

Condom Use in Multi-Ethnic Neighborhoods of San Francisco: The Population-Based AMEN (AIDS in Multi-Ethnic Neighborhoods) Study

ABSTRACT

We examined the prevalence and correlates of condom use in a community-based sample of unmarried heterosexual and gay/bisexual Whites, Blacks, and Hispanics (aged 20 to 44 years) in San Francisco (n = 1229). Only 9% of heterosexual males reported always using condoms, and fewer of those with multiple sexual partners (6%) reported always using condoms compared with those in monogamous relationships (12%). Much higher proportions of gay/bisexual men reported always using condoms (48%). Racial differences in condom use were observed only among women. Sexual communication and the sexual enjoyment value of condoms were consistent correlates of condom use across gender and sexual orientation, while other condom-related beliefs were significant predictors of condom use only for men. In general, condom promotion programs should build sexual communication skills, teach people how to enhance enjoyment with condoms, and reduce psychological barriers to condom acquisition and use. (*Am J Public Health*. 1991;81:284-287)

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Introduction

Condoms are an important means of preventing transmission of human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs).¹⁻⁵ Research on the determinants of condom use is a necessary prerequisite to developing effective condom promotions.^{1,6-8} We examined psychosocial predictors of condom use in a random sample of unmarried, multi-ethnic San Franciscans.

Methods

Sample Design and Data Collection

We obtained a household probability sample of unmarried men and women (20 to 44 years) in 16 census tracts characterized by high rates of sexually transmitted diseases and admission to drug programs; similar proportions of Black, White, and Hispanic residents; and proximity to areas of high HIV seroprevalence. All eligibles (unmarried, aged 20 to 44) had the same probability of being selected (sample is "self-weighting"); 4234 households were contacted, 2755 met survey criteria, and 1770 volunteered. The cooperation rate was 64%. Data were collected (1988 to 1989) in 45-minute private interviews (in English or Spanish), and blood samples were obtained. (Survey protocol is obtainable from authors.) A \$20 reimbursement was provided.

Measures

The frequency of vaginal or anal intercourse and of condom use during all episodes of such intercourse was obtained for each sexual partner over the past year (for up to 10 partners). The average proportion of protected receptive or insertive contacts over all sexual partners was computed and trichotomized into three categories of condom use: always, sometimes, and never. The Health Protective Sexual Communication Scale (three items) measures perceptions of verbal interactions

with new sexual partners concerning safe sex and sexual histories, and has good validity and reliability⁹ (Cronbach alphas = .40 to .70 across ethnic groups; high scores = better communication; example: "You asked . . . [partner] . . . about using condoms before you had intercourse"). The "enjoyment of condom use" measure assessed how much respondents enjoyed vaginal or anal intercourse when they used a condom or, if they have never used condoms, how much they would expect to enjoy intercourse with condoms (high scores = more enjoyment). The "other condom-related beliefs" measure (three items) assessed various barriers to condom use (morality concerns, embarrassment, perceived availability; Cronbach alphas = .55 to .69 across ethnic groups; high scores = fewer barriers). Condom self-efficacy was assessed by two items (high scores = greater self-efficacy; example: "If someone's sexual partner does not want to use condoms, there is little he or she can do about it"). Religiosity was indexed by frequency of church attendance (once a

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week, once or twice a month, a few times a year, rarely, never). Respondents were asked if they had ever received antibody testing for HIV, and people with two or more sexual partners in the past year were defined as nonmonogamous (codes: 1 = only one partner in past year, 0 = more than one partner in past year). Respondents rated their chances of contracting the acquired immunodeficiency syndrome (AIDS) virus in the next year (high scores = greater susceptibility) and their degree of concern over the possibility of contracting the AIDS virus (high scores = greater anxiety; for validity, see Catania et al.).⁶ Standard demographic measures were obtained (race, age, gender, income, education); race was dummy coded with Whites as the reference group (1 = Hispanic/Black, 0 = White). Sexual orientation was defined by the gender of one's sexual partners in the past year.

Results

A total of 1770 unmarried people were recruited (49.7% men, 50.3% women; 41% White, 26% African American, 25% Latino, 8% other racial/ethnic groups; median income was \$18 000; 33% had less than a high school education). The present analyses ($n = 1229$) included only sexually active (past year) White (42%), African American (32%), and Latino (26%) heterosexuals (47% women, 44% men), and gay/bisexual men (9%; 77% White, 11% Black, 12% Hispanic).

Tables 1–3 present levels (%) of condom use for various social strata. Heterosexual men reported higher levels of condom use (less nonuse and more occasional use) than heterosexual women reported, their male partners to be practicing (chi-square, $P = .001$).

Condom use (always vs some/none) was regressed (logistic regression) on hypothesized psychosocial predictors^{7,8,10} and demographic variables for heterosexuals (Tables 4 and 5) and for gay/bisexual men (Table 6). Missing data were controlled for by using procedures described by Cohen and Cohen.¹¹

Discussion

Despite high levels of condom use among gay/bisexual men, more than half of those with multiple sexual partners had unprotected anal intercourse. Unmarried heterosexuals were poor condom users, and those with multiple sexual partners were least likely to be using condoms (see Tables 4 and 5).

	Total	Gay/Bisexual men	Heterosexual men	Heterosexual women ^a
Number	(1229)	(105)	(544)	(580)
Never	50	10	46	61
Sometimes	38	41	45	30
Always	12	48	9	9

^a That is, male partners of heterosexual women.

	Gay/Bisexual Men				Heterosexual Men				Heterosexual Women ^a			
	Total	W	B	H	Total	W	B	H	Total	W	B	H
Number	(105)	(81)	(11)	(13)	(544)	(236)	(135)	(173)	(580)	(238)	(227)	(115)
Never	(11)	12	0	8	(248)	43	45	50	(354)	49	68	72
Sometimes	(44)	36	64	62	(247)	52	43	39	(175)	39	25	22
Always	(50)	52	36	31	(49)	6	12	11	(51)	12	7	6

^aThat is, male partners of heterosexual women.

	Condom Use: One Partner			Condom Use: Two or More Partners		
	G/BM	HM	HW	G/BM	HM	HW
Number of Resp.	(24)	(236)	(374)	(81)	(308)	(206)
Never	8	61	69	11	34	47
Sometimes	42	27	20	42	60	48
Always	50	12	11	47	6	5

	Odds Ratio	95% Confidence Interval	P Value [*]
Communication	7.34	(1.5, 2.2)	.001
Enjoyment	1.99	(1.5, 2.8)	.001
Condom attitudes	1.10	(.99, 1.2)	.05
Self-efficacy beliefs	1.07	(0.7, 1.2)	ns
Religiosity	1.01	(0.9, 1.4)	ns
Tested for HIV	1.03	(0.4, 1.8)	ns
Monogamous	1.36	(0.1, 0.6)	.01
Susceptibility	1.13	(0.8, 1.5)	ns
AIDS anxiety	1.25	(0.6, 1.4)	ns
Black	1.49	(0.7, 3.3)	ns
Hispanic	2.22	(0.9, 3.9)	ns

^aFor those who always used condoms, $n = 49$; for those who sometimes or never used condoms, $n = 495$.
^{*}P value of the improvement chi-square at each step; ns = not significant.

The results suggest that sexual communication skills are a key influence on condom use across social strata (see Tables 4–6), a finding that is supported by prior research.^{12–21} However, uncooperative, nonegalitarian, and socially dys-

functional sexual partners may undermine verbal efforts to introduce condoms into a sexual relationship.²² Needed, but difficult to construct, are large-scale programs to repair dysfunctional relationships or empower individuals to dissolve such rela-

TABLE 5—Psychosocial Correlates of Condom Use (Always vs Sometimes/Never)^a for Heterosexual Women

	Odds Ratio	95% Confidence Interval	P Value*
Communication	6.41	(1.5, 2.4)	.001
Enjoyment	1.85	(1.4, 2.5)	.001
Condom attitudes	1.04	(0.9, 1.1)	ns
Self-efficacy beliefs	1.04	(0.7, 1.2)	ns
Religiosity	1.01	(0.9, 1.5)	.05
Tested for HIV	1.35	(0.3, 1.6)	ns
Monogamous	4.13	(0.1, 0.6)	.001
Susceptibility	1.03	(0.8, 1.4)	ns
AIDS anxiety	1.23	(0.5, 1.6)	ns
Black	4.01	(0.2, 0.8)	.001
Hispanic	3.49	(0.1, 0.6)	.01

^aFor those who always used condoms, n = 52; for those who sometimes or never used condoms, n = 528.
*P value of the improvement chi-square at each step; ns = not significant.

TABLE 6—Psychosocial Correlates of Condom Use (Always vs Sometimes/Never)^a for Gay/Bisexual Men

	Odds Ratio	95% Confidence Interval	P Value*
Communication	5.56	(1.2, 1.8)	.05
Enjoyment	1.71	(1.1, 2.6)	.01
Condom attitudes	1.29	(1.1, 1.6)	.01
Self-efficacy beliefs	1.80	(1.8, 3.0)	.01
Religiosity	1.01	(0.9, 1.1)	ns
Tested for HIV	1.09	(0.8, 1.5)	ns
Monogamous	1.22	(0.3, 4.1)	ns
Susceptibility	1.10	(0.7, 1.7)	ns
AIDS anxiety	1.16	(0.7, 1.8)	ns
Black	2.20	(0.4, 10.3)	ns
Hispanic	1.99	(0.4, 9.1)	ns

^aFor those who always used condoms, n = 50; for those who sometimes or never used condoms, n = 55.
*P value of the improvement chi-square at each step; ns = not significant.

tionships. Perceived effects of condoms on sexual pleasure was also a consistent influence on condom use across social strata (see Tables 4–6), a finding that is corroborated by intervention studies indicating that eroticizing condom use enhances positive attitudes toward condoms and increases their use.^{23–27} Condom use was also influenced by other relevant belief systems, but only for men. These results are consistent with the view that condom use places more responsibility and, therefore, a greater cognitive-emotional burden on men than on women.

Black and Hispanic women were less likely than White women to have sexual partners who always use condoms (see Table 2). That these relationships held after controlling for all other variables suggests that interventions for minority women that focus only on condom enjoyment and social skills training may not be

sufficient to increase condom use without taking into account other facets of their sexual relationships.

The present findings are limited in that the results are based on a cross-sectional design, and we are unable to estimate condom use levels for nonrespondents or differentiate condom use for birth control from that for disease prevention. □

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