
Condom Use Among Hispanic Men with Secondary Female Sexual Partners

BARBARA VanOSS MARIN, PhD
CYNTHIA A. GOMEZ, PhD
JEANNE M. TSCHANN, PhD

The authors are associated with the University of California, San Francisco, School of Medicine. Dr. Marin and Dr. Gómez are with the Department of Epidemiology and Biostatistics and with the Center for AIDS Prevention Studies. Dr. Marin is an Associate Adjunct Professor and Dr. Gómez is an Associate Specialist. Dr. Tschann is Assistant Adjunct Professor with the Graduate Program in Health Psychology, Department of Psychiatry.

Rolando Juárez, of the Center for AIDS Prevention Studies, provided data analysis services; Dr. Thomas Piazza, of the Survey Research Center, University of California, Berkeley, suggested the sampling approach. The telephone survey was carried out by Communication Technologies, Inc., San Francisco, whose interviewers collected the data.

The research was funded by the National Institute of Mental Health, grants MH46777, MH46789, and NIMH Center Grant MH42459.

Synopsis

Greater understanding of psychosocial predictors of the use of condoms among Hispanics is needed in prevention efforts related to the human immunodeficiency virus and sexually transmitted disease epidemics among Hispanics in the United States. A telephone survey was carried out in nine States that have large populations of Hispanics, using a stratified clustered random digit dialing sampling strategy. The survey yielded interviews with 968 Hispanic men ages 18–49 years. Of them, 361 (37.8

percent) reported at least one secondary female sexual partner in the 12 months prior to the interview. Predictors were identified of condom use by those men with their secondary sex partners.

Key predictors of the subjects' condom use with secondary partners included carrying condoms; self-efficacy, or a measure of the subject's perceived ability to use condoms under difficult circumstances; positive attitude toward condom use; having friends who used condoms; and lack of symptoms of depression in the week before the interview ($R^2 = 0.35$). Significant predictors of condom carrying were being comfortable in sexual situations, positive attitude toward condom use, and self-efficacy to use condoms. Less acculturated men had more positive attitudes toward condom use and carried them more than did more acculturated men.

The researchers found encouraging levels of condom use with secondary sexual partners among Hispanic men with multiple partners. Because of the large proportion of Hispanic men who have multiple partners and the severity of the sexually transmitted disease epidemics in the Hispanic community, health care providers should recommend to Hispanic men that they carry and use condoms, point out the acceptability of men using condoms, and assess and teach basic sexual information in that group. Referral may be appropriate for high-risk Hispanic men with symptoms of depression.

EFFECTIVE AND CULTURALLY APPROPRIATE strategies for promoting condom use within the Hispanic community in the United States are needed urgently because of Hispanics' high prevalence of infection with human immunodeficiency virus (HIV) and other sexually transmitted diseases (STD) (1–4).

Hispanics are overrepresented disproportionately in statistics on STD and acquired immunodeficiency syndrome (AIDS). HIV infection is currently the sixth leading cause of death among Hispanic adults, although it is not among the first 10 causes of death among non-Hispanic whites (5). The

already high levels of HIV infection in the Hispanic community mean that rates will increase unless successful preventive measures, such as the promotion of condom use (6), are employed more effectively.

HIV risk behavior is difficult to change. In one study, despite individual counseling of patients following HIV testing, 23 percent of those STD seronegative and 15 percent of those STD seropositive had a new exposure to STD in less than 12 months following counseling (7). To create effective and culturally appropriate promotion campaigns for condom use by Hispanics at risk, the

beliefs, attitudes, and behaviors that are associated with consistent condom use for that community need to be better identified and understood.

Most of the information about condom use among Hispanics has come from studies of married women. Those studies focused on simple demographic predictors of condom use behavior, rather than identification of complex psychological mechanisms that could improve the understanding and effectiveness of condom promotion efforts (8, 9). Studies of condom use rarely distinguish between use with a primary sexual partner and use with a secondary sexual partner, despite the many differences in those relationships that could affect the likelihood or ability to use condoms.

We designed a study of condom use by Hispanics with a sample of sufficient size and representation to assess predictors of the frequency of condom use by men with their secondary female sexual partners and to assess differences among specific Hispanic subgroups, as for example, Puerto Ricans and Mexican Americans.

Method

Sampling. The 1991 telephone survey employed a modified Mitofsky-Waksberg sampling technique (10) to identify Hispanic households in nine States that had concentrations of Hispanics ranging from 5 percent to 38 percent in the Northeast (NY, NJ, MA, and CT) and Southwest (CA, AZ, CO, NM, and TX). Hispanics in those States comprise 77 percent of all Hispanics in the country.

In the first stage of sampling, 143,984 telephone number hundred-series groups were randomly generated from working telephone area codes and prefixes for the 9 States. A hundred-series group consists of an area code, plus a 3-digit prefix, plus the next 2 digits, plus all 100 possible combinations of numbers for the last 2 digits. Computer matching of Spanish surnames with telephone directory information identified 27,574 hundred-series groups (19 percent) that contained at least 1 Spanish-surnamed household. We did not sample hundred-series groups with no listed Spanish surnames, because we assumed that the number of Hispanic households would be extremely low.

Subsequently, 12,078 telephone numbers were randomly generated from those 27,574 hundred-series groups by a stratification procedure that oversampled the hundred series with the most Spanish surnames to increase the probability of reaching Hispanic households. Because the Northeast has a smaller Hispanic population that the

'Less acculturated men were more likely than the more highly acculturated to carry condoms and to report a positive attitude toward condom use, although they were no more likely than more acculturated men to actually use them. Those positive attitudes and behaviors suggest that less acculturated Hispanic men are quite open to condom use with secondary partners.'

Southwest, higher sampling fractions also were assigned to the Northeast to allow for reliable extrapolation of results to all Hispanics in that area. Calls to the 12,078 numbers produced 372 Hispanic households, although not all households included an eligible respondent.

In the second stage of sampling, the hundred-series groups in which those 372 Hispanic households appeared were treated as Primary Sampling Units, and additional telephone numbers from these groups were computer generated (10). Hundred-series groups were noted in which at least 1 additional Hispanic household was identified in the first 20 numbers called. Those hundred-series groups were called at a higher rate to increase the probability of finding eligible Hispanics. We made at least six attempts during various days and hours to reach unanswered telephone numbers.

Procedures. The screening procedure involved identifying the ethnicity, sex, and age of household members. Potential respondents were asked "Do you, or any of the members of your household, consider yourselves to be Latinos or Hispanics?" An eligible Hispanic respondent in the household was selected randomly, using the Kish method (11). Interviewers were bilingual men and women.

Prior experience of the telephone survey research organization that conducted the interviews had indicated that Hispanic women have difficulty answering questions on sexuality if interviewed by a man. Accordingly, the survey procedures called for only women to interview women respondents. Interviewers were experienced and received specific training on how to ask the questions used in this project. Respondents were interviewed in the language of their choice. Interviews were conducted between March and July of 1991.

Table 1. Characteristics of 361 Hispanic men, 18–49 years old, in 9 States, reporting secondary female sexual partners in the prior 12 months, in response to a telephone survey, 1991

Characteristic	Percent
Age (in years):	
18–25	47.8
26–32	23.9
33–40	17.5
41–49	10.8
Marital status:	
Married	31.0
Not married	69.0
Education:	
Less than high school	30.5
High school graduate	27.4
Some college	28.8
College graduate	13.3
Income:	
Less than \$10,000	21.9
\$10,001 to \$20,000	32.7
\$20,001 to \$40,000	26.6
More than \$40,000	14.4
Refused to answer	4.4
Acculturation:	
Low	34.6
Medium	35.7
High	29.6
Origin:	
Mexican	37.4
Puerto Rican	23.5
Dominican	15.8
Other	23.3

Instrument. The survey instrument was based on more than 100 open-ended interviews and 2 focus groups with Hispanics in San Francisco, held to identify Hispanic men's perceptions of the consequences of condom use with primary and secondary sexual partners, difficulties with condom use, and normative aspects of condom use. The instrument was developed originally in Spanish and a back-translation procedure was used to assure that the English version was equivalent in meaning (12). Both the Spanish and English versions were pre-tested with at least 20 persons.

The final version of the interview required an average of 24 minutes to complete. Most interview questions had four or five-level Likert-type response scales. The reported reliabilities were for the sample of 361 Hispanic men, reporting 1 or more secondary female sexual partners, who responded to the question on condom use with a secondary partner or partners.

Frequency of using and carrying condoms. The extent of condom use with a secondary sexual partner was assessed by the question, "When you had sex with someone other than your wife or

primary partner in the last 12 months, how often did you use condoms?" The extent of carrying condoms was assessed by the question, "How often do you carry a condom with you?" Each item was recorded using a five-point response scale from "always" to "never."

Self-efficacy to use condoms. Four questions were developed to assess perceived ability to use condoms:

"Would you be able to refuse sex if your partner didn't want you to use a condom?"

"Would you use condoms even if you had to stop to buy them or look for them?"

"Would you use condoms even if you had been drinking or using drugs?" and,

"Would you be able to use a condom with a secondary partner?"

The self-efficacy score was the mean of the four items on a four-point yes-no response scale with higher scores meaning higher efficacy ($\alpha = 0.55$). Those with greater self-efficacy to use condoms were expected to use them more consistently with secondary partners than did those who scored lower (13, 14).

Negative beliefs about condoms. Sixteen items measured beliefs about the consequences of using condoms. Beliefs included "the condom might break," "the condom might come off inside your partner," and "you would feel less sexual pleasure." Responses were "yes" "probably yes," "probably no," and "no" ($\alpha = 0.70$).

Depression scale. Ten of the 20 items of the Center for Epidemiologic Studies Depression Scale (CES-D) (15) were selected for the questionnaire, based on their factor loadings for Hispanics ($\alpha = 0.88$) (16). The items measure sadness in the 7 days prior to the interview and have been shown to assess depression in community samples (17, 18). We expected those men who reported the most depressive symptoms to report more risky behaviors than those who reported the least depressive symptoms. The scale score was a continuous variable ranging from 0 to 30, with high scores meaning more depressive symptoms.

Sexual comfort. Three items were used to assess sexual comfort: being naked in front of a partner, having sex with the lights on, and having sex with a new partner. The sexual comfort score was the mean of the three items on a four-point scale ranging from "very comfortable" to "very uncom-

fortable" ($\alpha = 0.62$). Persons with high levels of sexual comfort have been shown to exhibit sexual behavior that is more self-protective than persons with low levels of sexual comfort (19).

Number of friends using or carrying condoms. Two items assessed the proportion of the respondent's close friends who carried condoms and used them with secondary partners, a measure of perceived normative condom use behavior among peers. Responses ranged on a five-point scale from "almost all" to "almost none."

Myths about HIV transmission. A measure of beliefs about the casual transmission of HIV was computed by adding responses to three items, such as the likelihood of getting HIV from using public toilets. Total scores could range from 3 to 12, with higher scores representing less accurate beliefs.

Demographics. Age, education, marital status, and ethnic origin were determined for each respondent.

Acculturation. Acculturation, the process by which a person learns a new culture, was assessed using four language-related items. That scale has been previously shown to have good reliability and validity (20). Mean scores ranged from 1 to 5, with higher scores indicating more use of English, hence higher levels of acculturation ($\alpha = 0.90$).

Other variables. Positive attitude toward condom use with a secondary partner was measured with a six-level Likert-type scale ranging from "dislike a lot" to "like a lot." Knowing someone with HIV infection or AIDS and previous use of condoms to prevent disease were assessed through single items with "yes" or "no" responses.

Analysis

Ordinary least squares regression with all variables entered simultaneously was used to identify predictors of frequency of condom use with secondary female sexual partners. The analysis was conducted for the 361 Hispanic men who reported more than 1 female sexual partner in the previous 12 months. Additional regressions were conducted to identify predictors of selected variables that were significantly related to frequency of condom use in the initial analysis.

The results are reported as betas, a standardized regression coefficient reflecting the association be-

'For Hispanics, and possibly for other ethnic groups as well, health care providers and staff members of STD clinics may want to assess depressive symptoms to identify those patients who are more likely to have repeated STD exposures and to design more comprehensive clinical interventions for them, focusing on depression prevention.'

tween the predictor and the outcome, taking into account all other variables in the equation. Thus, effects of all psychosocial variables are adjusted for the demographic variables of ethnicity (Puerto Rican, Dominican, Mexican, or other Hispanic), age, marital status, education, income, and acculturation. All analyses were unweighted, because analysis indicated that sampling probability weights were uncorrelated ($P > 0.20$) to any of the outcome variables. Predictor variables showed low correlation between them, with the highest correlation of 0.32 between acculturation and education. Acculturation had a small correlation with several demographic variables, but most psychological predictor variables were uncorrelated.

Results

Response rate. A response rate in survey sampling may be defined as the ratio of the number of questionnaires completed for eligible elements to the number of eligible elements in the sample (21). The response rate was calculated by multiplying the proportion of households screened for eligibility by the proportion of eligible respondents who completed the interview. As in all telephone samples, certain telephone numbers (for example, those of businesses, facsimile machines, and nonhouseholds) were not eligible for enumeration. After those were eliminated, the age and sex of the adults in the household were determined for 67.1 percent of eligible telephone numbers (households or undetermined status). Also, 86.4 percent of those contacted, and who met the survey criteria, provided complete interviews. Multiplying those two proportions, a response rate of 58.0 percent for the entire sample was obtained. That rate compares well with other telephone surveys (21), since only six call-back attempts could be made because of budget

Table 2. Predictors¹ of frequency of condom use with secondary sexual partners by 361 Hispanic men, 18–49 years old, in response to a telephone survey, 1991

Predictor variable	Beta ²
Carrying condoms	³ 0.32
Self-efficacy to use condoms	³ 0.22
Friends use condoms	⁴ 0.14
Positive attitude towards condom use	⁵ 0.12
Depressive symptoms	⁵ -0.10
Knowing someone with HIV or AIDS	⁵ 0.10

¹ Variables entered in the analysis, but not significantly associated with frequency of condom use with a secondary sexual partner, included age, marital status, acculturation, ethnic subgroup, education, income, myths about HIV transmission, sexual comfort, substance use prior to sexual activity, and negative beliefs about condoms.

² Beta is a standardized regression coefficient reflecting the association between the predictor and outcome, taking into account all other variables in the equation. High betas, regardless of sign, indicate stronger prediction than low betas.

³ $P < 0.001$. ⁴ $P < 0.01$. ⁵ $P < 0.05$.

NOTE: $R^2 = 0.35$, $P < 0.001$.

constraints. Only 4.2 percent of eligible Hispanics refused to be interviewed. Another 4.7 percent broke off interviews before completion. The remaining 4.7 percent of eligible Hispanics who did not provide completed interviews were persons who could not be contacted after the initial contact.

Sample. There were 361 Hispanic men ages 18–49 years who reported having a secondary female sexual partner in the 12 months prior to the interview, including 5 men who also reported 1 or more male sexual partners. Those 361 men were 37 percent of all Hispanic men interviewed. Demographic characteristics of the 361 men are shown in table 1. More than two-thirds were unmarried, almost half were younger than 25 years, more than two-thirds had a high school diploma or better, more than half had incomes of \$20,000 or less, and the men were evenly distributed by acculturation categories. Because of purposeful oversampling in the Northeast, almost 40 percent of the sample were either Puerto Rican or Dominican, with an equal percentage of Mexican origin, compared with the 1990 census, in which more than 60 percent of Hispanics were of Mexican origin. Hispanic men with a secondary female sexual partner were more likely than those with a single partner to be unmarried, ages 18–24 years, less acculturated, and living in the northeastern United States (data not shown).

In the unweighted analyses, 60.1 percent of the 361 men reported “always” using condoms with secondary partners in the 12 months before the interview. Analysis weighted by sampling probability adjusted the prevalence of consistent condom use downward to 49.0 percent.

The results of the least squares regression analysis are shown in table 2. Six variables were identified as the best combination of predictors of frequency of condom use with a secondary partner among the 361 Hispanic men reporting a secondary female sexual partner. Those variables were greater frequency of carrying condoms, higher self-efficacy to use condoms, positive attitude toward condom use with a secondary partner, having friends who used condoms with a secondary partner, personally knowing a person with AIDS or HIV, and fewer depressive symptoms. The multiple R for that equation was 0.588, which means those predictors account for a substantial proportion (35 percent) of the variance in frequency of condom use with secondary partners.

Table 3 presents the results of separate regression analyses of three significant predictors of secondary condom use: carrying condoms, attitude toward condom use with a secondary partner, and self-efficacy to use condoms. We were able to explore those variables in more detail because we had additional predictors for each. Frequency of carrying condoms was predicted by the variables of having a positive attitude toward carrying condoms, having used condoms to prevent disease, being unmarried, having friends who carried condoms, knowing a person with AIDS or HIV, having greater sexual comfort, and having lower levels of acculturation. Together they account for 34 percent of the variance of that measure.

A more positive attitude toward condom use with a secondary partner was significantly predicted by lower acculturation, more sexual comfort, fewer depressive symptoms, less negative beliefs about the consequences of condom use with a secondary partner, and having ever used condoms. Together they explain 14 percent of the variance of that variable. High levels of sexual comfort, having ever used condoms, and fewer negative beliefs about the consequences of condom use with a secondary partner were significantly related to self-efficacy to use condoms with a secondary partner, explaining 28 percent of the variance of that variable.

Discussion

Key psychosocial predictors explained a substantial portion (35 percent) of the frequency of condom use with secondary sexual partners in the 12 months prior to the interview. More frequent condom use with secondary partners for these Hispanic men was associated with more frequently carrying condoms, greater self-efficacy to use con-

doms, having friends who also used condoms with secondary partners, a positive attitude toward condom use with a secondary partner, a lack of depressive symptoms, and personally knowing someone who had HIV or AIDS. The data suggest that behavioral factors, the social environment, culture, and psychological symptoms may play an important role in whether Hispanic men consistently use condoms with secondary sexual partners. Given the large proportion (almost 40 percent) of Hispanic men who reported multiple female partners in the previous year and the high prevalence of STD and HIV infection in the Hispanic community, those factors deserve careful consideration.

Behavioral factors. Two behavioral factors emerged as particularly important in the study: carrying condoms and self-efficacy to use condoms. In the sample, carrying condoms appears to be an indicator of preparedness for safe sex with a secondary partner and also of greater experience with condoms. Health care providers who wish to increase Hispanic men's use of condoms with secondary sexual partners should focus specifically on increasing the behavior of carrying condoms.

Self-efficacy to use condoms strongly predicted actual use with a secondary partner, and was in turn strongly predicted by prior use of condoms. That was not surprising, since feelings of self-efficacy generally are produced by practice. Health care providers in STD or family planning clinics, who see Hispanic male patients should teach techniques of proper condom use, such as avoiding the use of oil-based lubricants and leaving a reservoir for semen at the tip.

Hispanic men should be encouraged to handle condoms and to practice putting on one before attempting to do so during a sexual encounter. Men should be asked to consider how to overcome related difficulties, such as having to stop to buy condoms or to look for them, using them even if they had been drinking or using drugs, and learning how to insist on condom use with a partner who does not want them to use one. These barriers to condom use with a secondary partner, which were the basis of the self-efficacy measure in the study, should be specifically discussed. Video presentations or self-instructional approaches should be developed that incorporate modeling of appropriate condom behaviors. When feasible, role playing and instructive feedback may be used to prepare men (22).

The relationship between risky sexual behavior and the use of alcohol has been debated since it

Table 3. Predictors of condom carrying, positive attitude about use, and self-efficacy to use, among 361 Hispanic men 18-49 years old, with secondary sexual partners, in response to a telephone survey, 1991

Variable	Beta
Carrying condoms:¹	
Positive attitude about condom carrying	² 0.31
Previously used condoms to prevent disease . .	² 0.20
Not married	³ 0.14
Friends carry condoms	³ 0.13
Knowing someone with HIV or AIDS	⁴ 0.11
Sexual comfort	⁴ 0.11
Acculturation	⁴ -0.11
$R^2 = 0.34, P < 0.001$	
Positive attitude about condom use:⁵	
Acculturation	² -0.21
Sexual comfort	³ 0.17
Depressive symptoms	³ -0.13
Negative beliefs about condoms	⁴ -0.13
Ever used condoms	⁴ 0.12
$R^2 = 0.14, P < 0.001$	
Self-efficacy to use condoms:⁶	
Ever used condoms	² 0.28
Sexual comfort	² 0.28
Negative beliefs about condoms	⁴ -0.11
$R^2 = 0.28, P < 0.001$	

¹ Variables that were not significantly predictive of carrying condoms included age, ethnic subgroup, education, income, ever having used condoms, believing it is possible to know beforehand if you are going to have sex, belief that a casual partner would respect you more if you had condoms with you, myths about HIV transmission, depression, and belief that you were going to have sex in the next 30 days.

² $P < 0.001$, ³ $P < 0.01$, ⁴ $P < 0.05$.

⁵ Variables that were unrelated to positive attitude toward condom use included age, marital status, ethnic subgroup, education, income, HIV transmission knowledge, and knowing someone with AIDS or HIV.

⁶ Variables that were unrelated to self-efficacy to use condoms included age, marital status, acculturation, ethnic subgroup, education, income, depression, substance use before sex, HIV myths, knowing a person with AIDS, and knowing how to use condoms.

NOTE: HIV = human immunodeficiency virus infection. AIDS = acquired immunodeficiency syndrome.

was first described (23, 24). We found no relationship between the frequency of condom use and the use of drugs or alcohol before sex. However, self-efficacy to use condoms (which did predict greater condom use) included the perception that one could use condoms even after drinking or using drugs. Thus, actual frequency of alcohol or drug use before sex may be less important factors to assess for intervention than a person's perceived self-efficacy to use condoms, even under the influence of alcohol or drugs.

Social environment. The social environment affects condom use. Three factors appear particularly important: marital status, personal knowledge of someone with HIV or AIDS, and having friends who use condoms with secondary partners. A substantial minority (18 percent) of the married Hispanic men in the sample had multiple female sexual partners in the prior year (25). Unmarried men, with no marital partner who might question

'A more positive attitude toward condom use with a secondary partner was significantly predicted by lower acculturation, more sexual comfort, fewer depressive symptoms, less negative beliefs about the consequences of condom use with a secondary partner, and having ever used condoms.'

condom carrying, were more likely to carry condoms than were married men. Other research has found the same association between condom carrying and marital status among Hispanic men (26).

Personally knowing someone with HIV or AIDS was a predictor of more condom carrying and more use of condoms with a secondary partner. That suggests that health care providers should assess and emphasize a Hispanic man's personal vulnerability to HIV from sexual risk behaviors and previous STD. The results confirm the wisdom of many community programs that utilize persons with HIV to reach and motivate the community.

Having friends who carry condoms and use them with secondary partners were circumstances predictive of both carrying and using condoms. That was not surprising, given the importance of normative influences on sexual behavior (27). The findings suggest the importance of mass media and community level approaches to condom promotion, as well as approaches to promote normative changes within subgroups (28). Increased availability of condoms in vending machines can reduce embarrassment associated with buying condoms and increase the perception that "everybody" uses condoms.

Culture. Hispanic culture may contribute to high-risk sexual activity. One way is the common idea that sexuality is embarrassing and not to be discussed either with one's children or with one's sexual partner. In this study, comfort with sexuality was an important predictor of self-efficacy to use condoms, accounting for a substantial amount of the variance, as well as predicting greater frequency of condom carrying and a positive attitude toward condoms. Other research has found among Hispanic men an association between carrying condoms and sexual discomfort, measured as embarrassment in buying condoms (26).

We measured sexual comfort as comfort with

commonplace aspects of sexuality, such as being naked in front of a partner or having sex with lights on. Fisher and coworkers (19) have shown that comfort with sexuality is associated with various sexual self-care behaviors, such as breast self-examination and engaging in behaviors to prevent STD. As hypothesized by Fisher, some persons who feel discomfort with sexuality may avoid sex entirely, but those who are uncomfortable yet have multiple partners will be less likely to plan for sex, including condom buying and using. Those who are comfortable may be more likely to engage in nonpenetrative and generally safer forms of sex.

The issue of comfort with sexuality needs to be addressed in a culturally appropriate manner by health care providers. Initially, comfort with condom use should be the focus, emphasizing carrying condoms, practicing their use, and practical skills needed for their use. The patient's basic information, such as knowing the names for body parts and sexual acts, should not be assumed. A Hispanic man in one focus group wondered if oral sex ("sexo oral") meant "sex by the hour"; another thought a woman's vaginal lubrication meant she had "ejaculated;" and several believed masturbation causes physical harm. Further work on the components and amelioration of sexual discomfort clearly is needed among Hispanics.

If anthropological research (29, 30) is correct in suggesting a dichotomy in many Hispanics' minds between "good" women (a wife or mother) and "bad" women (a prostitute or easy conquest), changing the concept that only "bad" women enjoy sex could lead to more enjoyable sex with one's primary partner. Work is needed on the relationships between the beliefs many Hispanic men hold about what it means to be a man (low perceptions of sexual control, associating positive values with sexual behavior risk-taking, and needs for multiple sexual partners [31]) and the sexual behaviors that many Hispanic men demonstrate.

Psychological symptoms. Depressive symptoms in the week before the interview were associated with low rates of use of condoms with secondary partners in the previous year and negative attitudes toward condom use with a secondary partner. While those findings might appear to be surprising, people who are depressed are less likely, for example, to be able to quit smoking (32) and are more likely to relapse from methadone maintenance (33, 34). Depressed persons may perceive themselves as having less to live for, thus evaluating risk behavior as unimportant, or they may be

preoccupied with significant life problems that appear more important than an unprotected sexual encounter. For Hispanics, and possibly for other ethnic groups as well, health care providers and staff members of STD clinics may want to assess depressive symptoms to identify those patients who are more likely to have repeated STD exposures. Care providers can then design more comprehensive clinical interventions for them, focusing on depression prevention (35).

Demographic variables. We found no differences in predictors of condom use with secondary partners between Hispanic men in the Northeast and Southwest United States or between ethnic subgroups, education, income, or age groups, despite having sufficient power to detect such differences. Thus, recommendations made in this report are not limited to a particular subgroup of Hispanic men.

Less acculturated men were more likely than the more highly acculturated to carry condoms and to report a positive attitude toward condom use, although they were no more likely than more acculturated men to actually use them. Those positive attitudes and behaviors suggest that less acculturated Hispanic men are quite open to condom use with secondary partners. Certainly, in Latin America, condoms are seen as useful primarily outside primary relationships (36).

The data have the usual limitations of sexual behavior research, being self-reports that could not practically or ethically be validated. They are also cross-sectional in nature, with current measures of psychosocial variables being used to predict reports of past behavior. Thus, while the study provides useful information about the associations between variables, conclusions should not be drawn about causation or prediction. The generalizability of the sample is limited by the lack of telephones in some Hispanic households, although the absence of effects for income on relationships found in the research suggests that the limitation may be minimal. Some potential respondents were lost because of our inability to make more than six followup calls to a telephone number because of cost factors. We were told by the interviewers that some respondents broke off the interview, or refused to participate, because of their fundamentalist religious beliefs.

Conclusions

Programs and providers promoting condom use with secondary partners should attend to behav-

ioral factors, the social environment, cultural issues, and psychological symptoms. Specifically, they should recommend that Hispanic men carry condoms; should teach specific skills, such as how to use condoms even under difficult conditions; should lower sexual discomfort by providing basic information about sex in a sex-positive climate; and should pay particular attention to those men who may be emotionally troubled. Emphasizing personal vulnerability to HIV, especially for men with STD, and pointing out that "most men" use condoms with secondary partners is useful.

References.....

1. Syphilis and congenital syphilis—United States, 1985—1988. *MMWR Morb Mortal Wkly Rep* 37: 486–489, Aug. 19, 1988.
2. Continuing increase in infectious syphilis—United States. *MMWR Morb Mortal Wkly Rep* 37: 35–38, Jan. 29, 1988.
3. Schmid, G. P., Sanders, L. L., Blount, J. H., and Alexander, E. R.: Chancroid in the United States: reestablishment of an old disease. *JAMA* 258: 3265–3268, Dec. 11, 1987.
4. Selik, R. M., Castro, K. G., and Pappaioanou, M.: Racial/ethnic differences in risk of AIDS. *Am J Public Health* 78: 1539–1545, 1988.
5. National Center for Health Statistics: Advance report of final mortality statistics, 1989. Vol. 40, No. 8, Supp 2. DHHS Publication No. (PHS) 92-1120, Hyattsville, MD, 1992.
6. Rietmeijer, C. A. M., Krebs, J. W., Feorino, P. M., and Judson, F. N.: Condoms as physical and chemical barriers against human immunodeficiency virus. *JAMA* 259: 1851–1853, Mar. 25, 1988.
7. Zenilman, J., et al.: Effect of HIV posttest counseling on STD incidence. *JAMA* 267: 843–845, Feb. 12, 1992.
8. Mosher, W. D. and Bachrach, C. A.: Contraceptive use, United States, 1982. *Vital Health Stat* [23] No. 12. DHHS Publication No. (PHS) 86-1988. National Center for Health Statistics, Hyattsville, MD, 1986.
9. Forrest, J., and Singh, S.: The sexual and reproductive behavior of American women, 1982–1988. *Fam Plann Perspect* 22: 206–214 (1990).
10. Waksberg, J.: Sampling methods for random digit dialing. *J Am Stat Assoc* 73: 40–46 (1978).
11. Kish, L.: Survey sampling. John Wiley and Sons, New York, NY, 1965.
12. Marin, G., and Marin, B.: Research with Hispanic populations. Sage Press, Newbury Park, CA, 1991.
13. Bandura, A.: Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev* 84: 191–215 (1977).
14. Bandura, A.: Social foundations of thought and action: a social cognitive theory. Prentice-Hall, Englewood Cliffs, NJ, 1986.
15. Radloff, L. S.: The CES-D scale: a self-report depression scale for research in the general population. *Appl Psychol Measurement* 1: 385–401 (1977).
16. Guarnaccia, P. J., Angel, R., and Worobey, J. L.: The factor structure of the CES-D in the Hispanic Health and Nutrition Examination Survey: The influences of ethnicity,

- gender and language. *Soc Sci Med* 29: 85-94 (1989).
17. Myers, J. K., and Weissman, M. M.: Use of a self-report symptom scale to detect depression in a community sample. *Am J Psychol* 137: 1081-1084 (1980).
 18. Weissman, M. M., et al.: Assessing depressive symptoms in five psychiatric populations: a validation study. *Am J Epidemiol* 106: 203-214 (1977).
 19. Fisher, W., Byrne, D., White, L., and Kelley, K.: Erotophobia-erotophilia as a dimension of personality. *J Sex Res* 26: 123-151 (1988).
 20. Marin, G., et al.: Development of a short acculturation scale for Hispanics. *Hispanic J Behav Sci* 9: 183-205 (1987).
 21. Kalton, G.: Introduction to survey sampling. Sage Publications, Newbury Park, CA, 1983
 22. Bandura, A.: Perceived self-efficacy in the exercise of control over AIDS infection. *Evaluation Prog Plann* 13: 9-17 (1990).
 23. Bolton, R., Vincke, J., Mak, R., and Dennehy, E.: Alcohol and risky sex: in search of an elusive connection. *Med Anthropol* 14: 323-363 (1992).
 24. Stall, R., et al.: Alcohol and drug use during sexual activity and compliance with safe sex guidelines for AIDS: the AIDS Behavioral Research Project. *Health Ed Q* 13: 359-371 (1986).
 25. Marin, B. V., Gomez, C. A., and Hearst, N.: Multiple heterosexual partners and condom use among Hispanics and Non-Hispanic whites. *Fam Plann Perspect* 25: 170-174 (1993).
 26. Marin, B. V., and Marin, G.: Predictors of condom accessibility among Hispanics in San Francisco. *Am J Public Health* 82: 592-595 (1992).
 27. Joseph, J. G., et al.: Magnitude and determinants of behavioral risk reduction: longitudinal analysis of a cohort at risk for AIDS. *Psychol Health* 1: 73-96 (1987).
 28. Kelly, J., et al.: HIV risk behavior reduction following intervention with key opinion leaders of population: an experimental analysis. *Am J Public Health* 81: 168-171 (1991).
 29. Pavich, E. G.: A Chicano perspective on Mexican culture and sexuality. *J Social Work Human Sexuality* 4: 47-65 (1986).
 30. Burgos, N. M., and Diaz Perez, Y. I.: An exploration of human sexuality and the Puerto Rican culture. *J Social Work Human Sexuality* 4: 135-150 (1986).
 31. Diaz, R. M.: Latino gay men and the psychocultural barriers to AIDS prevention. *In A plague of our own: the impact of the AIDS epidemic on the lesbian and gay communities*, edited by M. Levine, J. Gagnon, and P. Nardi. University of Chicago, Chicago, IL. In press, 1993.
 32. Anda, R. F., et al.: Depression and the dynamics of smoking: a national perspective. *JAMA* 264: 1541-1545, Sept. 26, 1990.
 33. Batki, S., Sorensen, J., Gibson, D., and Maude-Griffen, P.: HIV-infected drug users in methadone treatment: outcome and psychological correlates—a preliminary report. *In Problems of drug dependence 1989: proceedings of the 51st annual scientific meeting of the Committee on the Problems of Drug Dependence*, edited by L. Harris. NIDA Research Monograph Series No. 95. U.S. Government Printing Office, Washington DC, 1988, pp. 405-406.
 34. Batki, S., Sorensen, J., Faltz, G., and Madover, S.: Psychiatric aspects of treatment of IV drug abusers with AIDS. *Hosp Community Psychiatry* 39: 439-411 (1989).
 35. Lewinshon, P. M., Muñoz, R. F., Youngren, M. A., and Zeiss, A. M.: Control your depression (revised edition). Prentice Hall, New York, NY, 1986.
 36. Bailey, J., Lopez-Escobar, G., and Estrada, A.: A Colombian view of the condom. *Stud Fam Plann* 4: 60-64 (1973).