected sexual acts.

In a second series of regression analyses conducted with number of partners as the dependent variable, similar findings were noted (Table 3); that is, unwanted sexual activity during childhood contributed significantly to

the number of partners when entered into the model alone and with the demographic and substance use variables. Additionally, for this outcome, unwanted sexual activity during childhood remained a significant predictor when the unwanted sexual activity in adulthood indicator was included along with the demographic variables.

## DISCUSSION

In this study, men with a history of unwanted sexual activity during childhood were significantly more likely than men without such a history to report risky sexual behaviors, alcohol problems, and drug use. These findings extend the findings of other investigators who have studied the long-term outcomes associated with childhood sexual abuse among gay or bisexual men and men being treated for mental health problems and substance abuse.<sup>1-3,9</sup> In our study, men reporting unwanted sexual activity during childhood were 6.79 times as likely as those not reporting such experiences to report some form of unwanted sexual activity after age 13. These findings parallel those of studies examining the long-term outcomes of childhood sexual abuse among women<sup>10,11</sup> and suggest that some consequences of childhood sexual abuse may be similar for men and women.

Some researchers have reported an association between forced sexual activity during

TABLE 2—Results From a Series of Regression Models Fit to Frequency of Unprotected Sexual Acts<sup>a</sup>

	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)	Model 4 β (SE)	Model 5 β (SE)
Unwanted sexual activity during childhood	0.34 (0.14)*	0.35 (0.13)*	0.29 (0.13) *	0.19 (0.13)	0.22 (0.14)
Age, y					
< 25		0.08 (0.16)	0.22 (0.17)	0.21 (0.16)	0.09 (0.16)
25–35		-0.02 (0.13)	0.04 (0.13)	0.04 (0.13)	-0.02 (0.13)
Race/ethnicity <sup>b</sup>					
Hispanic, non-Black		-0.25 (0.25)	-0.22 (0.25)	-0.21 (0.24)	-0.25 (0.25)
Hispanic Black		-0.17 (0.27)	-0.20 (0.27)	-0.18 (0.27)	-0.19 (0.27)
Non-Hispanic, non-Black		-0.37 (0.28)	-0.36 (0.28)	-0.25 (0.28)	-0.38 (0.28)
High school degree		-0.05 (0.12)	0.00 (0.12)	0.05 (0.12)	-0.05 (0.12)
Lives with sexual partner		1.66 (0.13)**	1.68 (0.13)**	1.71 (0.13)**	1.66 (0.13)**
Alcohol problems			0.11 (0.12)		
Drug use					
Cocaine, heroin, injection			0.65 (0.14)**		
Other, marijuana			0.43 (0.16)*		
Exchange of sex					
Bought sex				0.22 (0.14)	
Sold sex				1.60 (0.21)**	
Traded sex				1.03 (0.30)**	
Unwanted sexual activity during adulthood					0.47 (0.18)*

<sup>a</sup>The square root transformation was used to help normalize the distribution of unprotected acts, and 5 linear regression models were fit to the transformed outcome. Model 1 included the unwanted sexual activity during childhood indicator only. Each subsequent model included the unwanted sexual activity during childhood indicator, study center, and the variables shown in the respective columns.

<sup>b</sup>Black non-Hispanic race/ethnicity was the reference group and does not appear in this table.

\* $P < .05$ ; \*\* $P < .001$ .

childhood and alcohol or drug use, as was found in this research.<sup>1,2,4</sup> However, the results of other studies examining these associations were not consistent with our findings.<sup>2,12</sup> Given the relatively small number of studies exploring the long-term outcomes associated with unwanted childhood sexual activity among men, the diversity of samples, the small sample sizes, and the different approaches used to measure substance use, inconsistent findings are not surprising. Yet, the discrepancies in the study results underscore the need for further research to understand the conditions under which men who are forced to have sex as children later use alcohol or illicit drugs and the extent to which substance use is related to traumatic experiences of childhood.

To help elucidate the contribution of unwanted sexual activity during childhood to risky sexual behavior in the context of other risky health practices in adulthood, a series of regression analyses were conducted. In re-

gression models that included unwanted sexual activity during childhood alone and with demographic and substance use variables, unwanted sexual activity during childhood explained a significant amount of the variation in frequency of unprotected sexual acts and number of partners. In addition, with adjustment for unwanted sexual activity in adulthood, a significant association remained between unwanted sexual activity during childhood and number of partners. These results suggest that men with a history of unwanted sexual activity during childhood are at greater risk for engaging in sexual practices that increase their chances of HIV infection.

However, these findings hint at a more complex association between unwanted sexual activity during childhood and risky sexual practices among men who exchange sex for money or drugs or who report unwanted sexual activity as an adult. The results of the analyses suggest that exchange of sex for money or drugs might act as a mediator be-

tween unwanted sexual activity during childhood and both frequency of unprotected sexual acts and number of partners and that unwanted sexual activity in adulthood might act as a mediator between unwanted sexual activity during childhood and frequency of unprotected acts. Thus, men who report unwanted sexual activity during childhood appear more likely to exchange sex for money or drugs, and this practice increases their probability of engaging in risky sexual behaviors.

The association between exchange of sex for money or drugs and number of partners might be self-explanatory because trading sex is likely to lead to both a greater number of sexual acts and a greater number of partners. However, additional research is necessary to understand why men who appear to be at greater risk for exposure to HIV and other STDs because they trade sex with multiple partners fail to use protection. Likewise, additional research is necessary to understand

TABLE 3—Results From a Series of Regression Models Fit to Number of Partners<sup>a</sup>

	Model 1 β (SE)	Model 2 β (SE)	Model 3 β (SE)	Model 4 β (SE)	Model 5 β (SE)
Unwanted sexual activity during childhood	0.21 (0.06)**	0.20 (0.06)**	0.16 (0.06)*	0.08 (0.05)	0.12 (0.06)*
Age, y					
< 25		-0.00 (0.07)	0.13 (0.07)	0.23 (0.06)**	-0.00 (0.07)
25–35		-0.01 (0.06)	0.04 (0.06)	0.08 (0.05)	-0.01 (0.06)
Race/ethnicity <sup>b</sup>					
Hispanic, non-Black		-0.20 (0.10)*	-0.20 (0.10)*	-0.15 (0.10)	-0.21 (0.10)*
Hispanic Black		-0.003 (0.11)	-0.02 (0.11)	0.03 (0.11)	-0.01 (0.11)
Non-Hispanic, non-Black		-0.24 (0.12)*	-0.22 (0.12)	-0.12 (0.11)	-0.24 (0.12)*
High school degree		0.05 (0.05)	0.08 (0.05)	0.14 (0.05)*	0.05 (0.05)
Lives with sexual partner		-0.19 (0.05)**	-0.18 (0.05)**	-0.10 (0.05)*	-0.19 (0.05)**
Alcohol problems			0.03 (0.05)		
Drug use					
Cocaine, heroin, injection			0.39 (0.06)**		
Other/marijuana			0.11 (0.07)		
Exchange of sex					
Bought sex				0.69 (0.06)**	
Sold sex				0.70 (0.09)**	
Traded sex				0.40 (0.12)**	
Unwanted sexual activity during adulthood					0.29 (0.07)**

<sup>a</sup>The square root transformation was used to help normalize the distribution of number of partners, and 5 linear regression models were fit to the transformed outcome. Model 1 included the unwanted sexual activity during childhood indicator only. Each subsequent model included the unwanted sexual activity during childhood indicator, study center, and the variables shown in the respective columns.

<sup>b</sup>Black non-Hispanic race/ethnicity was the reference group and does not appear in this table.

\* $P < .05$ ; \*\*  $P < .001$ .

how unwanted sexual activity as an adult mediates the relation between unwanted sexual activity during childhood and frequency of unprotected sexual acts. Research among women who engage in risky sexual practices and who report both unwanted sexual activity during childhood and unwanted sexual activity as an adult suggests that issues surrounding power in relationships underlie the association.<sup>13</sup> Power dynamics also might play a role in the greater propensity for having sex with multiple partners among men in this study and should be explored in future studies.

An additional finding of this study was that Hispanic men were more likely to report unwanted sexual activity during childhood than were non-Hispanic Black men. Because this study did not focus on racial/ethnic differences in unwanted sexual activity during childhood, we were unable to conduct additional analyses that might shed further light on this result. Nonetheless, the observed association is interesting and indicates that further

research is necessary to determine whether it represents a chance finding that might capture certain characteristics of this particular sample or if, indeed, unwanted sexual activity during childhood is more prevalent among Hispanic males or at least among those Hispanic males who seek health care at STD clinics.

### Limitations

Although our findings suggested that men who report unwanted sexual activity during childhood are at risk for unwanted sexual activity in adulthood, involvement in trading sex, alcohol problems, and drug use, the limitations of the cross-sectional design did not permit us to rule out the possibility that men who engage in these risk behaviors may attempt to justify their behavior by characterizing their upbringing as abusive. A second limitation is the use of self-report measures that require participants to recall events that occurred during their childhood. Retrospective

recall of information is highly dependent on memory, which is not always reliable for events occurring many years previously. In addition to these limitations, the results can only be generalized to a relatively small group of predominantly Hispanic or Latino and African American men who are considered at high risk for contracting HIV because of their unsafe sexual and drug use behaviors.

### Implications

Although the findings of this study are limited to men who were at high risk for contracting HIV through risky sexual behavior, the results highlight the importance of childhood sexual abuse among men as a public health problem. In reducing sexual risk taking among such men, it might be useful to identify men who have experienced unwanted sexual activity during childhood and to provide opportunities for counseling around these issues. Because the proportion of men in this sample reporting unwanted

sexual activity during childhood was relatively high (25%), screening for unwanted sexual activity during childhood among men seeking care in STD clinics could be the first step in identifying men with abuse histories and should be included as part of the sexual history interview. ■

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*Note. The study was approved by the institutional review board of each of the 7 research sites. All participants volunteered for participation in the study. They were given information about the study that included risks and benefits and study procedures. Participants were required to sign an informed consent form before participation.*

### Contributors

Research Steering Committee members designed the multisite trial and were responsible for overseeing activities at each of study sites. Collaborating scientists made substantial contributions to the design of the study and the implementation at study sites. Site managers were responsible for the implementation of the trial at the study sites. The Data Coordinating Center was responsi-

ble for coordination of study activities across sites and analysis of data. Core Laboratory personnel analyzed biological outcomes. Research Support Office personnel monitored the implementation of the study. The Data Safety and Monitoring Board monitored study results.

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