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Cultural Beliefs, Partner Characteristics, Communication, and Sexual Risk Among Latino MSM

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Abstract

This study examined factors associated with communication about condom use and unprotected anal intercourse (UAI) in a U.S. sample of immigrant Latino MSM (N= 356), with a focus on culturally based beliefs. Logistic regression analysis revealed that communication about condom use at participants' most recent encounter was associated with a lower likelihood of UAI during that encounter. UAI was more likely when the partner was a main partner and there was seroconcordance. A separate logistic regression indicated that communication about condom use was less likely when the most recent encounter involved a main partner, greater sexual desire, and intoxication due to substance use. Although cultural beliefs were not predictive of communication about condom use or UAI at the most recent encounter, they were related to the occurrence of UAI in the previous three months. There is a need for more research on the interplay of culture, safer sex communication, and sexual risk.

Keywords

Communication; Condom use; Latino MSM; Cultural beliefs; Sexual risk; HIV

Introduction

Prior research has consistently demonstrated the effect of communication about sexual activities on sexual risk behavior. A meta-analysis by Noar et al. [1] found that across 26 peer-reviewed, published studies, communication between sexual partners about condom use was moderately associated with reported condom use, with an overall correlation of about 0.25. A more recent study by Wilson et al. [2] found that communication about condom use was an important situational factor that predicted a lower likelihood of unprotected anal intercourse (UAI) during specific sexual episodes among Latino gay men. Building upon this accumulating literature on sexual communication, the current study examined factors that influence communication about condoms, as well as the way in which such communication might affect sexual risk. Specifically, we examined the role of culture in both condom use communication and sexual behavior in a U.S. sample of immigrant Latino men who have sex with men (MSM).

While communication about safer sex can function as a promoter of condom use, whether and how such communication happens is partly a consequence of entrenched sociocultural norms as well as more transient situational factors [3, 4]. Among Latinos, Wilson et al. [2]

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suggested that particular cultural factors, *simpatía* and sexual silence, may exert influences on Latino MSM in ways that reduce the likelihood of communication about safer sex and condom use. *simpatía*, which roughly translates into "friendliness" or "affection" in English, is a cultural value that encourages harmony in relationships and has been studied in Latino groups [5, 6]. Because of *simpatía*'s association with socially desirable traits such as agreeableness and likeability, the implication is that individuals who conform to this normative script will strive to avoid conflict in their social interactions [6].

Given that condoms are often viewed as indicative of mistrust or as a barrier to intimacy [7–9], the topic of condom use has the potential to be relationally threatening. Even if an individual holds positive intentions toward condom use, if his sexual partner disagrees, *simpatía*'s emphasis on relational harmony complicates the process of negotiating condom use. Thus, cultural norms of *simpatía* may hinder the ease with which Latino men are able to broach this topic or to insist on condom use with sexual partners [2, 4].

A study by Marín et al. [10] also demonstrated the influence of cultural factors on sexual behavior: greater endorsement of traditional gender-role beliefs was associated with lower sexual comfort, and ultimately, less consistent condom use. Hence, sociocultural context has been a particular point of emphasis in subsequent research examining sexual risk-taking among Latino and other MSM [11–13]. In particular, much research has focused on the cultural concept of *machismo*, which has been described as characteristic of Latinos, although its basic tenet that men must distance themselves from any attribute that could be construed as feminine is central in all patriarchal societies [14]. Expectations that Latino men have irrepressible sexual urges are among the specific beliefs sometimes encompassed within *machismo*. Whether accurate or not, perceptions that *machismo* embodies the prevailing norms for Latino men may contribute to greater sexual risk-taking behavior among those who have internalized such beliefs [15, 16]. Consistent with this suggestion, Herbst et al. [17] found that HIV behavioral interventions (k = 12 studies) that incorporated content explicitly addressing the cultural belief of *machismo* resulted in greater reductions in sex risk behavior among various samples of non-drug using Latino participants.

In addition to cultural factors, many researchers have begun to document the importance of situational features in determining people's sexual risk-taking behavior. Zea et al. [18] recently showed that variation across multiple encounters in the likelihood of UAI among immigrant Latino men who have sex with men (MSM) occurred mostly *within*, rather than between, individuals. As previously noted, one important situational factor associated with sexual risk behavior is communication about sexual activities. However, other dyadic characteristics, such as emotional closeness between partners, serostatus and seroconcordance [19–22], along with transient physical states resulting from sexual desire, alcohol and drug use [23–27], have all demonstrated associations with sexual risk-taking.

We undertook the current study to explore the role of communication about condom use in a specific context— that is, communication about condoms in a particular sexual encounter in which either protected or unprotected anal sex occurred. Two sets of hypotheses were tested. First, we assessed whether greater endorsement of traditional Latino cultural beliefs was associated with a lower likelihood of communication about condom use during participants' most recent sexual encounter involving anal sex. In these analyses, we also examined how situational factors were associated with communication about condom use. Specifically, we tested whether main partner status, seroconcordance, sexual desire, and intoxication were associated with a lower likelihood of communication. Second, we examined whether communication about condoms predicted a greater likelihood of reported condom use, after controlling for the effects of the same cultural and situational variables included in the first analysis set.

Methods

Participants and Procedure

The analyses for this study were conducted on a subsample drawn from a larger study, which included 482 individuals from three growing but understudied groups of Latinos living in the New York City metropolitan area [18]. The subsample used in the current paper included 356 men who had engaged in either insertive or receptive anal intercourse with a single male partner in their most recent sexual encounter; thus, this analysis excluded men who had sex with more than one partner at their last sexual encounter and those who did not report having anal intercourse with a man at that encounter. This subsample included 107 Brazilian, 121 Colombian, and 128 Dominican immigrant MSM. Eligibility criteria included having been born in Brazil, Colombia, or the Dominican Republic, residing in the greater New York City metropolitan area, being at least 18 years of age, having had sex in the last 6 months, and having had sex with men. Descriptive information for the full sample is described by Zea et al. [18].

Targeted sampling was used to recruit participants from gay venues, community organizations, and Latino cultural events in the New York metropolitan area (including northern New Jersey). In addition, a classified advertisement with information about the study was placed on a website (Craig's List). Some participants in the study also referred others. Surveys were administered using computer assisted self-interview technology with audio enhancement (A-CASI) and touch-screen responding. Participants were given the option to take the survey in English, Portuguese, or Spanish. The audio enhancement enabled participants to listen to questions and responses, thereby providing an accommodation for those with limited reading abilities. A bilingual research assistant initially instructed participants in use of the computers and remained available to answer questions and help with any difficulties encountered. Participants received reimbursement of \$50 and a \$15 stipend to cover transportation costs. Procedures for participant recruitment and survey administration were previously reported.¹⁸

Measures

All measures were translated from English into Spanish and Portuguese by native speakers, and back-translated into English, either for this study or in our previous research. The survey was reviewed by experts from different Spanish-speaking countries to ensure universality of the Spanish used.

The primary outcome variables were communication about condom use and reported condom use during participants' most recent sexual encounter involving anal intercourse. Communication about condom use was ascertained by asking participants to report if there had been any verbal or non-verbal communication about the use of condoms on that occasion. A second dichotomous outcome variable indicated whether anal intercourse without a condom occurred during the last encounter.

Cultural factors included country of birth and endorsement of traditional Latino cultural beliefs. Dummy coding was applied to the country of birth to create dichotomous variables [Brazilian (1) vs. not (0) and Colombian (1) vs. not (0); Dominicans served as the reference group]. In addition to country of birth, participants' culturally based beliefs were elicited by assessing men's endorsement of stereotypical sexual attitudes pertaining to Latino sexuality with a 13-item inventory developed for use in the present study. A preliminary, 10-item version of the inventory was used in a pilot study [28], and based on results of the pilot study a final version, which included 13 items, was developed. In the present study, the full inventory included statements reflecting the culturally based value of *simpatía* (e.g., "Sometimes it is better to go along with a sexual partner's desires in order to avoid

conflict"), along with beliefs about men's sexuality in general (e.g., "Men are always ready for sex") as well as Latino men's sexuality in particular (e.g., "Latino men are passionate lovers"). The response format for these items was a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree." Although the various traditional beliefs were expected to constitute separate subscales, we found that the individual subscales were highly correlated, with the full scale having a Cronbach's alpha of 0.81 in this sample. We therefore utilized participants' composite inventory scores for these analyses.

For partner characteristics, participants reported whether their last sexual encounter involved their main sexual partner or some other partner. Seroconcordance was determined with questions concerning the participants' serostatus and the specific partner's serostatus. To assess serostatus of the participant's last sexual partner, participants were asked "What was this person's HIV status?" Response options included *I know it was positive, I think it was positive, I know it was negative, I think it was negative, and I don't know.* Responses that suggested definite knowledge of the partner's HIV status (i.e., *I know he was positive; I know he was negative*) were coded as seroconcordant (1) when the partner's serostatus matched that of the participant. Uncertain responses (i.e., *I think it was positive/negative; I don't know*) were coded as non-concordant (0), as were those responses indicating that the partner's serostatus differed from that of the participant.

Characteristics of the situation included the participant's physical state due to substance use and sexual desire. Intoxication due to alcohol or drugs was assessed by asking participants to report how drunk and how high they were during their most recent sexual encounter. Responses for both alcohol and drug use were made on a 5-point scale ranging from "Not at all" (1) to "Passed out" (5). For the analyses, we created a dichotomous variable with 1 reflecting some level of intoxication due to alcohol or drugs and 0 reflecting no intoxication at all. Sexual desire was asked the following way: "On this occasion, prior to any physical contact, how much did you want to have sex?" Response options ranged from "Not at all" to "A great deal."

Results

Descriptive Statistics

In the subsample for the current study, participants were 356 Latino gay men ranging from 20 to 70 years of age, with a mean of 35.9 years. The mean age of migration to the U.S. was 21.1 years; 14.9% of the sample had less than a high school diploma, 16.6% had completed trade or high school, and 68.5% had completed at least some college. About 18.5% of participants reported a monthly income of less than \$400, 26.4% reported a monthly income of \$401 to \$800, and 55.1% of the sample reported a monthly income of \$801 or more. Of the 356 men in this sample, 90 (25.3%) reported having UAI at their last sexual encounter; 32.0% said that their last sexual encounter involved a main partner, 36.8% reported having a seroconcordant partner at their most recent sexual encounter, and 25.3% were HIV-positive. Descriptive data for the full sample were reported by Zea et al. [18].

Table 1 shows the associations (i.e., correlations) among the cultural, partner, and physical variables. Correlations shown are phi coefficients for pairs of dichotomous variables, Pearson product moment for pairs of continuous variables, and point-biserial correlations for pairs containing a dichotomous and a continuous variable. In all cases, possible values range from -1.0 to +1.0.

As shown by the correlations in Table 1, participants who reported that their most recent sexual partner was a main or steady partner were more likely to report being seroconcordant with that partner, less likely to report being intoxicated during their most recent sexual

encounter, and less likely to have communicated about or to have used condoms during their last sexual encounter. Condom use was also less likely when the most recent partner was seroconcordant with the research participant. Communication about condom use was significantly positively correlated with actual condom use (r = 0.45, P < 0.0001). Latino beliefs were not significantly correlated with country of birth or any of the partner, physical state (i.e., intoxication and sexual desire), or outcome variables.

Model Predicting Communication About Condom Use

Hierarchical set logistic regression (performed using SAS Version 9.1) was used to determine the contributions of the three sets of variables (cultural, partner, and physical) to the prediction of the dichotomous outcome of whether communication about condom use occurred during the most recent sexual encounter involving insertive or receptive anal intercourse. Because some of the variables were interdependent, particularly main partner status and seroconcordance, we used logistic set regression to examine the combined effect of the sets of variables, rather than that of the individual predictors. Logistic set regression therefore allowed us to circumvent some of the problems posed by this interdependence while still demonstrating the impact of the separate sets of variables (via change in log-likelihood). As shown in Table 2, Set 1 (cultural variables) included the participant's country of birth and score on the Latino beliefs inventory. Set 2 (partner variables) included variables reflecting whether the partner in the last episode of anal sex was a main partner and whether the partner was seroconcordant. Set 3 (physical variables) included the respondent's level of sexual desire at the time of the encounter and whether the respondent was intoxicated with alcohol or recreational drugs during the sexual encounter.

In the first step, the cultural set of variables was entered, but the overall model was not significant ($X^2(3) = 5.59$, P = 0.13). In the second step, the partner set of variables was added. As shown in Table 2, the change in -2 log likelihood was significant (G = 477.77 - 459.17 = 18.60, distributed as a Chi-square with 5 - 3 = 2 degrees of freedom [df], P < 0.0001). The partner variables therefore added significant explanatory power to the model predicting communication about condom use beyond the cultural variable set. The third step included the physical variable set, which also resulted in a significant change in -2 log likelihood (G = 459.17 - 447.76 = 11.41, df = 2, P < 0.01).

Table 2 also shows the final model with all three sets of variables. None of the cultural variables was significant. Main partner status, but not seroconcordance, was significantly associated with a lower likelihood of communicating about condom use. Additionally, participants who reported higher levels of sexual desire and being intoxicated were significantly less likely to have communicated about condom use.

Model Predicting Condom Use at Most Recent Sexual Encounter

Hierarchical set logistic regression was then conducted to examine the contributions of the same three sets of variables, as well as communication about condom use, to the prediction of a dichotomous outcome indicating whether the participant had used a condom during his most recent episode of anal intercourse (either insertive or receptive). Set 1 again consisted of the cultural variables; Set 2 included the partner variables; Set 3 included the physical variables; and a single variable, communication about condom use, constituted Set 4. Results for the model predicting condom use at last anal intercourse are displayed in Table 3.

As shown in Table 3, the overall model consisting of only the cultural variables was not significant, but the addition of the partner characteristics added significantly to the prediction of condom use during respondents' last episode of anal sex, as did the physical

variables. Finally, the inclusion of communication about condom use greatly improved prediction of whether a condom was actually used during participants' most recent anal intercourse.

Table 3 also shows the final model including all variables. Parallel to the findings for communication about condom use, none of the cultural variables predicted actual condom use. However, both partner variables, i.e., main partner status, as well as seroconcordance, were significant in the final model. There was a lower likelihood of condom use when the partner was a main partner and when the partner was seroconcordant. Individuals' level of sexual desire was not a significant predictor, although being intoxicated was significantly associated with a lower likelihood of condom use. Finally, communication about condom use was associated with a significantly higher likelihood of actual condom use in individuals' most recent anal sex encounter. As indicated by the odds ratio, partners who communicated with each other about condom use were about nine times more likely to use condoms than those who did not communicate.

Given that UAI is more common in main or steady sexual partnerships, and that steady sexual partners are also more likely to have discussed condom use much earlier than their most recent sexual encounter, we recognized the possibility that our observed results were driven partially by the presence of individuals in steady partnerships in our sample. Thus, we also conducted an analogous series of analyses in a subset of our sample (N= 242) that excluded those who had sex with a main partner during their most recent episode of anal intercourse. These analyses produced similar results to our previous ones, affirming that (1) sexual desire and intoxication decreased the likelihood of communication about condoms and (2) communication about condoms significantly increased the likelihood of actual condom use in sexual encounters that did not involve main partners.

Because we expected, but did not find, a correlation between scores on our Latino belief inventory and the likelihood of unprotected anal sex, we speculated that the absence of an association could be due in part to the different levels of specificity in our measures of cultural beliefs and sexual behavior. Ajzen and Fishbein [29] argued that accurate prediction of behavior depends in part on a corresponding level of specificity in the predictors and the outcome. According to this reasoning, an individual's general characteristics would be expected to correspond with general patterns or aggregated indicators of behavior, whereas behavior in specific events would depend on attitudes relevant to those specific circumstances. Zea et al. [18] found support for this assertion in their study, in which personal characteristics tended to be more consistently associated with aggregated sexual behavior than with behavior in a single sexual encounter.

Thus, we conducted a hierarchical set logistic regression to examine the contribution of country of origin and cultural beliefs, along with participants' reported relationship and HIV status at the time of the study, to the prediction of a dichotomous outcome indicating whether the participant had engaged in UAI (either insertive or receptive) at any time during the 3 months prior to the study. In contrast to our findings for UAI at participants' most recent sexual encounter, the overall model consisting of only the cultural variables was statistically significant ($X^2(3) = 12.96$, P < 0.01). In the final model, greater endorsement of Latino beliefs predicted a greater likelihood of 3-month UAI, even when controlling for country of birth, HIV status of the participant, and whether or not the participant had a main male sexual partner (b = 0.34, Wald $X^2 = 4.99$, P < 0.05).

Discussion

One purpose of this study was to investigate the role that communication about condoms plays in sexual risk behavior. Findings of this study supported the importance of communication about condom use in sexual encounters involving anal intercourse among Latino MSM: condom use was more likely in encounters where communication took place. Another main purpose of this study was to examine influences on communication about condom use. Previous research has suggested that aspects of Latino cultural beliefs can reduce Latino individuals' willingness to communicate about condoms [2], which, in turn, would reduce the likelihood of safer sexual behavior. Although our findings did not support this hypothesis relative to situation-specific sexual risk behavior (i.e., condom use at the most recent sexual encounter), the link between cultural beliefs and condom use was found relative to UAI over 3 months. Thus, when there was greater correspondence in the level of specificity of the measures, an effect was evident. Therefore, the findings of this study are consistent with earlier research [10, 11, 13, 15, 16] showing the importance of cultural factors' influence on sexual behavior. Unfortunately, we could not explore the impact of cultural beliefs on aggregate patterns of sexual communication, because this study included only measures of communication at specific sexual encounters and not a more general indicator of communication patterns. Thus, we could not perform an explicit test of whether communication mediates the link between culture and condom use. Future research could pursue this question.

In some respects, our findings were consistent with prior research by Wilson et al. [2]. Specifically, our study, like that of Wilson et al., confirmed that discussion of condom use is an important factor in whether unprotected sex is likely to occur. In addition, both our study and the study by Wilson et al. demonstrated that in sexual encounters involving heightened sexual desire and steady sexual partners, people are more likely to forgo condom use. On the other hand, our research showed that participants who were high or drunk due to drugs or alcohol were less likely to report condom use, whereas Wilson et al. found that drug use by the partner, but not the participants themselves, contributed to a greater likelihood of unprotected anal intercourse. These conflicting findings could be due in part to our operational definition of substance use, which included respondents' reports of being either drunk or high, rather than focusing solely on whether drugs were used or not. It is interesting to note that Wilson et al. assessed partners' drug use by asking whether the partner was high, whereas they assessed participants' drug use by asking "did you use drugs?" (p. 693), and found a statistically significant association only for the former. Perhaps assessing the degree of intoxication, rather than simple presence or absence of use, is a more sensitive approach to capturing the potential effects of substance use on sexual risk behavior.

A limitation of this study was the use of a primarily gay-identified sample. Other limitations include the retrospective, cross-sectional design of the study. Moreover, communication between sexual partners depends on multiple dyadic characteristics—including the culture, age, education, and other characteristics of the partners. Although we controlled for main partner status and conducted analyses excluding anal sex encounters involving main partners, the collinearity of communication with other dyadic factors may have impacted our results. In addition, although the Latino cultural beliefs that we assessed in the study were derived from, and further refined in, prior elicitation research and pilot testing, the scale is limited in its ability to capture the nuances of *simpatía* and perceptions of Latino male sexuality. Nevertheless, this study advances knowledge about the complex interrelationships among cultural beliefs, sexual communication, relational and situational factors, and sexual risk behavior among Latino MSM. This study expands on the prior work by Wilson et al. [2] by examining cultural and communication influences on sexual risk, while also controlling for important co-variates of sexual risk, including seroconcordance.

Notwithstanding this study's limitations and unanswered questions, this research suggests additional considerations for research on the interplay of culture and sexual risk and the need for clarification of the pathways linking the two. In addition, by focusing on specific groups of immigrant Latino MSM who have not been widely represented in prior research, this study provides important information for those who wish to understand and ultimately intervene to reduce the HIV risk of similar populations. The research highlights the importance of encouraging communication about condom use in Latino MSM populations, while at the same time acknowledging how factors such as partner characteristics, sexual desire, and substance use may pose barriers to communicating about and enacting safer sexual activity.

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Appendix

Latino Cultural Beliefs Scale Items

- 1. Men have little control over their sexual impulses.
- 2. Men are always ready for sex.
- 3. Latino men are romantic when they are in love.
- 4. Latino men are passionate lovers.
- 5. Latino gay men prefer masculine men as partners.
- 6. When Latino gay men are in love, they surrender themselves to their partners' desires.
- 7. Fate determines whether a man will get a sexually transmitted disease.
- **8.** Sometimes it is better to go along with a sexual partner's desires in order to avoid conflict.
- **9.** Saying "no" to a potential sexual partner is difficult because it might hurt his feelings.
- 10. Sex without penetration seems incomplete.
- 11. It is harmful for a man to have an erection (a hard-on) without ejaculating.
- 12. It is hard to say no to a sexual partner who has been financially generous to me.
- 13. Lovers who trust each other don't use condoms.

References

- Noar SM, Carlyle K, Cole C. Why communication is crucial: meta-analysis of the relationship between safer sexual communication and condom use. J Health Commun. 2006; 11:365–90. [PubMed: 16720536]
- Wilson PA, Díaz RM, Yoshikawa H, Shrout PE. Drug use, interpersonal attraction, and communication: Situational factors as predictors of episodes of unprotected anal intercourse among Latino gay men. AIDS Behav. 2009; 13:691–9. [PubMed: 18985447]
- 3. Hoff, CC.; Manchikanti, A. Spoken and unspoken desires: sexual negotiation and communication strategies among HIV-positive gay and bisexual men. In: Halkitis, PN.; Gomez, CA.; Wolitski, RJ.,

editors. HIV+ sex: the psychological and interpersonal dynamics of HIV-seropositive gay and bisexual men's relationships. Washington, DC: American Psychological Association; 2005. p. 73-85.

- Marín BV, Tschann JM, Gomez CA, Gregorich S. Self-efficacy to use condoms in unmarried Latino adults. Am J Community Psychol. 1998; 26:53–71. [PubMed: 9574498]
- Ramirez-Esparza N, Gosling SD, Pennebaker JW. Paradox lost: unraveling the puzzle of Simpatía. J Cross Cult Psychol. 2008; 39:703–15.
- Triandis HC, Lisansky J, Marín G, Betancourt H. Simpatía as a cultural script of Hispanics. J Pers Soc Psychol. 1984; 47:1363–75.
- 7. Adam BD, Sears A, Schellenberg EG. Accounting for unsafe sex: interviews with men who have sex with men. J Sex Res. 2000; 37:24–36.
- Balán IC, Carballo-Diéguez A, Ventuneac A, Remien RH. Intentional condomless anal intercourse among Latino MSM who meet sexual partners on the Internet. AIDS Educ Prev. 2009; 21:14–24. [PubMed: 19243228]
- Williams JK, Wyatt GE, Resell J, Peterson J, Asuan-O'Brien A. Psychosocial issues among gay- and non-gay-identifying HIV-seropositive African American and Latino MSM. Cultur Divers Ethnic Minor Psychol. 2004; 10:268–86. [PubMed: 15311979]
- Marín BV, Gomez CA, Tschann JM, Gregorich S. Condom use in unmarried Latino men: a test of cultural constructs. Health Psychol. 1997; 16:458–67. [PubMed: 9302543]
- 11. Diaz, RM. Latino gay men and HIV: culture, sexuality, and risk behavior. New York, NY: Routledge; 1998.
- Parker R. Sexuality, culture, and power in HIV/AIDS research. Annu Rev Anthropol. 2001; 30:163–79.
- 13. Zea MC, Reisen CA, Díaz RM. Methodological issues in research on sexual behavior with Latino gay and bisexual men. Am J Community Psychol. 2003; 31:281–91. [PubMed: 12866685]
- DeSouza, ER.; Baldwin, J.; Koller, SH.; Narvaz, MA. Latin American perspective on the study of gender. In: Paludi, MA., editor. Praeger guide to the psychology of gender. Westport, CT: Praeger; 2004. p. 41-68.
- 15. Bianchi FT, Shedlin MG, Brooks KD, Reisen CA, Zea MC, Poppen PJ. Partner selection among Latino immigrant men who have sex with men. Arch Sex Behav. 2009 Epub ahead of print. 10.1007/s10508-009-9510-x
- Jarama SL, Kennamer JD, Poppen PJ, Hendricks M, Bradford J. Psychosocial, behavioral, and cultural predictors of sexual risk for HIV infection among Latino men who have sex with men. AIDS Behav. 2005; 9:513–23. [PubMed: 16328712]
- Herbst JH, Kay LS, Passin WF, Lyles CM, Crepaz N, Marín BV. HIV AIDS Prevention Synthesis PRS Team. A systematic review and meta-analysis of behavioral interventions to reduce HIV risk behaviors of Hispanics in the United States and Puerto Rico. AIDS Behav. 2007; 11:25–47. [PubMed: 16917668]
- Zea MC, Reisen CA, Poppen PJ, Bianchi FT. Unprotected anal intercourse among immigrant Latino MSM: the role of characteristics of the person and the sexual encounter. AIDS Behav. 2009; 13:700–15. [PubMed: 19030982]
- Crepaz N, Marks G. Towards an understanding of sexual risk behavior in people living with HIV: a review of social, psychological, and medical findings. AIDS. 2002; 16:135–49. [PubMed: 11807297]
- Parsons JT, Schrimshaw EW, Wolitski RJ, Halkitis PN, Purcell DW, Hoff CC, et al. Sexual harm reduction practices of HIV-seropositive gay and bisexual men: serosorting, strategic positioning, and withdrawal before ejaculation. AIDS. 2005; 19(Suppl 1):S13–25. [PubMed: 15838191]
- Poppen PJ, Reisen CA, Zea MC, Bianchi FT, Echeverry JJ. Serostatus disclosure, seroconcordance, partner relationship, and unprotected anal intercourse among HIV-positive Latino MSM. AIDS Educ Prev. 2005; 17:227–37. [PubMed: 16006209]
- 22. Xia Q, Molitor F, Osmond DH, Tholandi M, Pollack LM, Ruiz JD, Catania JA. Knowledge of sexual partner's HIV serostatus and serosorting practices in a California population-based sample of men who have sex with men. AIDS. 2006; 20:2081–9. [PubMed: 17053354]

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- Colfax G, Vittinghoff E, Husnik MJ, McKirnan D, Buchbinder S, Koblin B, et al. Substance use and sexual risk: a participant- and episode-level analysis among a cohort of men who have sex with men. Am J Epidemiol. 2004; 159:1002–12. [PubMed: 15128613]
- Hirshfield S, Remien RH, Humberstone M, Walavalkar I, Chiasson MA. Substance use and highrisk sex among men who have sex with men: a national online study in the USA. AIDS Care. 2004; 16:1036–47. [PubMed: 15511735]
- Purcell DW, Moss S, Remien RH, Woods WJ, Parsons JT. Illicit substance use, sexual risk, and HIV-positive gay and bisexual men: differences by serostatus of casual partners. AIDS. 2005; 19(Suppl 1):S37–47. [PubMed: 15838193]
- 26. Shuper PA, Fisher WA. The role of sexual arousal and sexual partner characteristics in HIV plus MSM's intentions to engage in unprotected sexual intercourse. Health Psychol. 2008; 27:445–54. [PubMed: 18643002]
- 27. Strong DA, Bancroft J, Carnes LA, Davis LA, Kennedy J. The impact of sexual arousal on sexual risk-taking: a qualitative study. J Sex Res. 2005; 42:185–91. [PubMed: 19817032]
- Calabrese, SK.; Lo, SC.; Reisen, CA.; Zea, MC.; Poppen, PJ.; Bianchi, FT. Poster session at The Society for the Scientific Study of Sexuality annual meeting. Las Vegas: Nevada; Nov. 2006 Cultural ideology and sexual risk-taking behavior among Latino MSM.
- 29. Ajzen I, Fishbein M. Attitude-behavior relations: a theoretical analysis and review of empirical research. Psychol Bull. 1977; 84:888–918.

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Table 1

Correlations among predictors and outcome variables (N = 356)

	1	1	n			•		0	٠	10
1. Brazilian ^a	I	-0.47 **	-0.49	-0.08	-0.00	0.02	0.08	-0.05	-0.08	0.04
2. Colombian ^a		I	-0.54 **	0.01	-0.02	-0.03	-0.06	-0.01	0.09	0.02
3. Dominican ^a			I	0.06	0.03	0.01	-0.02	0.05	-0.01	-0.06
4. Latino beliefs Partner variables				Ι	-0.02	-0.06	0.04	0.07	-0.07	-0.06
5. Main partner					I	0.36^{**}	0.09	-0.16^{*}	-0.23 **	-0.24
6. Seroconcordance Physical variables						I	0.07	-0.22	-0.08	-0.16 *
7. Sexual desire							I	0.06	-0.17 *	-0.07
8. Intoxication Outcomes								I	-0.08	-0.08
9. Condom communication									I	0.45^{**}
10. Condom use										I
Mean	0.30	0.34	0.36	3.10	0.32	0.37	3.05	0.30	0.58	0.75
Min	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00
Max	1.00	1.00	1.00	5.00	1.00	1.00	4.00	1.00	1.00	1.00

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P = 0.0001

Model	$-2 \log L$	Overall model	$\Delta -2 \log L$	
Set 1: cultural set	477.77	$X^2(3) = 5.59$		
Set 2: partner set	459.17	$X^2(5) = 24.19^*$	18.60**	
Set 3: physical set	447.76	$X^2(7) = 35.60^{**}$	11.41*	
Final model	Coefficient	Wald X^2	Odds ratio	95% CI
Set 1: cultural set				
Brazilian	-0.29	1.04	0.75	0.43-1.30
Colombian	0.22	0.63	1.24	0.73-2.13
Latino beliefs inventory	-0.25	1.87	0.78	0.54-1.12
Set 2: partner set				
Main partner	-1.05	16.36**	0.35	0.21-0.58
Seroconcordance	-0.05	0.03	0.96	0.58-1.58
Set 3: physical set				
Sexual desire	-0.36	6.36*	0.70	0.53-0.92
Intoxication	-0.51	4.00*	0.60	0.36-0.99

Table 2Logistic set regression: communication about condom use (N = 356)

* P<0.05,

** P<0.0001

Model	$-2 \log L$	Overall model	Δ –2 log L	
Set 1: cultural set	399.84	$X^2(3) = 2.72$		
Set 2: partner set	377.92	$X^2(5) = 24.64^*$	21.92**	
Set 3: physical set	370.83	$X^2(7) = 31.74^{**}$	7.09*	
Set 4: condom communication	309.30	$X^2(8) = 93.27^{**}$	61.53**	
Final model	Coefficient	Wald X^2	Odds ratio	95% CI
Set 1: cultural set				
Brazilian	0.53	2.21	1.70	0.85-3.41
Colombian	0.09	0.08	1.10	0.57-2.13
Latino beliefs inventory	-0.17	0.52	0.85	0.53-1.34
Set 2: partner set				
Main partner	-0.70	4.88*	0.49	0.27-0.92
Seroconcordance	-0.68	4.35*	0.51	0.27-0.96
Set 3: physical set				
Sexual desire	0.03	0.04	1.03	0.73-1.46
Intoxication	-0.65	4.07*	0.52	0.28-0.98
Set 4: condom communication	2.23	50.83 **	9.31	5.04-17.19

Table 3Logistic set regression: condom use at most recent anal intercourse (N = 356)

*P<0.05,

** P<0.0001