

# Extramarital Sex and HIV Risk Behavior among US Adults: Results from the National AIDS Behavioral Survey

## ABSTRACT

Data from the National AIDS Behavioral Survey were used to examine the social distribution of extramarital sex and risk for human immunodeficiency virus (HIV) infection among married individuals in the United States. Of 1686 married respondents living across the United States, 2.2% reported extramarital sex; of 3827 married respondents living in 23 urban areas with large Hispanic or African-American populations, 2.5% reported having sexual partners outside marriage. The data indicate that the correlates of extramarital sex varied by race/ethnicity. Low levels of condom use were found among people reporting extramarital sex (8% to 19% consistent users). (*Am J Public Health*. 1994;84:2003-2007)

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### Introduction

In the United States, the norm of sexual monogamy asserts considerable influence on relationships ranging from state-sanctioned marriages to less formal dating relationships. For married couples, the norm of sexual monogamy holds considerable sway at the attitudinal level,<sup>1</sup> but behavioral adherence to this norm is less rigid. An estimated 26% to 50% of men and 21% to 38% of women have reported at least one lifetime occurrence of extramarital sex.<sup>2-5</sup> The public health significance of extramarital sex has seldom been considered, but recently investigators have begun to consider extramarital sex in the context of human immunodeficiency virus (HIV) and other sexually transmitted diseases.<sup>6</sup> Research on racial/ethnic differences in extramarital sex is scant.

The present study examined the prevalence and correlates of extramarital sex among heterosexual respondents from the National AIDS Behavioral Survey<sup>7</sup>; the focus was on White, African American, and Hispanic populations. For respondents reporting extramarital sex, we examined condom use with both their primary and secondary sexual partners as an index of safe sexual practices.

### Methods

The 1990/91 National AIDS Behavioral Survey involved interviews of 13 786 people 18 to 75 years of age. Data were collected by telephone by means of random-digit dialing procedures. We oversampled African Americans and Hispanics for adequate representation. Interviews were conducted in either English or Spanish. The survey was composed of three interlaced samples (for details on sample construction and weighting, see Catania et al.<sup>7</sup>): a national sample (total unweighted n = 2673, married n = 1526; response rate = 70%), an urban sample of 23 cities with high prevalences of AIDS

cases (total unweighted n = 8263, married n = 3197; response rate = 65%), and a special Hispanic urban sample (total unweighted n = 4511, married n = 2343; cooperation rate = 79%) (for demographics, see Table 1).

Extramarital sex was defined as having more than one partner during the year prior to the survey based on the following question: "Over the past 12 months, how many different people have you had either vaginal or anal intercourse with?" (0.2% nonresponse across samples). Since types of sexual partners were not ascertained, some respondents who had only one sexual partner, but whose partner was not their spouse, may have been misclassified as maritally monogamous. Also, those who changed during the 12-month reporting period from marital monogamy to nonmonogamy following divorce or the death of their spouse could not be distinguished from those who were married and nonmonogamous in tandem. We focused on condom use during all acts of vaginal intercourse over the previous 6 months since all extramarital sex respondents were having vaginal intercourse. Six-month estimates of sexual behavior have been shown to have good reliability and validity.<sup>8-13</sup> Condom use was categorized into three groups: never (0%), sometimes (1% to 99%), and always (100%).

To examine the correlates of extramarital sex, we restricted our analysis to married 18- to 49-year-olds since this age group allowed us to use both the urban sample and the large "special" Hispanic urban sample for a more in-depth look at Hispanics. The resulting White sample

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**TABLE 1—Sociodemographic Characteristics of Married Individuals 18 to 75 Years of Age in the National, Urban, and Special Hispanic Samples**

	National Sample				Urban Sample				Special Hispanic Sample			
	Unweighted (n = 1528)		Weighted (n = 1526)		Unweighted (n = 3205)		Weighted (n = 3197)		Unweighted (n = 2344)		Weighted (n = 2343)	
	%	(No.)	%	(No.)	%	(No.)	%	(No.)	%	(No.)	%	(No.)
<b>Race</b>												
White	82	(1250)	83	(1265)	46	(1479)	63	(2009)	...		...	
African American	8	(125)	8	(114)	24	(765)	16	(522)	...		...	
Hispanic	8	(119)	6	(100)	27	(872)	16	(506)	...		...	
Other	2	(34)	3	(47)	3	(89)	5	(159)	...		...	
<b>Gender</b>												
Male	46	(696)	49	(754)	46	(1466)	50	(1592)	46	(1087)	48	(1127)
Female	54	(852)	51	(772)	54	(1739)	50	(1605)	54	(1257)	52	(1216)
<b>Age, y</b>												
18–29	14	(212)	18	(266)	18	(588)	17	(545)	27	(633)	35	(818)
30–39	23	(357)	27	(416)	31	(1003)	28	(899)	45	(1061)	37	(878)
40–49	17	(260)	21	(314)	22	(697)	20	(650)	28	(650)	28	(647)
50–59	21	(324)	16	(245)	14	(429)	16	(496)	...		...	
60–75	25	(375)	18	(284)	15	(488)	19	(608)	...		...	
<b>Education</b>												
Less than high school	15	(235)	17	(259)	21	(681)	21	(674)	51	(1190)	52	(1209)
High school graduate	33	(504)	32	(484)	24	(768)	27	(867)	20	(480)	23	(536)
Some college	52	(787)	51	(783)	55	(1748)	52	(1656)	29	(673)	25	(598)
<b>Income</b>												
Less than \$10 001	7	(93)	6	(91)	10	(312)	9	(267)	19	(398)	23	(502)
\$10 001–\$20 000	17	(250)	18	(260)	20	(594)	19	(581)	38	(805)	37	(789)
\$20 001–\$40 000	35	(505)	36	(521)	32	(967)	34	(1028)	30	(633)	30	(638)
\$40 001–\$60 000	23	(332)	23	(333)	19	(564)	20	(597)	9	(196)	7	(156)
More than \$60 000	18	(260)	17	(242)	19	(579)	18	(544)	4	(101)	3	(55)

**TABLE 2—Prevalence of Extramarital Sex among Married Men and Women 18 to 75 Years of Age in the National and Urban Samples in 1990**

	National Sample (n = 1525), %		Urban Sample (n = 3184), %	
	Men (n = 696)	Women (n = 829)	Men (n = 1453)	Women (n = 1731)
	<b>Race</b>			
White	2.1**	0.8**	3.0**	0.8*
African American	4.0	4.4	6.6	2.5
Hispanic	10.9	5.3	6.7	0.6
Other	7.2	7.8	2.1	0.0
<b>Age, y</b>				
18–29	4.2	2.7	6.9	2.8**
30–39	2.6	2.2	4.7	1.1
40–49	3.4	0.2	3.6	0.9
50–59	3.0	2.2	3.1	0.0
60–75	2.0	0.0	2.5	0.0
<b>Education</b>				
Less than high school	6.6**	2.2	7.2**	0.8
High school graduate	1.2	0.6	3.3	0.5
Some college education	2.6	2.0	3.3	1.4
<b>Income</b>				
Less than \$10 001	2.4	4.1	7.1	1.5
\$10 001–\$20 000	1.5	2.1	4.4	1.4
\$20 001–\$40 000	3.5	2.6	4.2	0.8
\$40 001–\$60 000	3.8	0.2	2.8	1.1
More than \$60 000	2.6	0.0	3.2	0.8

Note. Chi-square tests of independence were used to examine an association between the demographic characteristic and extramarital sex separately for men and women.

\* $P < .05$ ; \*\* $P < .01$ .

( $n = 909$ ) had a mean age of 35 years; 48% were men, 66% were college educated, and 2.5% reported extramarital sex. The African-American sample ( $n = 585$ ) had a mean age of 35 years; 48% were men, 56% were college educated, and 6.1% reported extramarital sex. The Hispanic sample ( $n = 2343$ ) had a mean age of 34 years; 48% were male, 25% were college educated, and 4.0% reported extramarital sex. Because Hispanic women reported such an extremely low prevalence of extramarital sex (0.9% vs 7.5% for Hispanic men), we were unable to generate a multivariate regression model for that group. We selected seven independent variables previously found to be associated with extramarital sex.<sup>2-3,14-22</sup>

All analyses were weighted to adjust for unequal probabilities of selection and nonresponse. Research Triangle Institute procedures that took into account the complex survey design were used to compute adjusted standard errors.

## Results

The overall prevalence of extramarital sex among respondents 18 to 75 years

**TABLE 3—Extramarital Sex among Married Individuals 18 to 49 Years of Age in the Urban Sample, by Race/Ethnicity: Results of Multiple Logistic Regression Analysis**

	Odds Ratio (95% Confidence Interval)		
	White (n = 820)	African American (n = 532)	Hispanic Men (n = 998)
Monogamy beliefs <sup>a</sup>	0.48 (0.33, 0.69)	0.74 (0.55, 0.98)	0.62 (0.48, 0.82)
Church attendance <sup>b</sup>			
1–3 times a month vs 1+ times a week	3.90 (0.41, 37.31)	1.60 (0.48, 5.35)	0.72 (0.15, 3.50)
Less than once a month vs 1+ times a week	3.32 (0.32, 34.54)	5.26 (1.62, 17.11)	1.27 (0.21, 7.66)
Don't go to church vs 1+ times a week	2.02 (0.21, 19.58)	5.18 (1.61, 16.71)	4.77 (1.20, 18.88)
Respondent's sexual problems <sup>c</sup> (yes vs no)	1.12 (0.25, 5.01)	4.77 (1.09, 20.94)	1.78 (0.47, 6.78)
Respondent's spouse's sexual problems <sup>d</sup> (yes vs no)	2.55 (0.66, 9.89)	0.72 (0.16, 3.16)	0.50 (0.12, 2.18)
Frequency of sexual communication <sup>e</sup>			
1–2 times a month vs at least once a week	1.15 (0.23, 5.74)	1.01 (0.39, 2.60)	0.42 (0.16, 1.13)
Less than once a month vs at least once a week	4.48 (1.10, 18.22)	0.94 (0.19, 4.57)	...
Never vs at least once a week	4.26 (0.67, 26.96)	1.07 (0.14, 8.19)	0.18 (0.06, 0.56)
Dyadic sexual communication <sup>f</sup>	0.92 (0.71, 1.19)	1.19 (0.93, 1.52)	0.75 (0.61, 0.93)
Gender <sup>g</sup> (male vs female)	1.80 (0.56, 5.83)	2.77 (1.06, 7.24)	...
Education <sup>h</sup>			
Less than high school vs high school education	...	4.54 (1.34, 15.38)	1.67 (0.30, 9.16)
Some college vs high school education	1.10 (0.32, 3.75)	1.14 (0.43, 3.01)	1.89 (0.33, 10.89)
Age, y	0.90 (0.82, 0.99)	0.97 (0.91, 1.03)	0.92 (0.84, 1.00)

<sup>a</sup>Respondents were asked to indicate how much they agreed or disagreed with each of the following statements: (1) "Sometimes it is OK for married people to have sex outside their marriage" and (2) "Having sex with someone other than your husband/wife is always wrong." Both items were measured on a 4-point scale (1 = "agree a lot," 4 = "disagree a lot"). The monogamy beliefs scale was constructed by summing scores on the two items. The scale thus ranged from 2 to 8.

<sup>b</sup>Respondents were asked, "Over the last year, how often have you gone to church or other types of religious meetings or services?"

<sup>c</sup>Respondents were asked, "Is there something either physical or emotional that makes it difficult for you to have a satisfying sexual relationship?"

<sup>d</sup>Respondents were asked, "Is there something either physical or emotional that makes it difficult for your (husband/wife/main sex partner) to have a satisfying sexual relationship?" For validity and reliability data, see Catania et al.<sup>48</sup>

<sup>e</sup>Respondents were asked, "How often did you discuss your sex life in the past year?" While a four-category sexual communication frequency variable was used for the White and African-American subsamples, a three-category frequency variable (at least once a week vs less than once a week vs never) was created for the Hispanic subsample since there were too few Hispanics (<5%) who responded "less than once a month" to this item.

<sup>f</sup>This measure was constructed by summing scores on the following four questions: (1) "Do you find some sexual matters too upsetting to discuss with your spouse?" (2) "Does your spouse have difficulty in talking to you about what he/she likes to do during sex?" (3) "Is talking about sex with your spouse fun for the both of you?" and (4) "Do you find that it is easy for you to tell your spouse what you do or don't like to do during sex?" Each question was measured on a 4-point scale (1 = "always," 4 = "never"). The measure ranged from 4 to 16 (Cronbach alpha = .62). Since dyadic communication questions were asked to respondents who had ever talked about sex in the past year, we adopted a procedure for missing data, as described by Cohen and Cohen,<sup>49</sup> to avoid excluding those who had never discussed sexual matters.

<sup>g</sup>Gender was coded as 1 for men and 0 for women.

<sup>h</sup>The level of education for African-Americans and Hispanics was grouped into 3 categories (less than high school education, high school education, and college education), whereas a two-category education variable (college education vs no college education) was created for Whites since few (7%) had less than a high school education.

of age was similar in both samples: 2.2% (95% confidence interval [CI] = 1.3%, 3.1%) in the national sample and 2.5% (95% CI = 1.9%, 3.2%) in the urban sample. In both samples, men were somewhat more likely than women to report extramarital sex: 2.9% of men (95% CI = 1.5%, 4.4%) vs 1.5% of women (95% CI = 0.4%, 2.7%) in the national sample and 4.1% of men (95% CI = 3.0%, 5.2%) vs 1.0% of women (95% CI = 0.5%, 1.5%) in the urban sample. Table 2 shows estimates of individual extramarital sex separately for men and women by sociodemographic characteristics in both samples.

The logistic regression analyses showed that the correlates of extramarital sex differed by race/ethnicity (see Table 3). Stronger monogamy beliefs were asso-

ciated with less extramarital sex for all three ethnic groups; gender and education were correlated with extramarital sex for African Americans but not for Whites. Among African Americans, extramarital sex was more common among men than among women and among those with low relative to moderate levels of education. Church attendance was an important correlate for both African Americans and Hispanic men but not for Whites, with infrequent churchgoers reporting higher levels of extramarital sex. Neither index of marital sexual quality was correlated with extramarital sex for Whites. In contrast, African Americans who reported sexual problems and Hispanic men with poor sexual communication skills were more likely to report extramarital sex.

Of the 33 respondents in the national sample who reported extramarital sex, a majority never used condoms during vaginal intercourse with either their main partner (73%) or secondary sexual partners (64%); 19% occasionally used condoms with their main partner, and 24% did so with their secondary partner; and only 8% and 12% always used condoms with their main and secondary partners, respectively. Of the 77 respondents in the urban sample who reported extramarital sex, 65% and 60% never used condoms with their main and secondary partners, respectively; about 1 in 5 irregularly used condoms with their main (18%) and secondary partners (21%); and less than one fifth always used condoms with their main (17%) and secondary partners (19%).

## Discussion

Extramarital sex has potential physical health consequences such as HIV infection. Surveys in Zaire and Rwanda have found a higher HIV infection rate among respondents reporting extramarital sex than among those reporting monogamy.<sup>23,24</sup> HIV seroprevalences and AIDS caseload data for US married heterosexuals are unavailable. Although we found a low annual rate for extramarital sex (2.2%) similar to other estimates,<sup>25,26</sup> all such estimates are probably understated. The reason is that many Americans strongly disapprove of extramarital sex,<sup>1</sup> and, therefore, some respondents may misreport extramarital sex histories.<sup>2,3,5,27</sup>

Although we cannot specify the direction of causality of extramarital sex because of the cross-sectional nature of the present study, we can make some general observations regarding racial/ethnic differences in the correlates of extramarital sex. Our findings showing a gender difference among African Americans but not among Whites may indicate that traditional sex role values may be more prevalent in the African-American community than in the White community. However, the results can also be understood in terms of the shortage of available unmarried men in the African-American community,<sup>28</sup> which may present married African-American men with greater opportunities for sexual relationships with single African-American women. It is clear that Hispanic men (7.5%) and women (0.9%) differed substantially in their experience with extramarital sex. Thus, traditional sex role expectations may also be more prevalent among Hispanics than among Whites. This is consistent with research indicating that, in traditional Hispanic culture, men are encouraged to enjoy sexual freedom, and extramarital sexual relationships are viewed as a sign of virility<sup>29-32</sup>; conversely, premarital virginity and marital fidelity are highly valued among women.

Hispanics and African Americans who attended church infrequently reported higher levels of extramarital sex. The significance of churches to married life for African Americans and Hispanics may be related to a larger and more pivotal role of religious institutions in minority communities.<sup>33,34</sup> African-American churches today continue a long tradition of fulfilling the spiritual and socioeconomic needs of their members.<sup>33</sup> Within the Hispanic community, the

Catholic church is an important source of influence and support for its members.<sup>34</sup>

Subculture differences in institutional influences on extramarital sex may also be an underlying factor in racial/ethnic differences in the relationship of sexual problems and sexual communication to extramarital sex. Institutional costs for breaking social norms that prohibit extramarital sex may be acceptable only when an individual's marriage is under high duress. One inconsistent finding was the higher prevalence of extramarital sex associated with more frequent sexual discussions among Hispanic men. This finding seems to contradict the common notion that interpersonal communication enhances marital interaction.<sup>35,36</sup> However, a high frequency of communication may occur among sexually dissatisfied husbands who repeatedly express their dissatisfaction.

Condom use among our respondents reporting extramarital sex was lower than that found among individuals with multiple partners in prior studies.<sup>26,37</sup> Nationally, only 8% to 12% of those reporting extramarital sex indicate always using condoms with primary and secondary partners. In urban areas, less than 20% are consistent condom users.

The nonresponse rate in the present survey compares favorably to rates reported in other recent AIDS behavioral surveys based on telephone methods.<sup>7,25,38-42</sup> Although phone surveys are limited in terms of sampling hard-to-reach populations (e.g., the homeless), it should be noted that 93% to 96% of US households are estimated to have telephones.<sup>43,44</sup> Telephone surveys have been used successfully to obtain information on AIDS issues, sexual behavior, and drug use.<sup>45-47</sup> □

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## International Symposium on Bloodborne Infections and Occupational Risks to Be Held in Paris

The occupational risks of bloodborne infections are of great concern, especially to those who work in health care settings. The International Social Security Association, Health Services Section, is organizing an international symposium in Paris, France, June 8 and 9, 1995, on "Bloodborne Infections, Occupational Risks, and Their Prevention." The program will cover the following subjects: the epidemiology of occupational infections (human immunodeficiency virus, hepatitis B and C viruses, other bloodborne pathogens); occupational blood-exposure risk settings (health care and surgical settings, laboratories); exposure prevention (safety equipment, safer working practices, personal and collective protective equipment, organizational aspects, waste disposal systems, etc.); risk assessment and control methods; medical prevention (vaccination, postexposure management and prophylaxis); and education and training.

The symposium is intended for occupational physicians, infectious disease specialists, hygienists, occupational risk-prevention specialists, hospital infection-control practitioners, health and safety representatives, and health care and laboratory managers and staff. It will also be of interest to designers of health care and personal protective equipment and to people in charge of medical waste disposal.

The symposium's languages will be English, French, and German. For further information, contact Colloque AISS Secteur santé, Institut national de recherche et de sécurité (INRS), Service Etudes et assistance médicales, 30 rue Olivier Noyer, 75680 Paris Cedex 14, France; fax +33 1 40 44 30 99.