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Disparities in access to HIV prevention among men of Mexican descent living in the Midwestern United States

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Abstract

BACKGROUND—Men of Mexican descent (MMD) in the U.S. are disproportionately affected by HIV. Understanding MMD's access to HIV prevention is necessary to reduce their transmission rates. We explored disparities in access to HIV prevention among MMD of different assimilation status, healthcare access, and sexual risk behavior.

METHOD—322 Midwestern MMD completed a survey assessing their access to passive interventions (e.g., lectures), interactive interventions (e.g., counseling), HIV testing, media information, and information from the Internet.

RESULTS—64% MMD had received passive interventions, 36% interactive interventions, 42% HIV testing, 41% information from media, and 12% from the Internet. MMD who were less assimilated to the U.S., had lower healthcare access, and were at risk for HIV, were less likely to have accessed prevention interventions but more likely to have received media information.

CONCLUSION—Access to HIV prevention among Midwestern MMD is tied to their assimilation and healthcare access. Findings have implications for developing strategies of intervention delivery.

Keywords

HIV PREVENTION; MEXICAN MEN; ACCESS; HEALTH DISPARITIES; IMMIGRANTS

INTRODUCTION

Latinos in the United States (US) account for a disproportionate number of new HIV infections, AIDS cases, and individuals living with HIV. In 2007, Latinos comprised less than 15% of the US population (1) but accounted for 18% of the new HIV infections, 19% of the new AIDS cases, and 19% of the individuals living with AIDS (2, 3). From 2003 through 2007, diagnosed AIDS cases decreased among most minorities but not among Latinos. Moreover, since the discovery of effective treatments, Latino AIDS deaths have declined less than deaths in other groups (2).

In the absence of a vaccine, behavior modification is essential to prevent new HIV cases. Fortunately, HIV prevention interventions are effective to change behaviors that transmit HIV (4). Clinical trials and meta-analyses of the efficacy of HIV prevention interventions

have found behavior change rates of 30% and 40% (4-7). Understanding access to HIV prevention among Latinos can help to reduce their HIV incidence rates and promote early detection among those affected.

Examining Latinos' access to HIV prevention without attention to their national origin, gender, and geographical distribution may mask their prevention needs (8). Latinos of diverse origins vary in their HIV risk profiles and access to prevention services (9, 10). For example, Mexican descendants are more likely to be infected with HIV from sexual intercourse and Puerto Rican descendants from intravenous drug use (11). Similarly, Latino men and women differ in their risk for HIV and preventive service use. Latino men are almost four times more likely to be HIV positive than Latino women (2) but are less likely than them to use preventive care (12, 13). Importantly, access to services among the same group of Latinos varies across areas of the U.S. For example, some U.S. regions have stable populations of persons of Mexican descent and established networks of information and services for the Mexican community. Patterns of access to services differ in regions that have experienced a rapid growth of the Mexican population and have fewer resources to meet their needs (8, 14).

Understanding access to HIV prevention among Men of Mexican Descent (MMD) is particularly important to reduce disparities in HIV incidence among Latinos. MMD are the largest and fastest growing group of Latino men in the U.S. (1). Compared with other Latinos, persons of Mexican descent are more likely to be poor, less educated, mobile, and uninsured, factors that affect their access to services and HIV prevention (15, 16). Compared with women of Mexican descent, MMD engage in riskier sexual behaviors and are more likely to be HIV positive and less motivated to seek preventive care (12, 17-20). MMD's sexual behavior puts them at risk for HIV. However structural and motivational barriers make their access to HIV prevention challenging (21).

MMD are not a uniform group in their access to preventive care. Studies found disparities in access to prevention services among MMD in terms of their *assimilation status.* Compared with recent immigrants, U.S.-born Mexican descendants and long term residents report greater access to preventive screening regardless of their socioeconomic status (22). In addition, more established HIV positive immigrants are less likely to be diagnosed with HIV late in the course of the infection than recent immigrants (23). For less assimilated MMD, language presents a significant barrier to access HIV prevention. Spanish dominant MMD may find challenges in obtaining counseling services and understanding brochures and prevention messages in the community. They also may lack information about Spanish-language HIV prevention resources and experience with services primarily geared toward English dominant individuals (24, 25).

MMD's *access to the healthcare system* may also affect their access to HIV prevention (26). The healthcare system is the entry point for voluntary counseling and testing and prevention recommendations from professionals. In the U.S., most individuals receive an HIV test in a physician's office (27) and minority men report a preference for receiving an HIV test from health professionals (28, 29). In addition to being a source for HIV testing and professional advice, the healthcare system serves as a referral and recruitment site for behavioral HIV

prevention interventions. A meta-analysis of participation in HIV prevention found that 38% of the reviewed interventions involved participants recruited in clinical settings (30). In comparison, 23 % of the interventions enrolled participants in community sites. MMD unable or unwilling to access healthcare, therefore, have fewer opportunities and less information to receive HIV prevention than those who access health-related services.

Finally, patterns of access to HIV prevention among MMD may be traced to their *HIV risk behaviors*. For example, individuals who have casual partners are more likely to receive an HIV test than those who do not have casual partners (31). In addition, persons who use condoms consistently access HIV testing and other prevention services more than those who use condoms less consistently (30, 32). Thus, research suggests that MMD at some risk for HIV access HIV prevention more than those at no risk. However, research also indicates that many MMD at highest risk for HIV because they do not use condoms with their new partners may not be receiving prevention services.

Types of HIV Prevention Strategies and Access to HIV Prevention

HIV prevention strategies vary in the degree to which they involve audiences in the intervention process (4, 33). Some interventions such as brochures, videos, and lectures target relatively passive audiences. Other interventions engage audiences more interactively; they include tailored feedback, discussions of sexual behaviors, and problem solving of situations surrounding HIV risk (e.g., a partners' refusal to use condoms). Passive intervention strategies reach larger audiences, require less motivation among participants, and involve less training to deliver. Interactive strategies demand more resources but are the most effective in reducing HIV risk and producing sustained change (4).

Prevention strategies also may vary in the degree to which they are accessible to different audiences. Brochures and pamphlets tend to be available in community and healthcare settings. Moreover, HIV testing is more often provided in health-related sites (27, 34) and classes and lectures at schools or community centers. Other prevention tools such as media messages can be accessed without reception of any preventive care, access to services, or particular motivations. Obtaining information from the Internet, however, requires access to the Internet and skills to navigate the web. Thus, accessing HIV prevention involves different sites, resources, and motivations. To understand access to HIV prevention it is important to differentiate HIV prevention types.

We examine disparities in access to HIV prevention among MMD with different levels of *assimilation*, *access to healthcare*, and *sexual risk behavior*. We identify disparities in their reception of passive interventions, participation in interactive interventions, and HIV testing rates. HIV testing is examined separately because it can be provided without much client involvement or counseling time (35) but triggers significant changes among those testing positive (36). In addition to the aforementioned strategies, we examine MMD's access to HIV prevention information from media sources and the Internet. We expect access to HIV prevention interventions to be greater among MMD who are assimilated to the U.S., have access the healthcare system, and are at some risk for HIV. However, we do not anticipate these patterns to replicate for MMD's access to media information, which does not require as much resources and motivation as access to other HIV prevention types.

Whereas studies have explored Latinos' access to preventive care nationwide (12, 22, 26, 37), other than HIV testing, no study has examined their access to HIV prevention (15, 31, 38-40). Importantly, most HIV prevention research with individuals of Mexican descent has been conducted in Western and South-central US (15, 23, 39, 41-44), regions with historically large populations of Mexican descendants (37). This study is the first to describe disparities in access to HIV prevention among MMD in the Midwestern US, a region of the U.S. with a recent increase in the population of Mexican descent.

METHODS

We conducted an anonymous self-administered survey among 322 MMD in a large Mexican festival in the city of Milwaukee, Wisconsin, U.S. Participants recorded their assimilation to the U.S., access to healthcare, and sexual risk behavior. Then, participants completed items about their access to interactive and passive HIV prevention interventions, HIV testing history, and reception of HIV prevention information from media and the Internet.

Recruitment and Procedures

Study procedures were approved by the Medical College of Wisconsin's Institutional Review Board. Research assistants of both genders approached adult males passing through the festival gate and asked them if they would like to answer four questions to determine eligibility to complete a survey on men's health and lifestyle. (Assistants were instructed to approach all adult males passing through the gate.) The assistants clarified that no identifying information would be collected.

Men aged 18-45 years, born in Mexico or sons of at least one Mexican parent were considered eligible and invited to a study booth where they received detailed information about the study and provided their consent to participate. After completing the questionnaire, participants received two meal coupons in compensation for their time. Procedures were conducted in the language of participant's choice (i.e., English or Spanish) and took between 15 and 40 minutes to complete.

Measures

Sociodemographic characteristics and assimilation—We inquired about participants' state of residence, age, and completed years of education. To assess assimilation, we elicited participants' nativity, years in the U.S., and language preference (8). Thus, participants indicated their country of birth, and those who were foreign born, the number of years they have lived in the U.S. --which we dichotomized in > 5 and < 5 years to indicate recent immigration (15). Participants also recorded the degree to which they preferred to speak Spanish or English on a 1 (only Spanish) to 5 (only English) scale. Because this measure was highly associated with the language of the survey (r = .70, p <. 001), the latter was used to signal language preference (37, 45-47).

Access to healthcare—Participants responded to yes or no questions indicating if they had a doctor or health professional to ask about health issues and if they had health insurance coverage. Participants also specified the preventive screening tests they had

received in the previous two years, which were dichotomized in “none” and “one or more”, preventive tests.

Sexual risk behavior—Participants recorded the number of casual partners they had during the previous three months. They also indicated their condom use with those partners on a 1 (never) to 5 (always) scale. Responses were recoded to indicate sex with casual partners (yes/no) and consistent (always) vs. inconsistent (not always) condom use with casual partners.

Access to HIV prevention interventions—We asked participants whether they had ever participated in each of the following *interactive* interventions: Discussions about HIV prevention with a group of individuals and facilitators, face-to-face HIV prevention counseling with a health professional, and interactive computer HIV prevention interventions. Participants also responded if they had received each of the following *passive* interventions: HIV prevention videos, classes and lectures about HIV, and HIV prevention brochures or booklets. Strategies within each intervention category were summed and dichotomized at 0 and 1, indicating whether or not participants had received each intervention class. Finally, we asked participants if they ever had an HIV test and when was the last time they had an HIV test.

Reception of HIV prevention information from media sources and Internet use

Participants responded whether or not they had obtained HIV information from the radio, TV, magazines or newspapers, and the Internet. Reception of information from radio and television and printed media was summed and dichotomized. Internet access was analyzed separately. An item allowed participants to indicate if they had not received information from any of the sources.

Data Analyses

We generated the descriptive statistics for all variables using frequencies and percentages or means and standard deviations, depending on whether the variables were categorical or continuous, respectively. We estimated odds ratios and their corresponding 95% confidence intervals to observe the effect of the independent variables on access to prevention strategies dichotomized as intervention classes (i.e., interactive, passive, HIV testing, media, and the Internet). All odds ratios were adjusted for age and education because several variables (e.g., years in the U.S.) related to these factors. Adjusted rates of access to prevention strategies in each group were obtained by evaluating the predicted logistic regression models at the mean values for the age and education covariates and then applying the inverse logit transformation to express the results in terms of the probability scale. Finally, we examined the concurrent influence of the predictors by fitting the multiple logistic regression models of access to each intervention strategy on the independent variables controlling for age and education.

RESULTS

Sixty seven percent (500) of 745 men approached by the research staff agreed to be screened. Of these 500, 72% (360) were eligible, 89% (322) of whom consented to participate and completed the questionnaire.

Sample description

Table 1 describes the sample's characteristics. Nearly all participants resided in the Midwestern U.S. exclusively. Further, the sample's demographics were varied and showed an expected pattern of relationships (48). For example, seventy-seven percent of the respondents in Spanish reported speaking only Spanish or more Spanish than English. Spanish-language respondents were more likely to be foreign born (X^2 *(1, 320)* = 158.27, $p < .001$) and recent immigrants (X^2 *(1, 182)* = 18.51, $p < .01$). Approximately one third of the respondents in Spanish and 10% of the respondents in English had not finished high school (X^2 *(1, 320)* = 32.14, $p < .01$). English-language respondents were younger (29.18 vs. 32.36 years; $F_{(1,314)} = 14.72$, $p < .01$). Sixty-six percent of the Spanish speaking respondents compared with 25% of the English speaking respondents did not have health insurance coverage (X^2 *(1, 319)* = 53.58, $p < 0.01$).

Access to HIV prevention interventions

Eighty-two percent of the participants had ever accessed HIV prevention interventions. Thirty-six percent had participated in interactive interventions, 64% had received passive interventions, and 42% had ever had an HIV test including 19% MMD who had been tested during the previous year. Forty-two percent of the MMD who had been tested for HIV also had participated in an interactive intervention and nearly half of the MMD who had participated in interactive interventions had been tested for HIV. Forty-one percent of the participants had received information from media sources and 12% had looked for information on the Internet. The last section of Table 1 describes participants' access to HIV prevention types.

Effects of assimilation, healthcare access, and sexual risk behavior on access to HIV prevention interventions

Table 2 shows participants' access to HIV prevention as a function of their assimilation status, access to healthcare, and sexual risk behavior. Less assimilated MMD had lower access to passive interventions. MMD with less healthcare access had lower participation in interactive interventions. Both less assimilated MMD and those with less healthcare access had lower access to HIV testing. MMD who had casual partners had higher lifetime HIV testing rates. Among MMD with casual partners, inconsistent (versus consistent) condom users were less likely to have received passive and interactive interventions and a recent HIV test.

Effects of assimilation, healthcare access, and sexual risk behavior on reception of media information and Internet use

Differences in access to HIV-related information from media sources showed the opposite pattern from those in access to less accessible strategies. MMD more likely to have received

information from media sources were less assimilated to the U.S., had less access to healthcare, and were less likely to have used condoms consistently with their casual partners. Internet use for HIV prevention did not vary as a function of the studied factors.

Multivariate analyses

Table 3 shows multivariate logistic regressions of access to HIV prevention on all predictors. Results replicated those of the bivariate analyses. Assimilation predicted access to passive interventions, healthcare access participation in interactive interventions, and both factors predicted HIV testing rates. Whereas MMD with casual partners were more likely to ever have an HIV test, inconsistent (versus consistent) condom users with their casual partners were less likely to have received passive and interactive interventions and a recent HIV test. Access to media information was greater for MMD who were less assimilated to the U.S., who had lower healthcare access, and who were inconsistent condom users with their causal partners.

DISCUSSION

This study is the first to explore disparities in access to HIV prevention among MMD in the Midwestern U.S. In our sample, participation in the most effective HIV preventive interventions was low. Only 23% of the participants had ever received personalized one-on-one HIV prevention counseling and only 13% had participated in small group interventions. Participants' access to more passive strategies was higher, particularly among more assimilated MMD.

Together with low rates of access to HIV prevention interventions, our study showed considerable disparities in access to HIV prevention as a function of assimilation status and access to healthcare. As expected, MMD more assimilated to the U.S. were more likely to have received passive strategies and those with greater healthcare access more likely to have participated in interactive strategies. Disparities in access to HIV testing were striking with less than one-fifth of the recently immigrated MMD having ever received an HIV test and 5% having had an HIV test during the previous year. Of note, more than a half of the MMD who had received an HIV test had never participated in interactive counseling and half of the MMD who had participated in interactive HIV prevention interventions had never been tested for HIV. Thus, although marginalized MMD are the most underserved by prevention efforts, opportunities for education and HIV testing are also missed among men who access prevention services.

Along with disparities among the most disadvantaged MMD, we found disparities affecting MMD at higher sexual risk for HIV. MMD who had casual sexual partners reported higher lifetime HIV testing rates. However, MMD at highest risk because they had used condoms inconsistently with their casual partners, had less access to HIV prevention interventions overall. These findings are consistent with research in which individuals at highest risk for HIV were less motivated to receive HIV prevention services than those at moderate or low risk (17, 30, 39). Although we cannot confirm this causal explanation for the association of sexual risk behavior with HIV prevention access, our study shows that a significant number of MMD at high risk for HIV are not receiving necessary HIV prevention services.

A major finding of our study is that MMD more disadvantaged in their access to HIV prevention obtain information from audiovisual and printed media. MMD less assimilated to the U.S., with less healthcare access, and at higher risk for HIV reported more reception of media information than MMD more assimilated to the U.S., with greater access to healthcare, and at lower HIV risk. It is likely that more disadvantaged MMD turn to alternative sources of HIV prevention education to compensate for their insufficient access to less reachable forms of HIV prevention. Access to media information requires less financial and motivational resources than access to other types of prevention strategies. It does not involve access to networks of information and social support, which is also insufficient among less assimilated MMD (49). Unfortunately, although media messages can impact the behavior of large numbers of individuals, they have not been as effective as more interactive approaches to reduce HIV risk (4, 50).

In all, our study confirms our assumption that, despite efforts to increase access to prevention through community outreach, MMD's access to HIV prevention interventions is low and associated with their assimilation to the U.S. and access to the healthcare system. Compared with regions of the U.S. with stable populations of MMD, health disparities affecting marginalized Latinos tend to be deeper in U.S. regions that have experienced a rapid growth of the Hispanic population like some Midwestern states (37). In these areas, a lack of resources in the Mexican community may compound the isolation and cultural and linguistic barriers encountered by recently immigrated MMD.

Implications and Limitations

Our study points to the value of strengthening alternative communication settings to prevent HIV among marginalized MMD. For example, media interventions can incorporate interactive strategies such as games to problem solve situations surrounding HIV risk. Radio call-in shows could elicit life stories from callers, encouraging other callers to address communication and self-control challenges, which are typical components of interactive interventions.

Rather than targeting behavior change, media interventions can direct MMD to HIV prevention services adapted to their needs. For example, brief HIV prevention videos can promote participation in more interactive HIV prevention sessions (51). Similarly, short messages during transmission of sports events could direct MMD to services designed with men's needs in mind, which may include after-hour services and short waiting times.

Our findings suggest that outreach efforts targeting marginalized MMD have been insufficient at increasing their access to HIV prevention. To effectively reduce MMD's HIV rates, HIV prevention outreach should be informed by research on the settings to locate MMD in need of services and the strategies to engage them in HIV prevention. Engaging MMD at highest risk, however, may require more intensive and personalized motivational strategies (52).

This study has several limitations. We used a convenience sample and a cross-sectional design, aspects that impede assuming causal relations between factors and access to HIV prevention and restrict the generalizability of our findings. Other study limitations are the

simplified measures of assimilation and risk behavior and the exclusion of variables that may significantly impact MMD's access to HIV prevention (e.g., income, immigration status, substance use). Despite these limitations, this study is the first to identify gaps in access to HIV prevention interventions in different groups of MMD in the Midwestern US, an area where Mexican descendants have seldom been the target of HIV-related research and prevention efforts.

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Table 1

Description of Participant's Sociodemographic Characteristics, Assimilation Status, Access to Healthcare, Sexual Risk Behavior, and Access to HIV Prevention.

Variable	*N*	*n*	Mean (SD) or %
Sociodemographic characteristics and assimilation status			
State of Residence	322		
Wisconsin		237	74%
Illinois		51	16%
Indiana/Michigan/Iowa/Minnesota		27	8%
Multiple states		7	2%
Language preference	322		
English		180	56 %
Spanish		142	44 %
Place of birth/Years in the US	321		
U.S. born		137	43 %
Foreign born			
> 5 years		108	34%
< 5 years		76	24%
Age in years	316		29.46 (7.35)
N years of education	322		11.87 (2.60)
Access to healthcare			
Healthcare provider	321		
Yes		175	55%
No		146	46%
Screening exams	322		
Yes		251	78%
No		71	22%
Health insurance	320		
Yes		182	57%
No		138	43%
Sexual risk behavior			
Casual partners	293		
Yes		90	31%
100 % condom use		43	15%
<100 % condom use		47	16%
No		203	69%
Access to HIV prevention			
Passive interventions	320		
Yes[C]		206	64%
Lectures		111	35%
Videos		114	36%
Brochures/booklets		106	33%

Variable	*N*	*n*	Mean (SD) or %
No		114	36%
Interactive interventions	320		
Yes [c]		116	36%
Small group		40	13%
One-on-one counseling		74	23%
Computerized interactive		5	2%
No		204	64%
HIV testing (ever)	317		
Yes		133	42 %
No		184	58 %
HIV testing (last year)	317		
Yes		60	19 %
No		257	81 %
Media	321		
Yes [c]		130	41%
Radio/TV		99	31%
Magazines/newspapers		87	27%
No		191	59%
Internet	320		
Yes		38	12%
No		282	88%

[a] *Note*. Different *N*s in different analyses reflect missing data due to incomplete surveys

[b] Percentages may not add to 100 due to rounding

[c] *N* and % for specific intervention strategies do not add to the *N* and % for the corresponding intervention class because some participants received more than one strategy within each class.

Table 2

Access to HIV Prevention as a Function of Assimilation Status, Access to Healthcare, and Sexual Risk Behavior

	Passive		Interactive		HIV testing (ever)		HIV testing (last year)		Media		Internet	
	N (AP)	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**
Assimilation status												
Language preference												
Spanish	58 (.47)	0.21*** (0.12-0.36)	50 (.38)	1.33 (0.79-2.22)	51 (.36)	0.70 (0.42-1.15)	22 (.16)	0.70 (0.37-1.31)	77 (.53)	2.65*** (1.60-4.36)	11 (.09)	0.78 (0.35-1.38)
English	148 (.81)	1.00 *a*	66 (.32)	1.00 *a*	82 (.45)	1.00 *a*	38 (.21)	1.00 *a*	53 (.30)	1.00 *a*	25 (.14)	1.00 *a*
Place of Birth												
Foreign born	95 (.56)	0.34** (0.19-0.59)	66 (.37)	1.24 (0.75-2.06)	76 (.41)	0.94 (0. 62-1.70)	30 (.15)	0.60 (0.33-1.12)	93 (.49)	2.64*** (1.59-4.38)	20 (.11)	1.05 (0.51-2.18)
U.S. born	111 (.79)	1.00 *a*	50 (.32)	1.00 *a*	57 (.41)	1.00 *a*	30 (.23)	1.00 *a*	37 (.28)	1.00 *a*	19 (.14)	1.00 *a*
Recent immigrant												
< 5 years	38 (.47)	.88 (0.44-1.76)	32 (.43)	1.55 (0.80-3.02)	13 (.16)	0.12*** (0.06-0.27)	5 (.05)	0.18** (0.06-0.58)	41 (.56)	1.62 (0.86-3.08)	9 (.11)	1.04 (0.38-2.90)
> 5 years	56 (.60)	1.00 *a*	33 (.33)	1.00 *a*	62 (.60)	1.00 *a*	24 (.21)	1.00 *a*	51 (.44)	1.00 *a*	10 (.10)	1.00 *a*
Access to healthcare												
Has a provider												
No	88 (.63)	0.73 (0.44-1.20)	43 (.28)	0.57* (0.35-0.92)	52 (.36)	0.67+ (0.43-1.07)	22 (.16)	0.69 (0.38-1.23)	79 (.54)	2.85*** (1.78-4.57)	13 (.08)	0.57’ (0.28-1.17)
Yes	118 (.67)	1.00 *a*	73 (.40)	1.00 *a*	81 (.46)	1.00 *a*	38 (.22)	1.00 *a*	51(.29)	1.00 *a*	25 (.13)	1.00 *a*
Had screening exams												
No	48 (.74)	1.55 (0.83-2.90)	19 (.26)	0.59+ (0.32-1.08)	14 (.20)	0.28*** (0.14-0.54)	4 (.06)	0.22** (0.08-0.62)	36 (.50)	1.66+ (0.96-2.87)	8 (.10)	0.95 (0.40-2.21)
Yes	158 (.65)	1.00 *a*	97 (.37)	1.00 *a*	119 (.47)	1.00 *a*	56 (.22)	1.00 *a*	94 (.38)	1.00 *a*	30 (.11)	1.00 *a*
Health insurance												
No	79 (.62)	0.68 (0.40-1.14)	53 (.39)	1.33 (0.81-2.17)	44 (.33)	0.59* (0.36-0.95)	18 (.13)	0.50* (0.27-0.94)	71 (.52)	2.38*** (1.47-3.86)	19 (.13)	1.53 (0.75-3.14)
Yes	126 (.71)	1.00 *a*	62 (.32)	1.00 *a*	87 (.46)	1.00 *a*	42 (.23)	1.00 *a*	58 (.31)	1.00 *a*	18 (.9)	1.00 *a*
Sexual risk behavior												

	Passive		Interactive		HIV testing (ever)		HIV testing (last year)		Media		Internet	
	N (AP)	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**	***N* (AP)**	**AOR (95% CI)**
Casual partners												
No	132 (.70)	1.16 (0.65-2.09)	72 (.32)	0.86 (0.50-1.47)	74 (.35)	0.36*** (0.21-0.61)	32 (.15)	0.42** (0.23-0.77)	78 (.38)	0.91 (0.53-1.54)	23 (.12)	1.01 (1.02-3.65)
Yes	63 (.66)	1.00 *a*	32 (.35)	1.00 *a*	53 (.60)	1.00 *a*	26 (.30)	1.00 *a*	35 (.40)	1.00 *a*	12 (.16)	1.00 *a*
Condom use w/casual partners												
100%	35 (.78)	2.69+ (0.99-7.28)	21 (.48)	3.17* (1.26.-7.97)	26 (.58)	1.29 (0.53-3.14)	18 (.49)	4.49*** (1.54-13.1)	12 (.29)	0.40* (0.16-0.99)	9 (.24)	2.46 (0.68-8.87)
< 100%	28 (.57)	1.00 *a*	11 (.23)	1.00 *a*	27 (.62)	1.00 *a*	8 (.17)	1.00 *a*	23 (.50)	1.00 *a*	4 (.07)	1.00 *a*

Note. AP: Adjusted probabilities; AOR: adjusted odds ratios. 95% CI: 95% upper and lower levels confidence intervals.

a Denotes reference value.

* $p < .05$,

** $p < .01$,

*** $p < .001$,

+ $p < .1$.

Table 3

Multiple Logistic Regressions of Access to HIV Prevention on Assimilation Status, Access to Healthcare, and Sexual Risk Behavior.

	Passive		Interactive		HIV testing (ever)		HIV testing (last year)		Media	
	AOR	**(95% CI)**	**AOR**	**(95% CI)**	**AOR**	**(95% CI)**	**AOR**	**(95% CI)**	**AOR**	**(95% CI)**
Higher age	0.98	0.93-1.02	0.96*	0.92-0.99	0.99	0.95-1.03	0.99	0.94-1.04	1.02	0.98-1.06
Higher Education	2.03***	1.19-3.47	1.66*	1.05-2.63	1.24	0.78-1.96	0.68	0.38-1.21	1.00	0.64-1.57
Assimilation status										
Spanish preference	0.16***	0.07-0.38	1.00	0.45-2.24	1.00	0.45-2.24	1.80	0.67-4.81	2.01+	0.96-4.22
English preference	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--
Foreign < 5 years	1.34	0.43-4.17	1.13	0.54-2.38	0.42+	0.15-1.06	0.19*	0.05-0.84	1.75	0.65-4.69
Foreign > 5 years	0.72	0.30-1.73	1.61	0.59-4.36	2.38*	1.12-5.04	0.64	0.25-1.61	1.27	0.61-2.66
U.S. born	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--
Access to healthcare										
No provider	0.74	0.40-1.38	0.50*	0.28-0.87	0.78	0.45-1.38	0.84	0.42-1.68	2.37**	1.38-4.05
Provider	1.00[a]	--	1.00[a]	--	1.00	--	1.00	--	1.00[a]	--
No screening exams	2.03	0.92-4.43	0.49+	0.24-1.03	0.23***	0.10-0.51	0.23*	0.07-0.80	1.22	0.64-2.33
Screening exams	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--
No health insurance	1.28	0.62-2.65	1.38	0.73-2.63	0.69	0.36-1.32	0.59	0.26-1.33	1.33	0.71-2.47
Health insurance	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--
Sexual risk behavior										
No casual partners	2.23+	0.99-5.05	1.91	0.86-4.24	0.41*	0.20-0.86	0.85	0.34-2.08	0.50+	0.25-1.02
Casual partners/ 100% condom use	4.82***	1.51-15.33	2.60*	1.02-6.08	1.12	0.43-2.90	4.00**	1.38-11.57	0.30*	0.11-0.79
Casual partners/ < 100% condom use	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--	1.00[a]	--
Cox and Snell R^2	.23		.10		.20		.12		.12	

Note. AOR adjusted odds ratio, 95% CI: 95% upper and lower levels confidence intervals. Nativity and years in the U.S. as well as having had casual partners and condom use with casual partners were converted in three-category variables.

[a]Indicates reference value.

* $p < .05$,

** $p < .01$,

*** $p < .001$,

+ $p < .1$