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Predictors of Condom Use in Latino Migrant Day Laborers

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This article reports on predictors of condom use with casual female sex partners on the part of Latino migrant day laborers in the San Francisco Bay Area. Results come from a secondary analysis of data from a cross-sectional survey using convenience sampling to interview 290 sexually active adult, male, migrant Latino day laborers. Regression analysis of sociodemographic background, behavioral, and psychosocial predictor factors revealed a number of significant findings. Men with wives or partners currently living in Mexico were almost 4.5 times more likely to use condoms with casual female sex partners compared to men accompanied by wives or partners in California. It was also found that men at high sexual risk for HIV with casual female partners were more than 5.5 times more likely to use condoms than men at low risk. Interpretations of findings and implications for HIV prevention with this unique and especially marginalized population of Latinos are discussed.

Keywords: *Mexican; Latino; migrant; day laborer; HIV/AIDS; condom*

The purpose of this article is to report on sociodemographic background, behavioral, and psychosocial predictors of condom use with casual female sex partners on the part of Latino migrant day laborers (LMDLs), a growing urban-based population of labor migrants. As with Latino labor migrants in general, day laborers are at increasing risk for HIV or STDs,

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among other psychosocial and health problems, making factors related to risk and self-protection important to study in order to inform HIV prevention services aimed at this especially unique Latino population living and working in the United States (Organista, Carrillo, & Ayala, 2004).

Migrant Day Laborers

Neither the Department of Labor nor the U.S. Bureau of the Census includes day labor in official employment classifications despite its growing presence in large and midsized urban centers throughout America (Valenzuela, 2003). Based on his pioneering survey research with LMDLs, Valenzuela (2003) defines day labor as informal, nonstandard work performed primarily by poor, foreign-born Latino migrant men who congregate in "open air" markets (e.g., street corners, Home Depot store parking lots) to solicit temporary daily work. In their recent National Day Labor Survey (NDLS), Valenzuela, Theodore, Melendez, and Gonzalez (2006) estimate 117,000 day laborers in the United States, with most concentration in the West (42%), followed by the East (23%), Southwest (18%), South (12%), and Midwest (4%). Although a few day labor centers have emerged to support and help organize day laborers, 80% continue to seek work at informal hiring sites where they are hired mostly by homeowners or renters (49%) and construction contractors (43%) to perform construction, landscaping and gardening, roofing, painting, and drywall installation. The vast majority surveyed in the NDLS indicated that day labor was their main source of income.

Consistent with our own day laborer research, the NDLS confirms that this population is predominantly from Mexico (59%) and Central America (28%) and undocumented (75%), with U.S. citizens making up less than 10%. In the West, where the current study was conducted, the number of undocumented LMDLs is even higher. For instance, in Valenzuela's (2002) survey of 481 male LMDLs from almost 90 different sites in Southern California, he found the following: predominantly Mexican (77%) and Central American (20%), 84% undocumented, less than 5 years in the United States, 34 years of age on average, 50% married or living with partner, and only 7 years of education on average. Furthermore, reasons for seeking day labor included lack of papers (40.3%) and lack of English (21.0%) and because regular jobs were few and paid poorly (18.2%). Below-poverty-line wages averaged \$7 an hour, with annual earnings of \$8,489, and the men were generally paid in cash. As with the NDLS, more than 50% of Southern California respondents reported being cheated out of wages and significant rates of injury from dangerous construction work without proper preparation, equipment, and supervision.

Given the above LMDL profile, we should assume considerable risk for psychosocial and health problems including HIV or STDs in this unique Latino population. Although very little research exists on LMDLs, a growing literature on HIV risk and Latino labor migrants in general serves as a proxy.

HIV Risk in Latino Labor Migrants

Reviews of the literature on HIV risk in migrant laborers in general (Organista & Balls Organista, 1997) and Mexican labor migrants in particular (Organista et al., 2004) document several risk factors and cofactors: multiple sex partners while in the United States, including sex with female sex workers and sex between men, inconsistent condom use, high rates of STDs, and high rates of alcohol use. Similarly, the first multistage probability survey of migrants documents considerable risk for HIV in a U.S.-Mexico border-based sample of four distinct subgroups of migrants: undocumented deportees from the United States, voluntary returnees from the United States, and arrivals from either other parts of the border region or from sending communities deeper in Mexico ($N = 1,606$). Unprotected heterosexual relations with regular and casual partners, including sex workers, were found in all four migrant groups (Rangel et al., 2005), with condom use low with casual partners and rare with regular partners. Furthermore, high-risk sex, involving sex with injection drug users, prostitutes, and multiple partners, was higher in migrants returning from the United States as well as those coming from other border regions, as compared to migrants from sending communities in Mexico.

Migrant Day Laborers

Although the above HIV risk literature conveys nothing specific to LMDLs, a handful of studies on this subpopulation confirm similar risk for HIV and STDs. For example, a previous report on the current sample (Ehrlich, Organista, & Oman, 2007) found that 38% reported having traded sex for food, shelter, drugs, or money during their lifetime, more than one third used alcohol or drugs during sex in the past 6 months, and, of the 40% reporting a past test for STDs, nearly one third said they had been diagnosed with an STD by a medical provider. With regard to condom use, a fifth of the current study sample reported never using condoms with casual sex partners, while more than 70% reported never using condoms with primary female sex partners such as wives. Despite such risk indicators, almost 80% of the men in the current study did not perceive themselves to be at risk for HIV.

A survey of HIV risk in 102 LMDLs in the San Francisco Bay Area further confirms risk in ways consistent with the above literature. More than half the men were sexually active during the past 2 months with women, who were evenly divided between regular sex partners (including spouses) and one-time-only sex partners (including sex workers) (Organista & Kubo, 2005). The men generally did not carry condoms, knowledge of proper condom use was poor, and condom use with casual sex partners was infrequent. High rates of alcohol use and binge drinking that co-occur with sexual activities were also reported. Although LMDLs in the above study reported no HIV infection, a third reported a history of STDs. Interestingly, no sex between men was reported, most likely because of limitations in the survey method for collecting such data.

In the only known published study of STD prevalence in LMDLs, Wong, Tambis, Hernandez, Chaw, and Klausner (2003) screened a convenience sample in San Francisco and found that of the 235 screened for syphilis, one positive diagnosis was made (0.4%), and of the 198 screened for gonorrhea and chlamydia, 1 (.5%) had gonorrhea and 7 (3.5%) had chlamydia. Based on these findings, these researchers recommended community-based screening initiatives for the day laborer population.

Predicting Condom Use in Latino Labor Migrants

One HIV prevention strategy, perhaps especially relevant to the highly mobile labor migrant population, is condom promotion informed by research showing factors that predict condom use with sex partners while in the United States. Unfortunately, very little research exists on this topic with Latino labor migrants in general, and we could find no study of condom use predictors in LMDLs. A report by Organista, Balls Organista, Bola, Garcia de Alba, and Castillo Moran (2000) did explore predictors of condom use in a sample of 501 Mexican labor migrants, but without specification of employment status (i.e., farmworker, day laborers, etc.). Results showed that condom use with casual female sex partners (the outcome variable predicted in the current study) was predicted by the behavioral factor, carrying condoms, and the psychosocial factor, condom efficacy or perceived confidence in being able to insist on condom use in challenging sexual situations (e.g., when a partner does not want to use a condom). Organista et al. also found that knowing someone with HIV/AIDS, an index of perceived risk, and younger age, presumably because younger labor migrants are more open to condom use, also predicted condom use with casual female sex partners.

Because the survey instrument limited exploration of predictor factors in the current study, neither carrying condoms nor condom efficacy could be explored. However, the demographic background variable, age, was examined, as well as perceived risk for HIV infection, in addition to previously unexamined predictors such as the current residence of LMDLs' wives or partners (i.e., in Mexico vs. California). The latter factor is important because research shows that among married migrant men, those unaccompanied by wives report more lifetime sex partners, more partners during the past 2 years, more sex with sex workers, and more extramarital sexual relations as compared to men accompanied by wives (Viardo & Earp, 2000). Considering that the vast majority of married Latino migrants come to work in the United States without their wives, this would appear to be a major migration-related factor related to sexual risk in need of further study.

The Current Study

The purpose of the current study is to analyze sociodemographic background, behavioral, and psychosocial predictors of condom use with casual female sex partners on the part of LMDLs as a first study of its kind in this important topic area. Deeper understanding of such influential factors can inform the development of prevention intervention strategies that can effectively promote condom use as one of many prevention strategies for this unique high-risk population. This study addresses an overriding research question: What factors predict condom use with casual female sex partners on the part of LMDLs living and working in the San Francisco Bay Area?

Method

The current study is a secondary analysis of data collected by the California Department of Health Services, Office of AIDS, in collaboration with the city of Berkeley Health Department, which together designed and conducted a cross-sectional survey of LMDLs soliciting work in the San Francisco East Bay cities of Oakland, Berkeley, and Richmond. The survey was designed to assess risk for HIV and related sociodemographic, behavioral, and psychosocial variables, including intention to test for HIV, which is reported elsewhere (Ehrlich et al., 2007). A HIV testing and street outreach coordinator and team of recruiter-interviewers, from the city of Berkeley's HIV/AIDS Program, familiar with both the study population and

survey research were responsible for piloting, helping to revise, and administering the final version of the survey instrument, which is described below.

Participants

Convenience sampling was used to survey 290 sexually active male LMDLs, 18 years of age or older, soliciting work in four well-know day labor pickup sites. Two sites were a large boulevard and a city-designated parking lot where private contractors and homeowners hire workers. Another site was near a popular tile store, and the final site was concentrated around the parking lot of a large hardware store.

The interview team consisted of four Spanish-speaking, bilingual Latino males who parked a mobile van near each work pickup site during recruitment and survey administration. Recruitment notes show that about 10% of LMDLs approached refused to participate, typically because they were waiting for work, were uncertain about the survey, or indicated willingness at another time. A few potential participants did express concern regarding anonymity and being undocumented. Interview team members, who also read informed consent forms to potential participants and addressed questions as needed, addressed such concerns. Eligibility screening excluded about two dozen men who were either younger than 18 or spoke neither Spanish nor English (i.e., of indigenous background).

The majority of interviews were conducted in the mobile van that contained two private rooms. Remaining interviews took place outdoors and far enough from others so as to not be overheard. Survey questions were read to participants in Spanish, with clarifications made as needed. Recruitment and survey administration took place on the same day, with no participants opting to stop once interviews had begun. As an incentive, participants were offered a \$25 McDonald's certificate on completion of the interview.

As can be seen in Table 1, more than one third of participants were between 28 and 37 years of age, while almost the same percentage were younger than 28 years of age. About two thirds had grown up in Mexico, with one third in Central America, and well over half reported a history of migrating back and forth between country of origin and the United States for at least two years. Of the men 56% were married or had a common-law wife, and about 80% of these men were currently unaccompanied by their wives. A quarter of participants earned between \$100 and \$199 per week, while more than a third made between \$200 and \$299 per week.

Table 1
Sociodemographic Characteristics and Sexual
Risk Behaviors of Latino Migrant Day Laborers

Characteristic	<i>n</i> ^a	<i>%</i> ^b
Age		
Younger than 28	103	35.8
28 to 37	106	36.8
38 or older	79	27.4
Spent childhood		
Mexico	187	64.9
Central America	92	31.9
South America	3	1.0
United States	6	2.1
Education		
Never attended school	27	9.3
Some middle school	169	58.3
Middle school or further (e.g., some vocational or college)	94	32.4
Current residence		
Oakland	228	79.2
Berkeley	18	6.3
Richmond	28	9.7
Other city in California	14	4.9
Years migrating to the United States		
< 1 year	74	26.2
1 year	50	17.7
2 to 5 years	89	31.5
> 6 years	70	24.7
Wages earned per week		
< \$100	25	8.8
\$100 to \$199	73	25.6
\$200 to \$299	109	38.2
> \$300	78	27.4
Marital status		
Married or common-law wife	161	55.7
Single	112	38.8
Divorced or separated	16	5.5
Residence of wife		
With migrant in California	34	20.6
Mexico	80	48.5
Not Mexico or United States, another country	51	30.9
Previous HIV test		
Had test	90	31.0
Not tested	200	69.0

(continued)

Table 1 (continued)

Characteristic	<i>n</i> ^a	% ^b
Condom use with casual female sex partner		
Never use	57	21.9
Have used or use	203	78.1
Condom use with primary female sex partner		
Never use	196	71.3
Have used or use	79	28.7

Note: *N* = 290.

a. May not add to 290 because responses of “don’t know” and “refuse” were dropped.

b. May not add to 100% because of rounding.

Measures

The survey instrument was designed to assess sociodemographic background characteristics, risky sexual behaviors, perceptions of HIV infection, HIV or STD testing history, and intention to test for HIV, which is reported elsewhere (Ehrlich et al., 2007). Some survey items were adopted from the Cultural Health Attributions Questionnaire by Murguía, Zea, Reisen, and Peterson (2000) and are described below.

Background characteristics. Sociodemographic background variables assessed, as well as different levels or categories of each variable, are listed in Table 1. Four language-related items from the Short Acculturation Scale (SAS; Marin, Sabogal, Marin Otero-Sabogal, & Pérez-Stable, 1987) assessed level of acculturation. For example, participants were asked, “What language do you read and speak?” “. . . speak with friends?” and so on. These items are arranged on 5-point scales ranging from 1 (*only Spanish*) to 5 (*only English*). These four items are frequently used in the literature to assess acculturation because they account for the majority of the SAS’s variance in scores. In the current study, this scale had a mean of 1.29 (*SD* = 0.46), indicating very low acculturation to the United States.

Condom use. The main study outcome variable, condom use with casual female sex partners, was assessed by a question, “When you have sex with a woman who is a casual, non-steady sex partner, do you use a condom?” Participants who responded “no, never” or “yes, sometimes, less than half the time” to this item were combined and categorized as those who do not

regularly use condoms with casual female sex partners. Participants who responded, "yes, sometimes, more than half the time" or "yes, always" were combined and categorized as those who do regularly use condoms with casual female sex partners. A total of 26 participants indicated that they "did not know" the extent of their condom use with casual female sex partners or did not answer the question and were thus dropped from the analysis of condom use.

Sexual risk behaviors. Assessment of sexual risk behaviors included number of lifetime female sexual partners, number of female sexual partners during the past 6 months, and sex with a woman in the United States (yes or no). Because the first three items were correlated, they were combined into an index of overall sexual risk for HIV from sexual relations with female partners. As such, *high risk* was defined as four or more lifetime female sex partners, having had sex with a woman in the past 6 months, and having had sex with a woman in the United States on the three items, respectively. *Medium risk* was defined as endorsing any two of the above three items, while *low risk* referred to endorsing any one of the three items (including between zero and three lifetime female sex partners if only that one item was endorsed).

The index of sexual HIV risk with female partners was used as a continuous variable in the logistic regression model. A univariate logistic regression model confirmed that a linear relationship between the sexual HIV risk index and the outcome condom use was an adequate fit to the data, Hosmer and Lemeshow goodness of fit test, $\chi^2(1, n = 263) = 0.03, p = .86$. Hence, it was retained as a predictor.

Alcohol and substance use. Alcohol and substance use as cofactors of HIV risk were assessed by self-reported alcohol use during sex in the past 6 months as well as being high on alcohol or drugs during sex during the past 6 months (each a dichotomous variable). Because these two items were correlated, they were combined into a single substance use during sex index.

Perceived risk for HIV. The item, "What are your chances of getting infected with HIV in the next year?" assessed perceived risk for HIV infection. Men who answered "very likely" or "probable" were considered to perceive themselves to be at risk, while men who answered "somewhat likely" or "impossible" were considered to not perceive themselves to be at risk. Personally knowing someone with HIV/AIDS or someone who had died of HIV/AIDS (dichotomous variable) also assessed perceived risk of HIV infection.

HIV or STD testing. History of HIV or STD testing, and intention to test, was assessed by three items: “Ever had an HIV test?” “Do you intend to test for HIV?” “Ever had an STD test, and ever been diagnosed with an STD by a medical provider?” (all dichotomous variables).

Data Analyses

All potential predictor variables were included in a full logistic regression model of condom use with a casual female sex partner on the part of LMDLs. More specifically, the following sociodemographic predictors were tested: age, education, marital status, residence of wife or primary partner, length of time migrating between country of origin and the United States, and weekly wages. The following behavioral predictors were tested: sexual HIV risk with female sex partner (high, medium, low); history of STD test and past diagnosis of an STD; having exchanged sex for food, shelter, drugs, or money, during the past 6 months as well as during one’s lifetime; substance use during sex during the past 6 months; and history of HIV test. And the following psychosocial predictors were tested: perceived risk of HIV infection, knowing some one with HIV or AIDS, and intention to test for HIV within the next year.

Variables with p values greater than .10 in the full logistic regression model were dropped from the model, except for age, which, although greater than .10, was retained because it has been found to be a significant predictor of condom use with Latino labor migrants (Organista et al., 2000). Next, backward stepwise elimination, with a cutoff of $p < .05$, was used to derive the final model.

Interactions among all potential predictor variables were investigated given the exploratory nature of this study. In a few instances, there was a lack of statistical power for testing interactions because of too few or no participants in cross-product cells. In total, 179 interactions were tested with bivariate logistic regression models that included the two potential predictor variables and their interaction term. Interaction terms with a p value less than .05 in the bivariate models were retained for inclusion in the full multivariate logistic regression model.

The bivariate analyses of potential interactions yielded eight significant interactions ($p < .05$). However, only one of the eight interactions, between education and marital status, remained significant in the full multivariate model ($p < .05$) and was thus retained for the final model reported here. Thus, the following interaction categories were retained for inclusion in the final logistic regression model: married and single men who had completed middle school or further, married and single men who had attended some

middle school, and married and single men who had never attended school. Men who were single and had never attended school composed the reference group.

Results

Because descriptive findings for HIV risk and related sociodemographic, behavioral, and psychosocial variables have been reported elsewhere (Ehrlich et al., 2007), findings reported here focus on the results of the regression analyses.

The final logistic regression analysis modeling condom use by LMDLs with casual female sex partners included the following sociodemographic background variables: age (younger than 28, 28 to 37, and 38 or older), marital status (wife or common-law wife, single), residency of wife or primary partner (living in Mexico, living with migrant in California, living in other country but neither Mexico nor United States, refused to answer or don't know), education (no school, some middle school, completed middle school or further), and the interaction between education and marital or partner status (married and single who had completed middle school or further, married and single who had attended some middle school, and married and single who had never attended school).

The final logistic regression analysis also included the following psychosocial and behavioral predictors: perceived risk for HIV infection (not at risk, at risk), history of HIV testing (has tested, never tested), sexual HIV risk with female partners (high, medium, low risk), and substance use during sex in the past 6 months (yes or no).

The goodness of fit of the final multivariate model was tested with a Hosmer and Lemeshow test, $\chi^2(7, n = 263) = 10.4, p = .24$, which indicated that the model sufficiently fit the data. As can be seen in Table 2, the results of the final multivariate logistic regression model ($N = 263$) revealed several significant predictors of condom use with a casual female sex partner on the part of LMDLs.

With regard to sociodemographic background predictors, participants with wives or primary partners living in Mexico (the majority of the men) were about 4.5 times more likely to report using condoms (i.e., "more than half the time" or "always") with casual female sex partners as compared to men who were currently accompanied by wives or primary partners in California (odds ratio [OR] = 4.45, 95% confidence interval [CI] = 1.59-12.43). No other background predictors were significant.

Table 2
Predictors of Condom Use With Casual Female Sexual Partners on the Part of Latino Migrant Day Laborers

Characteristic	Use Condoms				Unadjusted		Adjusted	
	Less Than Half the Time or Never		More Than Half the Time or Always		OR	95% CI	OR ^a	95% CI
	n	% ^b	n	% ^b				
Age (n = 265)								
Younger than 28	28	31.1	65	37.1	1.04	0.56, 1.93	1.53	0.73, 3.20
28 to 37	30	33.3	67	38.3	1.00 ^c	—	1.00 ^c	—
38 or older	32	35.6	43	24.6	0.60	0.32, 1.13	0.59	0.28, 1.21
Wife live (n = 265)								
Mexico	22	24.4	54	30.9	2.45*	1.01, 5.99	4.45*	1.59, 12.43
With migrant	14	15.6	14	8.0	1.00 ^c	—	1.00 ^c	—
Other	20	22.2	25	14.3	1.25	0.49, 3.22	2.75	0.89, 8.47
Don't know or refuse	34	37.8	82	46.9	2.41*	1.04, 5.60	7.44	0.59, 93.93
Perceived risk of HIV infection (n = 265)								
Not at risk (some what, impossible or don't know)	76	84.4	169	91.4	1.00 ^c	—	1.00 ^c	—
At risk (very likely or probable)	14	15.6	15	8.6	0.51	0.23, 1.11	0.38*	0.15, 0.94
New combination sex partner risk variable ^d (n = 263)								
Low risk in two or all categories	33	36.7	35	20.2	1.00 ^c	—	1.00 ^c	—
Low risk in one category	23	25.6	42	24.3	1.63 ^{d*}	1.20, 2.21	2.37 ^{d*}	1.54, 3.64
High risk in all three categories	34	37.8	96	55.5	2.66 ^{d*}	1.44, 4.88	5.62 ^{d*}	2.37, 13.25
Previous HIV test (n = 265)								
No test	19	21.1	66	37.7	1.00 ^c	—	1.00 ^c	—
Had test	71	78.9	109	62.3	2.26*	1.25, 4.09	3.06*	1.53, 6.13

(continued)

Table 2 (continued)

Characteristic	Use Condoms		n	% ^b	More Than Half the Time or Always	n	% ^b	Unadjusted			Adjusted		
	Less Than Half the Time or Never	More Than Half the Time or Always						OR	95% CI	OR ^a	95% CI	95% CI	
	n	% ^b						OR	95% CI	OR ^a	95% CI	95% CI	
Substance abuse (<i>n</i> = 265)													
No	54	60.0	110	62.9				1.00 ^c	—	1.00 ^c	—	—	—
Yes	36	40.0	65	37.1				0.89	0.53, 1.49	0.46*	0.22, 0.95	0.22, 0.95	
Wife (<i>n</i> = 265)													
No wife	36	40.0	84	48.0				1.00 ^c	—	1.00 ^c	—	—	—
Married or common law	54	60.0	91	52.0				0.72	0.43, 1.21	0.81	0.07, 9.06	0.07, 9.06	
Education (<i>n</i> = 265)													
Never attended school	14	15.6	11	6.3				0.36*	0.15, 0.89	0.45	0.10, 2.14	0.10, 2.14	
Some middle school	48	53.3	103	58.9				0.99	0.56, 1.73	0.35*	0.13, 0.93	0.13, 0.93	
Middle school or further	28	31.1	61	34.9				1.00 ^c	—	1.00 ^c	—	—	—
Interaction ^e													
No wife × middle school or further ^f								1.00 ^c	—	1.00 ^c	—	—	—
No wife × some middle school ^f								0.43	0.18, 1.06	0.35**	0.13, 0.93	0.13, 0.93	
No wife × never attended school ^f								0.37	0.09, 1.57	0.45	0.10, 2.14	0.10, 2.14	
Wife × middle school or further ^f								0.31**	0.12, 0.79	0.81	0.07, 9.06	0.07, 9.06	
Wife × some middle school ^f								0.60	0.25, 1.43	2.14	0.19, 23.6	0.19, 23.6	
Wife × never attended school ^f								0.12**	0.03, 0.45	0.51	0.04, 7.00	0.04, 7.00	

Note: *N* = 263. OR = odds ratio; CI = confidence interval.

a. All variables adjusted for each other in multivariate logistic model (*n* = 263).

b. May not add to 100% because of rounding.

c. Reference category.

d. Continuous variable (0 to 2), estimated OR between any two adjacent levels = 1.63, *p* < .01 for unadjusted OR and 2.37, *p* < .01 for adjusted OR.

e. Test for interaction. Ho: only main effects are needed in the model, *p* < .01.

f. Overall test. Ho: all categories are equal, unadjusted *p* value = .02, adjusted *p* value = .03.

g. Significantly different than reference level (no wife and high school or further), *p* < .01.

***p* < .05.

With regard to behavioral predictors, sexual risk for HIV with casual female partners was a highly significant predictor of condom use. As compared to men at low risk on this three-item index, men at high risk were more than 5.5 times (OR = 5.62, 95% CI = 2.37-13.25), and men at moderate risk were 2.37 times, more likely to use condoms with casual female sex partners (OR = 2.37, 95% CI = 1.54-3.64).

With regard to psychosocial predictors, men who perceive themselves to be at risk of HIV infection within the next year (i.e., “very likely” or “probable”) were 62% less likely to use a condom with casual female sex partners (OR = 0.38, 95% CI = 0.15-0.94) as compared to men who do not perceive themselves to be at risk (i.e., “impossible,” “some what likely,” or “don’t know”). However, men who had been previously tested for HIV were more than 3 times more likely to report using condoms with casual female sex partners (OR = 3.06, 95% CI = 1.53-6.13) as compared to men with no HIV testing history.

With regard to substance use, participants who reported using alcohol or drugs during sex in the past 6 months were about half as likely to report using a condom with their casual female sex partners (OR = 0.46, 95% CI = 0.22-0.95) as compared to men who did not report alcohol and substances use during sex.

Finally, testing the terms for the interaction between education level and marital status warranted its inclusion in the multivariate model, $\chi^2(1, n = 263) = 9.8, p < .01$. The overall test was also significant, suggesting that the three levels of education level by condom use with a casual partner subgroups differed from one another other, $\chi^2(3, n = 263) = 12.3, p < .05$. Of the six groups created by combining the education and marital status variables, a statistically significant OR emerged for men who reported some middle school and not being married. That is, these men were 65% less likely to use a condom with a casual female sex partner as compared to men who had completed middle school or further and who were not married (OR = 0.35, 95% CI = 0.13-0.93). The ORs comparing the other education-marital status groups to the same baseline (completing middle school or further and being married) were not statistically significant.

Discussion

This secondary analysis of data from the California Office of AIDS examines important sociodemographic background, behavioral, and psychosocial predictors of condom use with casual female sex partners on the part of sexually active male LMDLs soliciting work in the East Bay of San

Francisco. Although limited by the survey instrument and local convenience sampling, this is the first study of its kind to our knowledge and thus provides a benchmark for this important line of research. As such, the findings begin to tell an interesting story consistent with past research on HIV risk and Latino labor migrants in general.

With regard to the various sociodemographic background factors analyzed, only current residence of wife or primary partner emerged as a significant predictor of condom use. More specifically, men whose wives or partners currently reside in Mexico were more than 4.5 times more likely to use condoms with casual female sexual partners as compared to men accompanied by their wives or partners in California. This particular finding is interesting for three reasons. First, consistent with the literature (Organista et al., 2004), well over half of the participants in the current study were married or partnered, yet 80% were currently unaccompanied by their wives or partners. Thus, the above predictor factor pertains to a large proportion of LMDLs in the current study.

Second, although greater condom use on the part of unaccompanied men suggests greater HIV prevention effort, apparently to avoid infecting wives or partners back home, this finding also appears to confirm greater casual sexual activity on the part of unaccompanied men, as has been documented. That is, research shows that among married male Latino migrants, those unaccompanied by wives report more recent and lifetime sexual partners, as well as sex with sex workers, as compared to their accompanied counterparts (Viardo & Earp, 2000).

Third, although past research has documented HIV risk to wives in country of origin resulting from the sexual risk behaviors of Latino migrant husbands (Hirsch, Higgins, Bentley, & Nathanson, 2002; Salgado de Snyder, Diaz-Perez, & Maldonado, 1996), this is one of the first studies to also document HIV prevention efforts on the part unaccompanied migrant men. For example, Organista, Balls Organista, Garcia de Alba, Moran, and Ureta Carrillo (1997) found that although more than 40% of both married and single Latino labor migrant men ($n = 342$) reported sex with sex workers while in the United States, married men were actually less likely to carry and use condoms. Thus, the greater condom use evidenced by unaccompanied men in the current study is encouraging considering the ways that migratory labor in the United States increases the probability of being unaccompanied by wives or partners and hence sexual risk. For example, guest worker contracts typically contain provisions prohibiting married migrant men from bringing their wives while performing seasonal labor (Chang, 2000). Furthermore, undocumented laborers, who compose the

majority of day laborers and farm workers in the United States, typically leave wives at home and prolong their stays as a result of border-control policies that make it both expensive and dangerous to cross the U.S.-Mexico border (Organista, 2007).

In attempting to understand the above finding, it is worth noting that being located in the San Francisco Bay Area most likely exposes day laborers to relatively high amounts of HIV prevention messages and access to condoms, including active outreach to this population by culturally competent community-based organizations. For example, a previous local study on Latino day laborers found that almost all of the 102 surveyed reported having heard HIV/AIDS prevention messages from a variety of sources including radio, television, brochures, newspapers, friends, and outreach workers (Organista & Kubo, 2005).

Although no other sociodemographic factors predicted of condom use, the significant interaction found between marital status and level of education indicates that unmarried men with some middle school were about 65% less likely to use condoms with casual female sex partners as compared to married men who had completed middle school or further. Thus, it appears that both desire to protect wives or partners from HIV and more years of education combine to predict higher levels of condom use with casual female sexual partners along the migrant trail.

With regard to behavioral risk factors, results clearly show greater levels of condom use with casual female sex partners predicted by greater levels of sexual HIV risk taking with such sex partners. That is, compared to men at low sexual risk for HIV with female sex partners, men at high risk were more than 5 times, and men at medium risk were more than twice as likely, to use condoms with casual female sex partners. Considering that almost 80% of participants reported at least some condom use with casual female sex partners, these data are encouraging and support continued condom promotion efforts.

Not surprisingly, men who reported using alcohol and/or other substances during sexual relations were half as likely to use condoms during sex with casual female partners as were men who reported no such alcohol and/or substance use. Thus, alcohol and substance use appear to be significant HIV risk cofactors for LMDLs, warranting alcohol and substance use prevention services, especially in view of a review of the literature showing alcohol use and problem drinking to be serious problems among Latino day laborers and labor migrants in general (Worby & Organista, 2007).

On a counterintuitive note, it was found that men who perceive themselves to be at risk for HIV were 68% less likely to use condoms as compared to men who do not perceive themselves to be at risk. However, men

who had been previously tested for HIV were 3 times more likely to use condom with casual female sex partners than were men with no such history of HIV testing. Thus, although findings for perceived risk for HIV as a predictor of condom use appear mixed, HIV testing behavior may be a more direct assessment of this psychosocial factor.

In closing, more research is needed with larger and more representative samples of LMDLs, utilizing more comprehensive survey instruments, in order to build on the current study and expand our understanding of influential predictors of condom use that can be incorporated into comprehensive HIV prevention services with this unique population of Latinos currently living and working in the United States.

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