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# Self-Reported HIV Antibody Testing among Latino Urban Day Laborers

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## Abstract

**Objective—**To identify the characteristics of male Latino urban day laborers who self-report having tested for HIV.

**Methods—**A cross-sectional survey was conducted with 356 Latino day laborers, aged 18 to 40 years, who had been sexually active in the previous 12 months, from six day labor sites in the City of Los Angeles.

**Results—**Most of the men were single, mainly from Mexico and Guatemala, and had been employed as a day laborer less than 3 years; 38% had an annual income of $4,000 or less. Ninety-two percent of the men reported having sex with women only and 8% reported a history of having sex with men and women. Forty-six percent had received an HIV test in the previous 12 months and one person tested positive. In univariate logistic regression analyses, day laborers who were 26 years of age or older, had more than 3 years in the United States, had more than 1 year but less than 5 years employed as a day laborer and had annual incomes greater than $4,000 were significantly more likely to self-report HIV testing in the previous 12 months. In a multivariate logistic regression analysis, only higher annual income was found to be significantly associated with self-reported HIV testing.

**Discussion—**Interventions that target lower income Latino day laborers are needed to promote early HIV detection. HIV detection offers individual benefits through treatment, with decreased morbidity and mortality, as well as public health benefits through decreased rates of HIV transmission in the community.

### Keywords

Latinos; day laborers; sexual risk behaviors; HIV testing

## Introduction

Latinos are disproportionately affected by human immunodeficiency virus (HIV) infection and acquired immunodeficiency syndrome (AIDS) in the United States. In the year 2005, although Latinos accounted for 14.4% of the U.S. population,[1] they accounted for 19% of persons

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receiving an AIDS diagnosis.2 The rate of new HIV diagnosis among Latinos is also disproportionately high and in 2005 was three times that for whites.3

Nearly half of U.S. Latinos in whom HIV infection was diagnosed between 2001–2005 were born outside of the United States.[3] Latinos born in Mexico and other Latin American countries often migrate to the U.S. in search of employment; a subset of these immigrants work as day laborers.[4] Factors that make Latino immigrant populations vulnerable to HIV include social inequalities, including low wages, low levels of education, language barriers, unstable housing, social isolation, and marginalization from society[5–10]; in addition, a recent study reports that Latino day laborers are often solicited for sex work in urban areas.[11]

Latino immigrant populations at risk for HIV in the U.S. are of special concern due to their known lack of access to the healthcare system where HIV testing may be offered; factors known to impede their access to care include having a low income, lacking employer-based health insurance, and having an undocumented status.12[–13] National studies indicate that Latinos are more likely than whites to be “late-testers” for HIV (i.e. find out their HIV status within 12 months of an AIDS diagnosis)[14]; a recent study documents that immigrant status is significantly and independently associated with delayed HIV presentation among Latinos.15 Late-HIV detection has negative implications for individual morbidity and mortality as well as for public health. In the era of effective antiviral treatments, the benefits of early HIV detection are significant, including a diversity of treatment options for the individual and a lowering of the viral load across the population, potentially slowing new infections.16

In the United States individuals who are living with HIV but are unaware of their status are estimated to be 3.5 times more likely to transmit HIV to others compared to individuals who are aware of being HIV positive; the HIV/AIDS epidemic can be lessened substantially by increasing the proportion of HIV positive persons who are aware of their status.[17] Studies indicate that 70% of persons who find out that they are HIV positive stop having unsafe sex[18–19]; therefore, timely knowledge of a positive HIV status alone offers substantial public health benefits. The changing epidemiologic patterns of HIV in the United States is making early HIV detection a priority strategy in controlling the spread of disease.[20]

The purpose of this study was to identify the characteristics of male Latino urban day laborers who self-report having been tested for HIV in the previous 12 months. Specifically, we wanted to see which day laborers are more likely to get tested for HIV. This study will contribute to the limited literature that currently exists about Latino day laborers and HIV testing. In a literature review, only one study was found on day laborers which examined their intentions to test for HIV; however, this study did not assess self-reported HIV testing history.[21] An understanding of the factors associated with HIV testing among Latino day laborers may help inform policy regarding ways to reach individuals outside of the healthcare system and may provide useful information for the development of interventions that promote HIV testing in this population.

## Methods

### Participants

The study participants in this study reflect a sample from a larger cross-sectional study that examined sexual solicitation of Latino male day laborers by other men. The original study conducted personal interviews with a convenience sample of 450 day laborers in six day labor sites in the city of Los Angeles; the day labor sites were selected based on knowledge obtained regarding sexual solicitations occurring at these sites. To be included in the original study, the participants had to meet the following criteria: self-reported Latino ethnicity, age ranging from 18 to 40, and self-report employment as a day laborer. For this paper, we selected the

participants who reported being sexually active in the past 12 months. Please refer to Galvan *et al.* (2008)[11] for further information about the selection of participants and sites.

Each participant was paid $15 for a 30 minute individual interview. The interviews were conducted from July to September 2005 and all participants were interviewed in Spanish. Prior to participating in the study, participants signed a consent form which indicated that the purpose of the study was to examine the extent to which Latino urban day laborers were at risk of HIV. It added that questions would be asked about their sexual behaviors, their use of alcohol and drugs, and whether they had ever been tested for HIV. This study was approved by the Institutional Review Boards of Charles R. Drew University of Medicine and Science, the University of California, Los Angeles, and the University of Washington.

## Procedures

Of the six day labor sites in Los Angeles identified by project staff, five of these day labor sites were outdoor sites on street corners and one was a day labor center. At each site, interviewers made visual assessments of which day laborers were likely over 18 years old and less than age 40 and approached them individually. After an initial screening for eligibility based on the participants' ethnicity and age, those who expressed an interest in participating were then guided to a nearby private area and subsequently interviewed.

## Measures

Sociodemographic characteristics, alcohol and drug use, sexual risk behaviors, and self-reports of HIV testing were assessed in the interview. The measures are described below.

### Independent Variables

**Socio-demographic characteristics:** Age, education, marital status, country of birth, citizenship/immigration status, number of years in the United States, years spent as a day laborer, residential stability, and sexual orientation were assessed. Marital status was categorized as follows: (1) single, (2) married (spouse in United States) or not married but living with partner, and (3) married but spouse not in United States. Other factors were categorized as follows: country of birth (United States, Mexico, Guatemala, and other Latin American countries), citizenship/immigration status (United States citizen, legal resident, in the process of obtaining documentation, undocumented, other), and sexual orientation (heterosexual, homosexual, bisexual, or other). Residential stability was assessed by asking day laborers if they had moved from one county in California to another in the previous 12 months in order to seek work.

**Alcohol use:** Alcohol use was measured with the Alcohol Use Disorders Identification Test22 and assessed for the previous past 12 months. For alcohol use, we focused on a history of binge drinking, a behavior that previous studies describe as being more common among Latino men23 and especially more common among young Latino men with low levels of education.[24] To assess binge drinking, study participants were asked, "How often do you have 6 or more drinks on one occasion (never, less than monthly, monthly, weekly, or daily/almost daily)?" Those who reported monthly, weekly, or daily/almost daily heavy drinking were considered binge drinkers, and those who reported less frequent heavy drinking were not.

**Drug use:** Drug use, including marijuana, tranquilizers or sedatives, cocaine or crack, hallucinogens, inhalants, methamphetamines, opiates, and other stimulants, was assessed using the Texas Christian University Drug Screen II.[25] For drug use, participants were first asked a question about whether they had used any drugs in the previous 12 months; then they were asked about which drugs caused them the most serious problems. Those who responded that serious problems were caused by drug use from cocaine or crack, hallucinogens, inhalants,

methamphetamines, opiates, or other stimulants were categorized as meeting the criteria for hard drug dependence.

**Sexual Risk Behaviors:** Day laborers were asked about the number of sexual partners and frequency of condom use (always, usually, once in a while, never) when engaging in sexual activity in the past 12 months. Those reporting having been sexually active within that time period were then categorized as having had one partner, 2–5 partners, or more than 5 partners. Type of sexual partner (only men, primarily men, equally men and women, primarily women, only women) was also assessed. Only one participant reported "primarily men" and no one reported "only men". Therefore this variable was categorized into "women only" and "men and women". Condom use was further dichotomized into always and less than always.

**Annual Income:** This was assessed based on the previous year's income. In the multivariate model, income was used as a continuous variable in increments of $1,000.

**HIV Testing—**To assess self-reports of HIV testing, day laborers were asked, "Have you ever been tested for HIV?" Interviewers recorded the response as a yes, no, don't remember, or refused to answer. If the day laborer answered affirmatively, they were then asked, "When was the last time you were tested for HIV?" and "Have you ever been told that you have HIV?" Interviewers recorded the response to this last question as a yes, no, don't remember, or refused to answer.

## Data Analysis

The analysis for this study represents a sub-sample of Latino day laborers from a larger study (N=450) that examined their frequency of being solicited for sex work.[11] For this study, we selected men who reported a history of being sexually active in the previous 12 months (n = 378). However, since the application for legal residency status could confound with HIV testing in the previous 12 months, we excluded any participants who reported having a residency status of naturalized U.S citizen, legal resident, and "other" (in the process of obtaining documentation) from further analysis for a final sample size of 356. The reason for excluding these groups was that, at the time that the study was conducted, according to the U.S. Immigration and Nationality Act, individuals who wished to obtain lawful immigration status in the United States had to undergo HIV testing; those who applied for a temporary visa were asked to report their HIV status but were not required to undergo HIV testing.26

Comparisons of the sociodemographic characteristics and risk behaviors were made between the day laborers who self-reported HIV testing in the past 12 months and those who did not. We then conducted univariate logistic regression analyses of each independent variable and HIV testing in the last 12 months. Variables found to be significant in the univariate analyses at the $p \leq 0.25$ level, as well as other variables of *a priori* interest, were selected for inclusion in the multivariate logistic regression model.

Variables found to be collinear were excluded from the multivariate analysis. Collinearity was addressed by examining combinations of two specific variables and determining if they were significantly associated with each other through the use of a chi-square statistic. If the association was determined to be significant at $p \leq 0.05$ or better, one of these two variables was then excluded from the multivariate analysis. The variable with the larger odds ratio in a univariate analysis with the outcome variable of HIV testing in the last 12 months was the one that was subsequently used in the multivariate model. Stata 6.0 was used for the analysis (StataCorp LP, College Station, Texas).[27]

## Results

Among the 356 Latino day laborers, 43% were aged 25 years or younger, and the majority (69%) had 8 years or less of education. Most of the sample consisted of single men (60%). Only one man reported being born in the United States. The remainder was born in other Latin American countries. Fifty-nine percent had lived in the United States for 3 years or less. Over four-fifths reported having worked as a day laborer for less than 5 years. Twelve percent had a history of moving from county to county in the previous 12 months. Forty-six percent had a history of alcohol binge drinking and 15% had a history of hard drug dependence in the previous 12 months. Thirty-eight percent reported an annual income of $4,000 or less.

Almost all day laborers self-identified as heterosexual (99%) and only 1% as bisexual; no one self-identified as gay/homosexual. A little more than half reported having 2 or more sexual partners in past 12 months. When describing their type of sexual partner, 92% described them as being women only and 8% reported both men and women. Somewhat more than half reported having always used condoms with their sexual partners during the previous 12 months.

Forty-six percent of the sample had received an HIV test in the previous 12 months; one person tested positive for an HIV prevalence of 0.6% among those tested. Only one man reported not knowing the outcome of his HIV test result; all other men reported that their HIV test result had been negative.

In comparing the day laborers who self-reported HIV testing in the past 12 months to those who had not, significant differences were found by age group, number of years in the United States, years of employment as a day laborer, and annual income (Table I). Day laborers who were 26 years of age or older, had more than 3 years in the United States, had more than 1 year but less than 5 years employed as a day laborer and had annual incomes greater than $4,000 were significantly more likely to self-report HIV testing in the previous 12 months. Table I also presents information on the day laborers who reported not having had an HIV test in the previous 12 months. The significant results report the inverse of what was described for those who had had an HIV test during that period.

After correcting for multicollinearity as described in the Data Analysis section, we ran our multivariate model (Table II); only annual income was found to be associated with self-reported HIV testing in the past 12 months [OR 1.11., 95% CI 1.04–1.18, $p \leq 0.001$]. An increase of $1,000 in annual income was associated with 1.11 times the odds that an individual had taken the HIV test in the previous 12 months. Other factors, such as sexual risk behaviors (history of having sex with both men and women) and hard drug dependence were not found to be associated with self-reported HIV testing in the previous 12 months.

## Discussion

In the present study of male Latino day laborers, the only factor found to be associated with self-reported HIV testing in the previous 12 months, after controlling for the presence of other variables, was annual income. The association between self-reported HIV testing and annual income found in this study is consistent with another study that examined HIV testing among Latino farmworkers, a different sub-group of Latino immigrants.[28] Although HIV testing may be available free of charge in large urban areas through public health clinic sites and community based organizations, such sites may not be easily accessible for low-income Spanish-speaking populations.

A previous study has developed consumer-based indicators to evaluate the accessibility of private and public nonhospital HIV testing organizations in Los Angeles County; this study used a telephone survey protocol to contact 148 sites and assess consumer-relevant accessibility

measures. Only 50% of the sites could be contacted after three telephone calls; hence a consumer who tried to reach one site had only a 50–50 chance of success.[29] Such findings indicate that HIV testing sites may not be readily available.

Although it may be argued that most day laborers in this study had low annual incomes, it appears that those with the lowest annual incomes may face more barriers in finding HIV testing in their communities than those with higher incomes, especially if they believe that they have to pay for testing. A need exists to make low income populations, such as day laborers, aware of the availability of free or affordable HIV testing sites in their communities.

Two ways of raising awareness of the need for HIV testing in the day labor population may include outreach programs by a county's Department of Public Health, especially if done through trusted community-based organizations, as well as social marketing campaigns conducted in Spanish. Social marketing campaigns, especially if done through radio, a media that is commonly used by low-income Spanish speaking Latinos,[30] would be able to reach a large segment of the Spanish speaking population; a recent study indicates that such campaigns may be effective in promoting HIV testing in Latinos.[31] The utility of social marketing campaigns is likely to be enhanced considerably by close integration, at the local level, of social marketing and HIV testing services. [29]

The finding of higher annual income being associated with self-reported HIV testing in the present study contradicts a previous study that examined intention to test for HIV among a sample of Latino day laborers. In this previous study, lower income was associated with greater likelihood of having intentions to test for HIV in the subsequent 6 months. The present study findings indicate that when self-reported HIV testing history is measured rather than "intention to test", there may be less likelihood of a socially desirable response among the lower income day laborers. [21]

The self-reported HIV testing rate in the previous 12 months among this sample of Latino day laborers was 46%; a rate that is higher than the 30% reported on a previous study on Latino day laborers.[9] However, day laborers who engaged in high risk behaviors, such as having sex with both men and women, were not found to be more likely to self-report HIV testing in the past 12 months. This finding contrasts with studies on other populations that have found that men who have sex with men (MSM) are more likely than heterosexual men to receive HIV testing.[32–]33 In addition, while a previous study reports relatively high rates of HIV testing among MSM, that study included only men who self-identified as gay or bisexual.34 However, men who have sex with men and women may not always identify as homosexual or bisexual, and this lack of association between sexual behavior and self-identified sexual orientation may be even more common among Latino subgroups such as day laborers. Therefore, future studies need to assess sexual behaviors and not just sexual orientation.

In addition, future research needs to evaluate the specific social and cultural issues that serve as barriers or facilitators for HIV testing among Latino men who have sex with men and women. A previous study describes that HIV-related stigma is an important barrier keeping persons at risk for HIV from seeking HIV testing.[35] Although the present study did not measure HIV-related stigma, we suspect that this may be an important barrier for HIV testing among Latino men who have sex with men and women; qualitative research in this area focused on Latino men who have sex with men and women is needed.

In the present study, all of the day laborers who reported having had sex with men also reported having had sex with women (8%). The proportion of day laborers reporting having had sex with men is similar to a previous study of day laborers.[9] However in this previous study, the participants who had sex with men were not asked if they also had sex with women. Despite 8% of the sample reporting bisexual behavior in the present study, only 1% self-identified as

bisexual and no one self-identified as gay/homosexual. The discrepancy between sexual identification and reported sexual behavior found in this sample is a cause for concern because a recent study indicates that men who have sex with men who identify as heterosexual are more likely to have had STDs, to have unprotected intercourse with female partners, and to report having sex under the influence of alcohol or other drugs. 36 A need exists for the development of interventions that promote sexual risk behavior reductions as well as HIV testing among Latino men who have sex with men and women and who identify as heterosexual.

The strength of this study is that it is the first to focus on self-reported HIV testing by Latino day laborers using a large sample from an urban area. Regarding the limitations of the study, one limitation is that this study did not actually conduct laboratory HIV testing on the day laborers who participated in this study and that the history of HIV testing is based on self-report. Another limitation is that the data did not include measures on day laborers' perceived risk for HIV or HIV/AIDS-related knowledge. It is likely that more recent immigrants may have less HIV-related knowledge; many immigrants come from rural areas where access to information on HIV is limited. A previous study documents low levels of HIV knowledge among Latino immigrants.[15] In addition, recent immigrants may be emigrating from areas where the HIV prevalence is low and therefore they may not be as aware of the need to practice safe sex to prevent HIV. Another limitation of this study is that it is based on a convenience sample of day laborers; however, in comparing the socio-demographic profile of our study participants to that of a recent national study on day laborers, we found many similarities, including a similar proportion of day laborers born in Mexico and similar education levels, marital status, and years spent in the United States.[4]

Finally, it is possible that our study, based on pre-existing data from another original study, did not have sufficient statistical power in order to be able to detect significant differences in HIV testing among certain subgroups of day laborers. Ex post facto we considered the ability of our multiple logistic regression model to predict whether a day laborer would have been tested for HIV. For example, among other potential predictor variables, we specifically considered the case of an individual who was low risk for HIV (men who had sex with only women) versus one who was high risk for HIV (me who had sex with both men and women). Using the numbers obtained from our actual study, we assumed an approximate 50% rate of HIV testing in the population under consideration (the rate for the dependent variable), an approximate rate of about 10% of the population being high risk (the independent variable of interest), an approximate R-squared of 0.1 between all of the independent variables in the model, and a 0.05 significance level. With a sample size of 356, the study had 80% power to detect an odds ratio of 3.02 for the high risk group (versus the low risk group). Thus only a fairly large odds ratio of about 3 could have been detected with the given sample size and rarity of the high risk group in the population under study. Thus it is not surprising that we found no significant difference in HIV testing between men who had sex with women only and those who had sex with both men and women.

Nevertheless, this study presents findings not previously addressed in the few articles that exist on HIV testing among day laborers, and the findings are based on a sample size larger than those utilized in previous HIV studies with day laborers. Our findings indicate that interventions that target lower income day laborers are needed to promote HIV testing among this population. Such interventions will need to be linguistically and culturally appropriate. As noted by the Center for Disease Control and others, [16–20] early HIV detection is an important strategy in preventing the spread of HIV in the community.

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## References

1. Source: Population Division. U.S. Census Bureau; [Accessed 09/15/07]. Table 3: Annual estimates of the population by sex, race, and Hispanic or Latino origin for the United States: April 1, 2000 to July 1, 2006 (NC-EST2006-03). Release Date: May 17, 2007. http://www.census.gov/popest/national/asrh/NC-EST2006-srh.html
2. Centers for Disease Control. HIV/AIDS Surveillance Report, 2005. Vol. 17. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention; 2007. p. 1-54.Rev Ed
3. CDC. HIV/AIDS among Hispanics—United States, 2001–2005. MMWR 2007;56(40):1052–1057. [PubMed: 17932482]
4. Valenzuela, A., Jr; Theodore, N.; Melendez, E., et al. Technical Report. UCLA Center for the Study of Urban Poverty; 2006 [Accessed 03/14/07]. On the corner: Day labor in the United States. http://www.sscnet.ucla.edu/issr/csup/index.php
5. Denner J, Organista KC, Dupree JD, et al. Predictors of HIV transmission among migrant and marginally housed Latinos. AIDS Behav 2005;9(2):201–210. [PubMed: 15933839]
6. Martinez-Donate AP, Rangel MG, Hovell MF, et al. HIV Infection in mobile populations: the case of Mexican migrants to the United States. Rev Panam Salud Publica 2005;17(1):26–29. [PubMed: 15720878]
7. Solorio MR, Currier J, Cunningham W. HIV health care services for Mexican migrants. J Acquir Immune Defic Syndr 2004;37:S240–251. [PubMed: 15722866]
8. Organista KC, Organista PB. Migrant laborers and AIDS in the United States: a review of the literature. AIDS Educ Prev 1997;9(1):83–93. [PubMed: 9083593]
9. Ehrlich, S.; Tholandi, M.; Martinez, S. HIV risk assessment of Latino day laborers. California Department of Health Services, Office of AIDS; 2006 [Accessed 04/17/07]. http://www.cdph.ca.gov/programs/AIDS/Documents/RPT2006-04-2679HIVRiskAssessMigrantLatinos.pdf
10. Wong W, Tambis JA, Hernandez MT, et al. Prevalence of sexually transmitted diseases among Latino immigrant day laborers in an urban setting—San Francisco. Sex Transm Dis 2003;30(8):661–663. [PubMed: 12897691]
11. Galvan FH, Ortiz DJ, Martinez V, et al. Sexual solicitation of Latino male day laborers by other men. Salud Pública de México 2008;50(6):439–446.
12. Moore, JW.; Pachon, H. Hispanics in the United States. Englewood Cliffs, NJ: Prentice hall; 1995.
13. Freeman, P.; Gomez-Dante, O. Health Systems in an Era of Globalization: Challenges and opportunities for North America. Washington, DC: Institute of Medicine; 1995.
14. Centers for Disease Control and Prevention. Late versus early testing of HIV—16 sites, United States, 2000–03. MMWR 2003;52(25):581–586. [PubMed: 12836626]
15. Levy V, Prentiss D, Balmas G, et al. Factors in the delayed HIV presentation of immigrants in northern California: implications for voluntary counseling and testing programs. J Immigr Health 2007;9:49–54.
16. Vernazza PL, Troiani L, Flkepp MJ, et al. Potent antiretroviral treatment of HIV-infection results in suppression of the seminal shedding of HIV. AIDS 2000;14:117–121. [PubMed: 10708281]
17. Marks G, Crepaz N, Janssen RS. Estimating sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. AIDS 2006;20(10):1447–1450. [PubMed: 16791020]

18. Kalichman SC. HIV transmission risk behaviors of men and women living with HIV-AIDS: prevalence, predictors, and emerging clinical interventions. Clin Psychol: Science Pract 2000;7(1): 32–47.
19. Weinhardt LS, Carey MP, Johnson BT, et al. Effects of HIV counseling and testing on sexual risk behavior: a meta-analytic review of published research, 1985–1997. Am J Public Health 1999;89(9): 1397–1405. [PubMed: 10474559]
20. Centers for Disease Control and Prevention. Revised recommendations for HIVtesting of adults, adolescents, and pregnant women in health-care settings. MMWR 2006;55(RR14):1–17.
21. Ehrlich SF, Organista KC, Oman D. Migrant Latino day laborers and intentions to test for HIV. AIDS Behav 2007;11(5):743–752. [PubMed: 17086437]
22. Fleming MR, Barry KL, MacDonald R. The Alcohol Use Disorders Identification Test (AUDIT) in a college sample. Int J Addict 1991;26(11):1173–1185. [PubMed: 1743817]
23. Galvan FH, Caetano R. Alcohol use and related problems among ethnic minorities in the United States. Alcohol Res Health 2003;27(1):87–94. [PubMed: 15301403]
24. Town M, Naimi TS, Mokdad AH, et al. Health care access among U.S. adults who drink alcohol excessively: missed opportunities for prevention. Prev Chronic Dis 2006;3(2):A53. Epub 2006 Mar 15. [PubMed: 16539794]
25. Texas Christian University Institute of Behavioral Research. TCU drug screen II. Forth Worth: Institute of Behavioral Research; 2002.
26. U.S. Immigration and Nationality Act of 1990, 8 U.S.C. § 212. 2006.
27. Stata [computer program]. Version 6.0. College Station, TX: Stata Corporation; 1999.
28. Fernandez MI, Collazo JB, Bowen GS, et al. Predictors of HIV testing and intention to test among Hispanic farmworkers in South Florida. J Rural Health 2005;21(1):56–64. [PubMed: 15667010]
29. Grusky O, Duan N, Swanson AN, et al. Evaluating the accessibility of HIV testing organizations. Eval Health Prof 2004;27(2):189–205. [PubMed: 15140294]
30. Public Research Institute, San Francisco University; Jun2003 [Accessed 03/15/07]. News Ghettos, Threats to Democracy and Other Myths about Ethnic Media: Lessons from the Bay area news media survey, 2003. http://pri.sfsu.edu/reports.html
31. Olshefsky AM, Zive MM, Scolari R, et al. Promoting HIV risk awareness and testing in Latinos living on the U.S.-Mexico border: the Tú No Me Conoces social marketing campaign. AIDS Educ Prev 2007;19(5):422–435. [PubMed: 17967112]
32. Kalichman SC, Hunter TL. HIV-related risk and antibody testing: an urban community survey. AIDS Educ Prev 1993;5(3):234–43. [PubMed: 8217475]
33. Miller LG, Simon PA, Miller ME, et al. High-risk sexual behavior in Los Angeles: who receives testing for HIV? J Acquir Immune Defic Syndr 1999;22(15):490–497. [PubMed: 10961611]
34. Xia Q, Osmond DH, Tholandi M, et al. HIV prevalence and sexual risk behavior among men who have sex with men: results from a statewide population-based survey in California. J Acquir Immune Defic Syndr 2006;41(2):238–245. [PubMed: 16394858]
35. Fortenberry JD, McFarlane M, Bleakley A, et al. Relationships of stigma and shame to gonorrhea and HIV screening. Am J Public Health 2002;92(3):378–381. [PubMed: 11867314]
36. Zellner JA, Martínez-Donate AP, Saňudo F, et al. The interaction of sexual identity with sexual behavior and its influence on HIV risk among Latino men: results of a community survey in northern San Diego County, California. Am J Public Health 2009;99(1):125–32. [PubMed: 19008512]

## Table 1

Characteristics of Latino Day Laborers Who Self-Report Receiving and Not Receiving HIV Testing in the Past 12 Months (N=356).

| Characteristics | | Received HIV Test | |
|---|---|---|---|
| | | Yes | No |
| | Total N=356 | n=162 (%) | n=194 (%) |
| Age Group | | | |
| ≤25 years | 153 | 60 (39.2%) | 93 (60.8%) |
| ≥26 years | 203 | 102 (50.3%)* | 101(49.7%)* |
| Education | | | |
| ≤8 years | 247 | 109 (44.1%) | 138 (55.9%) |
| ≥9 years | 109 | 53 (48.6%) | 56 (51.4%) |
| Marital status | | | |
| Single | 213 | 92 (43.2%) | 121 (56.8%) |
| Married/Spouse in United States/ Not married but living with partner | 72 | 39 (54.2%) | 33 (45.8%) |
| Married/Spouse not in United States | 71 | 31 (43.7%) | 40 (56.3%) |
| Country of Birth | | | |
| Mexico | 174 | 82 (47.1%) | 92 (52.9%) |
| Guatemala | 129 | 53 (41.1%) | 76 (58.9%) |
| Other Latin American country/ United States[a] | 53 | 27 (50.9%) | 26 (50.1%) |
| Citizenship/immigration status | | | |
| United States Citizen [a]/Visa | 22 | 14 (63.6%) | 8 (36.4%) |
| Undocumented | 334 | 148 (44.3%) | 186 (55.7%) |
| Number of years in United States | | | |
| ≤3 years | 210 | 83 (39.5%) | 127 (60.5%) |
| > 3 years | 146 | 79 (54.1%)** | 67 (45.9%)** |
| Number of years employed as day laborer | | | |
| ≤ 1 year | 144 | 55 (38.2%) | 89 (61.8%) |
| >1 year and < 5 years | 148 | 78 (52.7%)* | 70 (47.3%)* |
| ≥ 5 years | 64 | 29 (45.3%) | 35 (54.7%) |
| History of moving from county to county, past 12 months | | | |
| No | 313 | 138 (44.1%) | 175 (55.9%) |
| Yes | 43 | 24 (55.8%) | 19 (44.2%) |
| Alcohol binge drinking, past 12 months | | | |
| No | 193 | 87 (45.1%) | 106 (54.9%) |
| Yes | 163 | 75 (46.0%) | 87 (54.0%) |
| Hard drug dependence, past 12 months | | | |
| No | 303 | 137 (45.2%) | 166 (54.8%) |
| Yes | 53 | 25 (47.2%) | 28 (52.8%) |
| Number of sex partners, past 12 months | | | |

| Characteristics | | Received HIV Test | |
|---|---|---|---|
| | | Yes | No |
| | Total N=356 | n=162 (%) | n=194 (%) |
| 1 | 156 | 69 (44.2%) | 87 (55.8%) |
| 2 to 5 | 153 | 71 (46.4%) | 82 (53.6%) |
| > 5 | 47 | 22 (46.8%) | 25 (53.2%) |
| Condom use, past 12 months | | | |
| Always | 200 | 97 (48.5%) | 103 (51.5%) |
| Less than always | 156 | 65 (41.7%) | 91 (58.3%) |
| Type of sexual partners, past 12 months | | | |
| Women only | 328 | 148 (45.1%) | 180 (54.9%) |
| Women and men | 28 | 14 (50.0%) | 14 (50.0%) |
| Annual income | | | |
| ≤ $4,000 | 135 | 48 (35.6%) | 87 (64.4%) |
| $4,001 to $10,000 | 173 | 84 (48.6%)* | 89 (51.4%)* |
| $10,001 to $28,000 | 48 | 30 (62.5%)*** | 18 (37.5%)*** |

[a]Only one person reported to being born in the United States.

*$p \leq .05$

**$p \leq .01$.

***$p \leq 0.001$

## Table 2

Logistic Regression Model of Effects of Specific Variables on Self-Reported HIV Testing by Latino Day Laborers in the Previous 12 Months (N=356).

| Variable | Adjusted OR (95% CI) |
|---|---|
| Age group, y | |
| ≤ 25 years | 1.00 |
| ≥ 26 years | 1.34 (0.81–2.23) |
| Education, y | |
| ≤ 8 years | 1.00 |
| ≥ 9 years | 1.12 (0.69–1.81) |
| Marital status | |
| Single | 1.00 |
| Married/Spouse in United States/Not married but living with partner | 1.18 (0.64–2.16) |
| Married/Spouse not in United States | 0.88 (0.49–1.59) |
| Country of Birth | |
| Mexico | 1.00 |
| Guatemala | 0.82 (0.50–1.35) |
| Other Latin American country/United States [a] | 1.10 (0.57–2.11) |
| Number of years in United States | |
| ≤ 3 years | 1.00 |
| > 3 years | 1.38 (0.85–2.26) |
| Hard drug dependence, last 12 months | |
| No | 1.00 |
| Yes | 0.73 (0.38–1.42) |
| Condom Use, Last 12 months | |
| Less than always | 1.00 |
| Always | 1.46 (0.93–2.28) |
| Types of sexual partners, previous 12 months | |
| Women only | 1.00 |
| Women and men | 1.26 (0.55–2.87) |
| Annual income | 1.11 (1.04–1.18)*** |

[a] Only one person reported to being born in the United States.

*** $p < 0.001$