Published in final edited form as:

AIDS Care. 2010 June ; 22(6): 718–728. doi:10.1080/09540120903431322.

Intentions to Seek and Accept an HIV Test Among Men of Mexican Descent in the Midwestern US

Laura R. Glasman¹, Lance S. Weinhardt, Wayne DiFranceisco, and Kristin L. Hackl

Center for AIDS Intervention Research, Department of Psychiatry and Behavioral Medicine, Medical College of Wisconsin

Abstract

In the US, a high proportion of Men of Mexican Descent (MMD) test for HIV late in the course of the infection and miss opportunities for prevention. Given the need to promote timely HIV testing among MMD, we studied how MMD's motivations and previous experiences with disease prevention influence their intentions to seek (i.e., client-initiated HIV testing) and accept (i.e., provider-initiated HIV testing) an HIV test. We conducted a survey ($N = 302$) at a large Mexican festival in the Midwestern US. We elicited MMD's sexual risk behavior, social norms and culturally supported HIV testing expectations, previous experiences with disease prevention, and their intentions to seek and accept a free HIV test. Forty-one percent of MMD intended to actively seek an HIV test and 70% said they would accept it from a provider. Multivariate analyses indicated that MMD's intentions to seek and intentions to accept an HIV test were stronger when they expected desirable outcomes of an HIV test, including benefits for their family and community. Whereas MMD's intentions to actively seek an HIV test were stronger when they had more previous experiences with disease prevention and normative support, their intentions to accept an HIV test from a provider were stronger when they expected less negative outcomes from testing for HIV (e.g., stigma). Provider-initiated HIV testing may improve HIV testing access, particularly among MMD with lower experience and support. However, efforts to promote provider-initiated HIV testing among MMD should challenge negative HIV testing expectations and associate HIV testing with positive outcomes.

Keywords

HIV testing; Intentions; Latinos; Motivation; Men

Introduction

It is estimated that one-quarter of individuals living with HIV in the United States are unaware of being infected (Centers for Disease Control and Prevention [CDC], 2008a, 2008b). Many of these individuals will receive an HIV-positive diagnosis less than one year before experiencing symptoms of AIDS (CDC, 2003). A high proportion of these late testers will be men of Latino descent (CDC, 2003), a group disproportionately affected by the AIDS

¹To whom correspondence should be directed. 2071 N. Summit Avenue, Milwaukee, WI 53212, USA. lglasman@mcw.edu, Telephone: 414 955 7772, Fax: 414 287 4205 .

epidemic (CDC, 2008a) but seldom targeted by HIV prevention efforts (National Latino AIDS Action Network, 2008).

Earlier HIV detection is critical to prevent HIV transmission. HIV positive individuals reduce risk behavior when diagnosed (Weinhardt, 2005) and become less infectious with treatment (Castilla et al., 2005). Individuals aware of their HIV status are about 3.5 times less likely to transmit HIV (Marks, Crepaz, & Janssen, 2006). This research underlines the need of increasing HIV testing uptake among Latino men.

Among Latinos, involving Men of Mexican Descent (MMD) in HIV testing has been challenging (López-Quintero, Shtarkshall, & Neumark, 2005; Olshefsky, Zive, Scolari, & Zúñiga, 2007). This difficulty has been attributed to structural obstacles such as language barriers, immigration, lack of health insurance (Levy et al., 2005, 2007; Taylor, Leibowitz, Simon, & Grusky, 2006), and legal status in the US (Levy et al., 2005) but these factors do not completely explain MMD's low testing rates (Agency for Healthcare Research and Quality, 2000). First, Latinas face the same barriers to preventive care as Latinos but use more services (Fernández et al., 2005). Further, many Latinos with access to health services have never tested for HIV (Fernández et al., 2003a). Beyond structural barriers, it is important to examine MMD's intentions to seek or to accept an HIV test to understand their HIV testing access.

MMD may seek or accept an HIV test if they are motivated to receive an HIV test and have information and behavioral resources to navigate HIV testing services (see J.D. Fisher & W.A. Fisher, 2000, for models of HIV-related behavior). In particular, testing for HIV has been related to having risky partners and having used condoms with them (Ehrlich, Organista, & Oman, 2007; Kalichman et al., 1997), implying that risk awareness (Floyd, Prentice-Dunn, & Rogers, 2000) and the need to reinforce safer-sex efforts (Fernández, Perrino, Bowen, Royal, & Varga, 2003; Kalichman et al., 1997) may be motives to test for HIV (Noguchi, Durantini, Albarracín, & Glasman, 2007). This speaks to the need to examine MMD's *HIV sexual risk behavior* and safer-sex motivation to understand their HIV testing intentions.

Motivation to test for HIV test may also be traced to *social norms* and culturally relevant attitudes or *outcome expectations* about testing for HIV (Ajzen & Fishbein, 2005; Kellerman et al., 2002). Particularly, MMD may dislike testing for HIV because they often believe that seeking help is inconsistent with expectations about masculine behavior (e.g., self-reliance, risk taking; Fernández-Esquer, Atkinson, Diamond, Useche, & Mendiola, 2004), think that one cannot alter the course of the HIV infection (i.e., fatalism; González, Hendriksen, Collins, Durán, & Safren, 2009), and associate HIV testing with stigmatized conditions (e.g., promiscuity, homosexuality; Brooks, Etzel, Hinojos, Henry, & Perez, 2005; Rios Ellis, 2007). However, MMD may find benefits in HIV testing if they associate it with the well-being of their families and communities (i.e., familism and collectivism; González et al., 2009; Quesada & Heller, 1977).

Finally, besides motivation, intentions to have an HIV test have been linked to previous *experiences with disease prevention* with the health care system (Fernández, Perrino, Royal,

Ghany, & Bowen, 2002; Fernández et al., 2005), and significant others (Phillips et al., 1995). Presumably, previous experience provides resources to effectively navigate HIV testing services including knowledge on the health care system and language for communicating one's motivations (McKinlay, 2005). Like many men, MMD often are inexperienced with disease prevention (Courtenay, 2002), which may be compounded by their isolation from informational networks (Harari, Davis, & Leisler, 2008; Levy et al., 2005) and immigration without spouses who engage them in healthy practices (Preloran, Browner, & Lieber, 2001).

This study examines how MMD's motivations and previous disease prevention experiences influence their intentions to *seek* and *accept* free, culturally appropriate HIV testing services. We expect intentions to seek and accept an HIV test to relate to sexual risk behavior, social norms and expected outcomes of an HIV test, and previous experiences with disease prevention with the health care system and significant others. In addition, we expect disease prevention experiences to be more relevant to MMD's intentions to seek an HIV test than to their intentions to accept it from a provider because seeking an HIV test involves more actively navigating services and communicating with providers.

This study is the first to address HIV testing intentions among MMD in the Midwestern US. Most of HIV prevention research with MMD was conducted in Southern and Western US. The study is also the first to distinguish between intentions to *seek* and *accept* an HIV test. Understanding these two outcomes is critical to efforts to achieve universal HIV testing by encouraging client and provider-initiated HIV testing in health and community settings (World Health Organization, 2007).

Methods

MMD attending a large Mexican festival in Milwaukee, Wisconsin completed a questionnaire. The questionnaire was self-administered to collect data from a large number of participants and reduce response bias associated with embarrassment and stigma (Newman et al., 2002).

We elicited MMD's sexual risk behaviors, their HIV testing norms, their attitudes or expectations about the outcomes of an HIV test, and their experiences with disease prevention. We studied the associations of these factors with their intentions to seek and intentions to accept free culturally appropriate HIV testing services. We also examined the effect of each expected HIV testing outcome to understand the cultural values influencing MMD's intentions to test for HIV.

Recruitment of Participants

An assistant approached adult males passing through the festival's gate and asked them if they would like to answer four questions to determine eligibility to complete a survey on men's health and lifestyles. (Assistants were instructed to approach all adult males passing through the gate.) The assistant clarified that no identifying information would be collected.

Eighteen to 45 year-old men born in Mexico or sons of at least one Mexican parent were invited to a study booth where they received detailed information about the study and gave their consent to participate. After completing the questionnaire, participants received festival meal coupons in compensation for their time. Procedures were conducted in the participants' language of preference (English or Spanish) and took between 15 and 40 minutes to complete.

Measures

We recorded participants' language preference based on the language in which they chose to complete the study. Participants then reported their country of birth, number of years living in the USA, state of residence, age, education, and health insurance status.

Intentions to seek and intentions to accept an HIV test—Participants responded if in the following six months they (a) would go to a Latino clinic to receive a free HIV test (i.e., *seek* an HIV test) and (b) would agree to receive a free HIV test when they are at a Latino clinic (i.e., *accept* an HIV test). Response options were yes, maybe, and no.

Sexual risk behavior—Participants reported their condom use with main and casual partners in the previous three months on a 1 (never) to 5 (always) scale and the number of causal partners they had during that period. Three-point items assessed participants' intentions to use condoms during the next three months with main and casual partners. A separate question asked participants if they have sex with women only, men only, or with both.

HIV testing outcome expectations—Participants responded if they agreed, on a three-point scale, with statements linking HIV testing to either a positive or negative outcome related to values and beliefs prevalent among Mexicans. We constructed measures of expectations *ad hoc*, because no measures of HIV testing attitude scales for Latinos were available. Items were informed by previous research on Latinos' HIV prevention needs (e.g., Rios Ellis, 2007), and the HIV antibody testing attitude scale (Boshamer & Bruce, 1999). Items associated HIV testing with HIV stigma (e.g., "If I had an HIV test, it would mean that I did something dirty," "...people would think that I am gay"), traditional gender norms (e.g., "...someone would tell me what to do," "...men take risks without worrying about HIV"), fatalism (i.e., "if HIV has no cure, why have an HIV test?"), community and family orientation (e.g., "...I would set an example for my community," "...I would protect my family"), concerns about safety ("...I would have peace of mind"), and low risk perceptions (e.g., "...is useless because I am not at risk of HIV").

Exploratory factor analyses of items resulted in two factors involving expected positive and negative outcomes of an HIV test. This structure reflects the construct of attitudes as evaluations and is consistent with previous studies (Glasman & Albarracín, 2003). Negative and positive expected outcomes were averaged separately to create a positive ($\alpha = .70$) and a negative ($\alpha = .74$) outcome expectation scales.

HIV testing social norms were measured by a 4-point item where participants reported if all, most, some, or none of their friends and relatives had undergone an HIV test (Marín et al., 1993).

Experiences with disease prevention—Participants indicated if they had received advice from a professional about the prevention of different diseases and if they had health screening tests during the previous two years. Participants also reported if they had received HIV prevention education and had an HIV test. Finally, participants indicated if they ever had received advice about HIV prevention and the prevention of other diseases from significant others (i.e., parents, siblings, friends, and priest; see Marín et al., 1993).

Data Analyses

MMD were classified as intending to seek or intending to accept an HIV test if they responded “yes” to the corresponding intention question. This conservative recoding of participants’ intentions was selected to address self-presentation bias.

We generated descriptive statistics using percentages for categorical and means for continuous variables respectively. Odds ratios and 95% confidence intervals were estimated to observe the effects of all variables on both intention outcomes. Multiple logistic regressions estimated the effect of the predictors on intentions, adjusting for all other predictors. In the regression model, we included sociodemographic factors and the predictors that were significantly associated with any of the outcomes ($p < .1$; see Fernández et al., 2003a) and involved the entire study sample. As language, place of birth, and years in the USA were highly related ($rs > .69$), only language was entered in the equation to avoid collinearity.

Results

Sample Description

Sixty-seven percent (500) of 745 men approached agreed to screening. Of these 500, 72% (360) were eligible, 89% (322) of whom completed the questionnaire. Twelve participants who reported having sex with men and eight who never had sex were excluded from analyses. The final sample size was 302. Different *Ns* reflect missing data.

Forty-one percent of the participants intended to seek a free HIV test and 70% to accept it in the following six months. Table 1 displays sample’s characteristics in demographics, motivation (e.g., risk behavior, expectations, and norms) and experiences with prevention.

Univariate Analyses

Table 2 shows the factors associated with intentions to seek and intentions to accept an HIV test. Intentions to *seek* an HIV test were related to sexual risk behavior (i.e., having had casual partners in the previous three months). They also were related to having more significant others tested for HIV, holding more positive HIV testing expectations and norms, and more disease prevention experiences (i.e., having received health education, having had

an HIV test, and having been advised about disease prevention and HIV prevention by significant others).

Intentions to *accept* an HIV test were associated with sociodemographic factors, including speaking Spanish, being born in Mexico, having lived a shorter time in the US, and not having health insurance. Intentions to accept an HIV test were also related to sexual risk behavior (i.e., having had casual partners and higher condom use and condom use intentions with casual partners), having more significant others tested for HIV, and holding more positive and less negative outcome expectations about HIV testing. Finally, intentions to accept an HIV test were related to disease prevention experiences, including having received health education, having had an HIV test, and having received advice from significant others about HIV prevention and the prevention of other diseases.

Specific expected outcomes relevant to intentions to both seek and accept an HIV test were having peace of mind (OR = 1.67, 95% CI = 1.26-2.78), protecting one's family (OR = 1.87, 95% CI = 1.26-2.78), and being an example for one's community (OR = 1.87, 95% CI = 1.25-2.79). Intentions to accept an HIV test also were associated with less fear of being stigmatized as promiscuous or gay (OR = 0.55 95% CI = 0.33-0.93 and OR = 0.63, 95% CI = 0.41-0.98), less HIV testing fatalism (OR = 0.38, 95% CI = 0.23-0.64), and less tendency to consider testing useless because of not perceiving oneself at risk for HIV (OR = 0.60, 95% CI = 0.43-0.82). HIV testing expectations associated with traditional masculine roles (i.e., self-reliance and risk taking) were not significantly related to either outcome ($p < .2$).

Multivariate Analyses

Table 3 shows the results of the multiple logistic regression analyses. Intentions to seek an HIV test were associated with holding positive expectations about HIV testing and having more significant others tested. They also were related to greater experience with disease prevention, including having received health education, having had an HIV test, and having received advice from significant others about HIV prevention. In turn, intentions to accept an HIV test were associated with having casual partners and holding more positive and less negative expectations about an HIV test with only one indicator of previous disease prevention experiences (i.e., having received professional health education) relating to this outcome.

Discussion

This study suggests that provider-initiated free HIV testing may strengthen MMD's intentions to test for HIV, particularly among those who encounter structural barriers to access HIV testing services. Specifically, Spanish speaking, foreign born, recently immigrated, and uninsured MMD had stronger intentions to accept a free HIV test than English speaking, US born, established, and insured MMD, respectively. However, our study also indicates that promoting HIV testing among MMD involves addressing their motivations and experiences.

Specifically, in our sample, MMD with casual partners had stronger intentions to seek and accept an HIV test. Moreover, those using and intending to use condoms with casual

partners had stronger intentions to accept it. Presumably, MMD test for HIV when they have put themselves at risk. However, their decisions may also reflect a motivation to monitor their risk-reduction efforts. These findings replicate research where Latinos who used condoms with their causal partners were more willing to test for HIV than those who did not (e.g., Ehrlich et al., 2007; Fernández et al., 2005), suggesting that efforts to promote HIV testing are not reaching many high-risk MMD.

As expected, HIV testing social norms and culturally relevant outcome expectations motivated MMD's testing decisions. MMD who believed that testing for HIV would help them to protect their family and those who believed that receiving an HIV test would benefit their community had stronger intentions to seek and accept an HIV test. Those who associated HIV testing with stigma and fatalism had weaker intentions to accept it.

Our data support the contention that MMD with more experiences with disease prevention have stronger intentions to receive an HIV test. Overall, previous experience provides resources such as information on navigating the health care system and language for communicating about health (Glasman & Albarracín, 2006; McKinlay, 2005). Among MMD, experience may reflect fewer inhibitions to speak about sexuality --a strong obstacle for preventing HIV (Rios Ellis, 2007).

Finally, our study confirms that MMD's motivations and previous experiences may have different roles in guiding their intentions for seeking an HIV test versus accepting it from a provider. Adjusting for relevant variables, intentions to *seek* an HIV test depended on having more significant others tested, expecting benefits from testing, and having more experiences with disease prevention. In turn, risk behavior and expected benefits and drawbacks of a test predicted intentions to *accept* it. This pattern suggests that MMD's intentions to seek and accept an HIV test are stronger when they hold positive expectations about an HIV test (e.g., family protection, risk reduction). However, MMD's intentions to seek an HIV test depend on them having resources (e.g., information and skills from experience and support from experienced others), whereas their intentions to accept it from a provider depend on them holding less negative expectations about testing for HIV (i.e., stigma and fatalism). Thus, provider-initiated HIV testing may strengthen MMD's intentions to test for HIV, particularly if they are disadvantaged and have little experience and support (see Albarracín, Kumkale, & Johnson, 2004, for the influence of resources on HIV preventive behavior). Still, addressing MMD's motivations may be necessary to improve provider-initiated HIV testing uptake among this group.

Unlike previous studies (e.g., Mahalik, Walker, & Levi, 2007; Mahalik, Burns, & Syzdek, 2007), our measure of HIV testing expectations associated with masculine roles (i.e., risk taking and self-reliance) did not relate to weaker HIV testing intentions among MMD. It is possible that more comprehensive measures of masculine norms could detect this effect (see Mahalik et al., 2007). Interestingly, however, given that disease prevention experience affects HIV testing decisions, and men are less likely to acquire such experience early in their lives (White & Witty, 2009), future research can explore if lower prevention experience explains men's poorer disposition to disease prevention.

Applied Implications

This study points to the need to address MMD's motivations and experiences to encourage them to seek and accept HIV tests. For example, campaigns may sensitize MMD to the risks involved in casual sex and the importance of HIV testing to complement safer-sex efforts. However, targeted motivational counseling may be needed to expand HIV testing among high risk MMD.

Messages connecting HIV testing with meaningful benefits may persuade MMD to seek and accept HIV tests. For example, campaigns could link HIV testing to the goals that guided MMD to immigrate to the US, which often include the benefit of the family and the community (see Rios Ellis, 2007).

Resources from one's and significant others' previous disease prevention experiences appear relevant, particularly to decisions to seek an HIV test. Interventions could encourage significant others experienced with preventive care (e.g., female partners) to engage MMD in conversations about prevention or involve MMD in less stigmatizing services before motivating them to receive an HIV test. Social network approaches could be used to disseminate information about free, culturally sensitive HIV testing services.

Although encouraging MMD to seek HIV testing remains important, provider-initiated HIV testing in health and community settings can improve HIV testing uptake among marginalized MMD. Further, addressing HIV stigma and fatalism may promote greater HIV testing access, even in the context of the higher rates expected with provider-initiated HIV testing.

Finally, our results highlight the value of encouraging MMD to discuss HIV prevention with their sons. This strategy could promote greater service use and decrease late HIV testing rates among younger generations of MMD.

Limitations

This study has a cross sectional design and was conducted with a convenience sample, factors that limit our ability to conclude causality and generalize findings. Conclusions also may be biased by recruitment procedures. Several men refused screening and recruiters may have skipped men based on their apparent ethnicity or age. Importantly, several factors (e.g., migrant status, substance use, occupation) may influence HIV testing decisions in addition to those examined in this study.

Despite limitations, few HIV prevention studies have recruited a demographically diverse sample of MMD in the Midwestern US, a necessary step in addressing their needs. HIV prevention among MMD in the Midwest requires more attention. This study represents one of the first efforts in this direction.

Acknowledgments

This study was supported by center grant P30-MH52776 from the National Institute of Mental Health. We thank the staff at the Center for AIDS Intervention Research for their invaluable support in the conduction of this study and Yvonne Stevenson for assisting with manuscript preparation.

References

- Agency for Healthcare Research and Quality. Addressing Racial and Ethnic Disparities in Health Care Fact Sheet. Agency for Healthcare Research and Quality; Rockville, MD: 2000. Retrieved on May 8, 2008 from, <http://www.ahrq.gov/research/disparit.htm>
- Ajzen, I.; Fishbein, M. The influence of attitudes on behavior. In: Albarracín, D.; Johnson, BT.; Zanna, MP., editors. Handbook of Attitudes and Attitude Change. Erlbaum; Hillsdale, NJ: 2005.
- Albarracín D, Kumkale GT, Johnson BT. Influences of social power and normative support on condom use decisions: A research synthesis. *AIDS Care*. 2004; 16:700–723. [PubMed: 15370059]
- Armitage CJ, Conner M. Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*. 2001; 40:471–499. [PubMed: 11795063]
- Boshamer CB, Bruce KE. A scale to measure attitudes about HIV-antibody testing: Development and psychometric validation. *AIDS Education and Prevention*. 1999; 11:400–413. [PubMed: 10555624]
- Brooks RA, Etzel MA, Hinojos E, Henry CL, Perez M. Preventing HIV among Latino and African American gay and bisexual men in a context of HIV-related stigma, discrimination, and homophobia: Perspectives of providers. *AIDS Patient Care and STDS*. 2005; 19:737–44. [PubMed: 16283834]
- Castilla J, Del Romero J, Hernando V, Marincovich B, García S, Rodríguez C. Effectiveness of highly active antiretroviral therapy in reducing heterosexual transmission of HIV. *Journal of Acquired Immune Deficiency Syndromes*. 2005; 1(40):96–101. [PubMed: 16123689]
- Centers for Diseases Control and Prevention. HIV and AIDS in the United States: A Picture of Today's Epidemic. US Department of Health and Human Services, Centers for Diseases Control and Prevention; Atlanta: GA: 2008a. Retrieved on February 12, 2009 from, http://www.cdc.gov/hiv/topics/surveillance/united_states.htm
- Centers for Diseases Control and Prevention. HIV/AIDS surveillance report, 2006. US Department of Health and Human Services, Centers for Diseases Control and Prevention. 2008b; 18:1–55. 18. Retrieved on February 12, 2009 from, <http://www.cdc.gov/hiv/topics/surveillance/resources/reports/>
- Centers for Disease Control and Prevention. Late versus early testing of HIV—16 sites, United States, 2000 – 2003. *MMWR*. 2003; 52:581–586. Retrieved on May 8, 2008 from, <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5225a2.htm>. [PubMed: 12836626]
- Courtenay WH, McCreary DR, Merighi JR. Gender and ethnic differences in health beliefs and behaviors. *Journal of Health Psychology*. 2002; 7:219–231. [PubMed: 22114246]
- Ehrlich SF, Organista KC, Oman D. Migrant Latino day laborers and intentions to test for HIV. *AIDS and Behavior*. 2007; 11:743–52. [PubMed: 17086437]
- Fernández MI, Collazo J, Bowen GS, Varga LM, Hernández N, Perrino T. Predictors of HIV testing and intention to test among Hispanic farmworkers in South Florida. *Journal of Rural Health*. 2005; 21:56–64. [PubMed: 15667010]
- Fernández MI, Perrino T, Bowen GS, Royal S, Mattson T, Cohn S. Promoting HIV testing among Never tested Hispanic men: A doctor's recommendation may suffice. *AIDS and Behavior*. 2003a; 7:253–262. [PubMed: 14586188]
- Fernández MI, Perrino T, Bowen GS, Royal S, Varga L. Repeat HIV testing among Hispanic men who have sex with men--a sign of risk, prevention, or reassurance? *AIDS Education and Prevention*. 2003b; 15:105–116. [PubMed: 12630603]
- Fernández MI, Perrino T, Royal S, Ghany D, Bowen GS. To test or not to test: Are Hispanic men at highest risk for HIV getting tested? *AIDS Care*. 2002; 14:375–384. [PubMed: 12042082]
- Fernández-Esquer ME, Atkinson J, Diamond P, Useche B, Mendiola R. Condom use self-efficacy among U.S. and foreign-born Latinos in Texas. *Journal of Sex research*. 2004; 41:390–399. [PubMed: 15765279]
- Fisher, JD.; Fisher, WA. Theoretical approaches to individual-level change. In: Peterson, J.; DiClemente, R., editors. *HIV Prevention Handbook*. Kluwer Academic/Plenum Press; New York: 2000. p. 3-55.
- Floyd DL, Prentice-Dunn S, Rogers RW. A meta-analysis of research on protection motivation theory. *Journal of Applied Social Psychology*. 2000; 30:407–429.

- Glasman LR, Albarracín D. Models of health-related behavior: A study of condom use in two cities of Argentina. *AIDS & Behavior*. 2003; 7:183–193. [PubMed: 14586203]
- Glasman LR, Albarracín D. Forming attitudes that predict future behavior: A meta-analysis of the attitude-behavior relation following attitude formation. *Psychological Bulletin*. 2006; 132:778–822. [PubMed: 16910754]
- González JS, Hendriksen E, Collins EM, Durán RE, Safren SA. Latinos and HIV/AIDS: Examining factors related to disparity and identifying opportunities for psychosocial intervention research. *AIDS and Behavior*. 2009; 13:582–602. [PubMed: 18498050]
- Harari N, Davis M, Heisler M. Strangers in a strange land: Health care experiences for recent Latino immigrants in Midwest communities. *Journal of Health Care for the Poor and Underserved*. 2008; 19:1350–1367. [PubMed: 19029757]
- Kalichman SC, Schaper PE, Belcher L, Abush-Kirsh T, Cherry C, Williams EA, et al. It's like a regular part of gay life: Repeat HIV antibody testing among gay and bisexual men. *AIDS Education and Prevention*. 1997; 9:41–51. [PubMed: 9241397]
- Kellerman SE, Lehman JS, Lansky A, Stevens MR, Hecht FM, Bindman AB, et al. HIV testing within at-risk populations in the United States and the reasons for seeking or avoiding HIV testing. *Journal of Acquired Immune Deficiency Syndromes*. 2002; 31:202–10. [PubMed: 12394799]
- Levy V, Page-Shafer K, Evans J, Ruiz J, Morrow S, Reardon J, et al. HIV-related risk behavior among Hispanic immigrant men in a population-based household survey in low-income neighborhoods of northern California. *Sexually Transmitted Diseases*. 2005; 32:487–490. [PubMed: 16041250]
- Levy V, Prentiss D, Balmas G, Chen S, Israelski D, Katzenstein D, et al. Factors in the delayed HIV presentation of immigrants in Northern California: Implications for voluntary counseling and testing programs. *Journal of Immigrant Minority Health*. 2007; 9:49–54. [PubMed: 17031578]
- López-Quintero C, Shtarkshall R, Neumark YD. Barriers to HIV-testing among Hispanics in the United States: Analysis of the National Health Interview Survey. *AIDS Patient Care STDS*. 2005; 19:672–83. [PubMed: 16232051]
- Mahalik JR, Burns SM, Syzdek M. Masculinity and perceived normative health behaviors as predictors of men's health behaviors. *Social Science and Medicine*. 2007; 64:2201–2209. [PubMed: 17383784]
- Mahalik JR, Walker G, Levi M. Health behaviors and masculinity in Australian men. *Psychology of Men and Masculinity*. 2007; 8:240–249.
- 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; 20:1447–1450. [PubMed: 16791020]
- Marín BV, Gómez CA, Tschann JM. Condom use among Hispanic men with secondary female sexual partners. *Public Health Reports*. 1993; 108:742–50. [PubMed: 8265759]
- McKinlay, E. Men's Health: A literature review. Otago University, Wellington School of Medicine and Health Sciences; Wellington: 2005.
- National Latino AIDS Action Network. Latino HIV/AIDS Federal Policy Recommendations – Addressing the Latino AIDS Crisis. New York, NY: 2008. Retrieved on January 9, 2009 from, http://www.latinoaidsagenda.org/documents/nlaan_recommendations_eng.pdf
- Newman JC, Des Jarlais DC, Turner CF, Gribble J, Cooley P, Paone D. The differential effects of face-to-face and computer interview modes. *American Journal of Public Health*. 2002; 92:294–297. [PubMed: 11818309]
- Noguchi K, Durantini MR, Albarracín D, Glasman LR. Who is exposed to which health promotion programs? A meta-analysis of motivations underlying enrollment and retention in HIV prevention interventions. *Psychological Bulletin*. 2007; 133:955–975. [PubMed: 17967090]
- Olshefsky AM, Zive MM, Scolari R, Zuñiga M. Promoting HIV risk awareness and testing in Latinos living on the U.S.-Mexico border: the Tú No Me Conoces social marketing campaign. *AIDS Education and Prevention*. 2007; 19:422–35. [PubMed: 17967112]
- Phillips KA, Paul J, Kegeles S, Stall R, Hoff C, Coates TJ. Predictors of repeat HIV testing among gay and bisexual men. *AIDS*. 1995; 9:769–775. [PubMed: 7546423]

- Preloran HM, Browner CH, Lieber E. Strategies for motivating Latino couples' participation in qualitative health research and their effects on sample construction. *American Journal of Public Health*. 2001; 91:1832–1841. [PubMed: 11684612]
- Quesada GM, Heller PL. Sociocultural barriers to medical care among Mexican Americans in Texas: A summary report of research conducted by the Southwest Medical Sociology Ad Hoc Committee. *Medical Care*. 1977; 15:93–101. [PubMed: 857103]
- Rios Ellis, B. Redefining HIV/AIDS for Latinos: A Promising Paradigm for Addressing HIV/AIDS in the Hispanic Community. National Council of La Raza; Washington, DC: 2007.
- Taylor SL, Leibowitz A, Simon PA, Grusky O. ZIP code correlates of HIV-testing: A multi-level analysis in Los Angeles. *AIDS and Behavior*. 2006; 10:579–86. [PubMed: 16552623]
- Weinhardt, LS. The effects of HIV diagnosis on sexual risk behavior. In: Kalichman, Seth C., editor. *Positive prevention: Reducing risk among people living with HIV*. Kluwer; New York: 2005. p. 29-60.
- White A, Witty C. Men's under use of health services – finding alternative approaches. *Journal of Men's Health*. 2009; 6:95–97.
- World Health Organization. Guidance on provider-initiated HIV testing and counseling in health facilities. World Health Organization; Geneva, Switzerland: 2007. Retrieved on August 15, 2008 from, http://whqlibdoc.who.int/publications/2007/9789241595568_eng.pdf

Table I
Description of Participants' Sociodemographic Characteristics, Motivation, and Experiences with Disease Prevention

Variable	Total N	N	Mean (SD) or percent ^a
<i>Sociodemographic characteristics</i>			
Language preference	302		
Spanish		131	43 %
English		171	57 %
Place of birth	302		
Foreign born		132	44 %
Born in the USA		170	56 %
N of years living in the USA	302	--	
<5 years		73	24 %
>5 years		229	76 %
Age in years	302	--	29.43 (7.40)
N years of education	302	--	11.54 (3.04)
Health insurance status	302		
Yes		169	56 %
No		133	44 %
<i>Motivation</i>			
<i>Sexual risk behavior</i>			
Has a main partner	302		
Yes		234	78 %
No		68	23 %
Had casual partners	280		
Yes		87	31 %
No		193	69 %
N of casual partners	280	--	0.69 (1.48)
Condom use main partner (1-5)	234	--	2.26 (1.66)
Condom use casual partners (1-5)	87	--	3.74 (1.57)
<i>HIV testing expectations and norms</i>			
Mean expected positive outcomes of HIV testing (1-3)	282	--	2.54 (0.48)
Mean expected negative outcomes of HIV testing (1-3)	272	--	1.43 (0.43)
HIV testing social norms (1-4)	293	--	2.58 (0.60)
<i>Experiences with disease prevention</i>			
Received professional health education	302		
Yes		168	56 %
No		134	44 %
Had health screening test in the last 2 years (other than an HIV test)	302		
Yes		67	22 %
No		235	78 %

Variable	Total <i>N</i>	<i>N</i>	Mean (<i>SD</i>) or percent ^a
Participated in HIV prevention education	299		
Yes		154	52%
No		145	49%
Had an HIV test (ever)	295		
Yes		119	40 %
No		176	60 %
Had an HIV test (last year)	295		
Yes		54	19 %
No		241	81 %
Received HIV prevention advice from significant others	299		
Yes		240	80 %
No		59	20 %
Received advice for the prevention of other diseases from significant others	299		
Yes		259	87 %
No		40	13 %

^aPercentages may not add to 100 due to rounding.

Table II
Univariate Effects of Sociodemographic Characteristics, Motivation, and Experiences with Disease Prevention on Participants' Intentions to Seek and Intentions to Accept an HIV Test

Variable	Intentions to seek an HIV test			Intentions to accept an HIV test		
	N ^a	Do not intend N (%) ^b	Intend N (%) ^b	N ^a	Do not intend N (%) ^b	Intend N (%) ^b
<i>Sociodemographic characteristics</i>						
Language preference	296			298		
Spanish	65 (51)		62 (49)		27 (21)	102 (79)
English	86 (51)		83 (49)		64 (38)	105 (62)
Place of Birth	296			298		
Foreign born	81 (49)		85 (51)		42 (25)	126 (75)
Born in USA	70 (54)		60 (46)		49 (38)	81 (62)
N of years living in the USA	296			298		
<5 years	34 (48)		37 (52)		14 (19)	58 (81)
>5 years	117 (52)		108 (48)		77 (34)	149 (66)
Age in years	296	--	--	298	--	--
Education	296	--	--	298	--	--
Health insurance status	296			298		
Yes	92 (55)		76 (45)		65 (39)	103 (61)
No	59 (46)		69 (54)		26 (20)	104 (80)
<i>Motivation</i>						
<i>Sexual Risk Behavior</i>						
Has a main partner	296			298		
Yes	117 (50)		117 (50)		72 (31)	162 (69)
No	34 (55)		28 (45)		19 (30)	45 (70)
Had casual partners	279			280		
Yes	33 (38)		53 (62)		16 (18)	71 (82)
No	110 (57)		83 (43)		67 (35)	126 (65)

Variable	Intentions to seek an HIV test				Intentions to accept an HIV test			
	N ^a	Do not intend N (%) ^b	Intend N (%) ^b	OR (95% CI LL-UL)	N ^a	Do not intend N (%) ^b	Intend N (%) ^b	OR (95% CI LL-UL)
N of casual partners	279	--	--	1.13 (0.95-1.34)	280	--	--	1.10 (0.90-1.34)
Condom use main partner	234	--	--	1.11 (0.95-1.29)	234	--	--	0.96 (0.81-1.13)
Condom use casual partners	86			0.94 (0.71-1.24)	87	--	--	1.33 (0.96-1.85)+
Condom use intentions main partner	234	--	--	1.46 (1.08-1.97)*	234	--	--	1.26 (0.91-1.75)
Condom use intentions casual partners	86	--	--	1.31 (0.67-2.55)	87	--	--	2.86 (1.35-6.03)**
<i>HIV testing outcome expectations and norms</i>								
Expected positive outcomes	282	--	--	3.83 (2.18-6.74)***	282	--	--	7.02 (3.80-12.96)***
Expected negative outcomes	271	--	--	1.03 (0.59-1.79)	271	--	--	0.48 (0.27-.83)*
HIV testing social norms	293	--	--	2.69 (1.77-4.09)***	293	--	--	1.76 (1.12-2.73)*
<i>Experiences with disease prevention</i>								
Received professional health education	296				298			
Yes	77 (46)		89 (54)	1.53 (0.97-2.43)+	42 (25)		126 (75)	1.82 (1.10-2.99)*
No	74 (57)		56 (43)	1.00 ^c	298	49 (38)	81 (62)	1.00 ^c
Had health screening test in the last 2 years (other than an HIV test)	296				298			
Yes	86 (51)		84 (49)	1.04 (0.66-1.65)	52 (30)		120 (70)	1.03 (0.63-1.70)
No	65 (52)		61 (48)	1.00 ^c	39(31)		87 (69)	1.00 ^c
Participated in HIV prevention education	295				297			
Yes	72 (47)		81 (53)	1.19 (0.94-1.49)	41 (27)		113 (73)	1.22 (0.95-1.56)
No	79 (56)		63 (44)	1.00 ^c	50 (35)		93 (65)	1.00 ^c
Had an HIV test (ever)	293				295			
Yes	48 (41)		69 (59)	1.89 (1.18-3.04)**	28 (24)		91 (77)	1.71 (1.02-2.92)*
No	100 (57)		76 (43)	1.00 ^c	61 (35)		115 (65)	1.00 ^c
Had an HIV test (last year)	293				295			
Yes	21 (38)		34 (62)	1.85 (1.02-3.38)*	11 (20)		44 (80)	1.93 (.94-3.93)+

Variable	Intentions to seek an HIV test				Intentions to accept an HIV test			
	<i>N</i> ^a	Do not intend <i>N</i> (%) ^b	Intend <i>N</i> (%) ^b	OR (95% CI LL-UL)	<i>N</i> ^a	Do not intend <i>N</i> (%) ^b	Intend <i>N</i> (%) ^b	OR (95% CI LL-UL)
No		127 (53)	111 (47)	1.00 ^c	297	78 (33)	162 (68)	1.00 ^c
Received HIV prevention advice from significant others	295				297			
Yes		109 (46)	127 (54)	2.65 (1.44-4.89)**		65 (27)	173 (73)	1.95 (1.09-3.53)*
No		41 (70)	18 (31)	1.00 ^c		25 (42)	34 (58)	1.00 ^c
Received advice for the prevention of other diseases from significant others	295				297			
Yes		134 (49)	138 (51)	2.35 (0.94-5.90) ⁺	297	78 (29)	195 (71)	2.50 (1.08-5.80)*
No		16 (70)	7 (30)	1.00 ^c		12 (50)	12 (50)	1.00 ^c

Note.

OR = odds ratio; 95% CI LL-UL = 95% lower and upper level confidence interval.

⁺ $p < .01$

* $p < .05$

** $p < .01$

*** $p < .001$.

^a Number of cases included each analysis.

^b Intend plus do not intend may not add to 100 due to rounding.

^c Reference category.

Table III
Multiple Logistic Regressions of Intentions to Seek and Intentions to Accept an HIV Test on Sociodemographic Characteristics, Motivation, and Experiences with Disease Prevention.

	Intentions to seek an HIV test				Intentions to accept an HIV test			
Predictor	OR	95% CI		R ²	OR	95% CI		R ²
		LL	UL			LL	UL	
<i>Sociodemographic characteristics</i>								
Language preference	0.79	0.60	1.06		1.00	0.74	1.36	
Age	1.08	0.98	1.06		1.02	0.98	1.07	
Education	0.51 ⁺	0.24	1.11		0.45 ⁺	0.20	1.02	
Health insurance status	1.18	0.61	2.32	.01	0.60	0.29	1.25	.05
<i>Motivation</i>								
Had casual partners	1.42	0.74	2.72		2.25 [*]	0.99	5.11	
Expected positive outcomes	4.77 ^{***}	2.16	10.57		7.60 ^{***}	3.43	16.83	
Expected negative outcomes	1.39	0.66	2.91		0.41 [*]	0.18	0.90	
HIV testing social norms	2.85 ^{***}	1.69	4.82	.21	1.37	0.75	2.51	.24
<i>Experiences with disease prevention</i>								
Received professional health education	1.65 ⁺	0.93	2.60		1.87 ⁺	0.96	3.63	
Had an HIV test (ever)	2.05 [*]	1.09	3.88		1.77	0.83	3.77	
Received advice for the prevention of other diseases from significant others	1.14	0.34	3.75		1.04	0.35	3.07	
Received HIV prevention advice from significant others	2.96 [*]	1.27	6.90	.25	1.86	0.82	4.26	.25

Note.

$N = 251$.

OR = odds ratio; 95% CI LL-UL = 95% lower and upper level confidence interval R^2 = Cox & Snell R^2 for each step in the hierarchical logistic regression.

⁺ $p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$.