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A Lifetime of Low-Risk Behaviors Among HIV-Positive Latinas in Los Angeles

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Abstract The objective is to assess the differences in lifetime and current transmission risk behaviors of HIV-positive and HIV-negative Latinas. In 2005–2006, 214 HIV-positive Latinas were recruited from systems of care and 111 HIV-negative Latina-matched controls were interviewed in Los Angeles, CA regarding lifetime and recent sexual and drug-taking risk behaviors. Multivariate OLS regression and logistic regression models were used to assess differences in lifetime and current transmission risk. There was no significant difference between the two groups with respect to lifetime exposure through injection drug use. HIV-positive Latinas reported significantly more lifetime sexual partners than HIV-negative Latinas. Rates of current sexual activity were not significantly different across the two groups. HIV-positive Latinas were less likely to report recent unprotected sex relative to HIV-negative Latinas. In Los Angeles, HIV-positive and HIV-negative Latinas were very similar with respect to transmission risk. The challenges these findings pose to prevention efforts that target Latinas and suggestions for new interventions are discussed.

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Introduction

The number of Latinas in the United States infected through heterosexual transmission is on the rise. New data from the CDC estimated that in 2006 there were approximately 56,000 new cases of HIV infection in the United States [1]. During the period 2003–2006, Latinos accounted for 21% of all new HIV infections among the 33 states who reported new cases of HIV infection. Women accounted for approximately one-quarter of those new HIV infections among Latinos [2]. More alarming still is the fact that overall 79% of new infections among Latinas in the years 2003–2006 were a result of "high-risk heterosexual contact."

Women's HIV infection has frequently been linked to the power imbalances between women and men around the world. The sexual and drug-taking risk behaviors of the male primary partners in heterosexual relationships are often women's greatest risks [3–15]. According to the CDC, "high-risk heterosexual contact includes heterosexual contact with a sex partner known to have HIV infection or at high risk for HIV infection" (2:96). Using this definition for "high-risk heterosexual contact," however, may be misleading.

For many Latinas who immigrated to the United States, the sexual risk taking of their male partners may be associated with marital separations which often accompany migrant labor and the process of immigration [10, 11]. Recent ethnographic work with women in rural Mexico and Latinas living in the United States suggests that many Latinas may be at risk for HIV infection from their

husbands for just this reason, yet women have difficulty in acknowledging this risk to their own health [10, 11]. In the abstract, women identified men's extramarital sexual relationships as an important transmission vector, bringing their wives into contact with HIV. But these same women were unwilling to recognize their own personal risk as a result of their own husband's actions. More alarming still was the fact that women regularly reported a belief that the best way for them to prevent HIV and other sexually transmitted diseases was to have sex only with one's husband. These women expressed a belief in the protective nature of their unilateral monogamy [9].

The purpose of this study is to assess the lifetime and current transmission risk-taking behaviors of Latinas living with HIV/AIDS in the United States, by comparing a group of HIV-positive and HIV-negative Latinas (most of whom are immigrants to the United States). In particular, this paper examines histories of injection drug use, the number of lifetime sexual partners, rates of current sexual activity, and rates of unprotected sex among those who were sexually active. The primary hypothesis guiding this research is that the sexual risk-taking of HIV-positive and HIV-negative Latinas are more similar than different. For Latinas, histories of substance use and acculturation have both frequently been associated with higher levels of risk taking [16–19]. In this study, these factors will be controlled for, so as to best assess differences between HIV-positive and healthy Latinas.

Methods

Participants and Data Collection

The sample is part of a larger study, which included women of all race/ethnic groups. Women who were not Latinas were dropped from the analysis to focus on the special issues of this group. Moreover, 12 women who did not provide responses to transmission risk (i.e., lifetime use of injection drugs) were dropped from the sample. The parent study was a cognitive behavior therapy intervention for mothers living with HIV (MLH) and their adolescent children, targeting improved coping and mental health, reduced family conflict, and reduced transmission. All data for this study come from baseline assessments.

Mothers Living with HIV

A total of 214 HIV-positive participants were recruited in Los Angeles County, California (refusal rate = 6.4%) from January 2005 to October 2006. It was required that they were the mothers or primary female caregivers of at least one child between the age of 6 and 20. MLH were recruited

from HIV/AIDS clinics, general medical clinics, HIV/AIDS community-based organizations, peer referrals, and from the rosters of previous studies. MLH were approached in waiting rooms of clinics, referred by providers, approached members of the study staff after presentations to support groups, or registered after reading promotional posters/flyers posted at participating agencies. HIV serostatus was provided as self-report, confirmed by women being clients of HIV/AIDS care organizations.

Neighborhood Control Mothers

A total of 111 neighborhood control mothers (NCM) were recruited through street outreach. After 25% of the MLH sample was recruited, the addresses of all participants were mapped. Five modal neighborhoods were identified based on clustering of MLH addresses. Screening and recruitment were conducted at grocery stores in these modal neighborhoods. Women of childbearing age were approached as they entered or left the participating market. Women were eligible to participate if they were the mother or primary female caregiver of at least one child between the age of 6 and 20. All eligible women were invited to participate in the study (refusal rate = 53.0%). During the interview, women were asked to provide HIV serostatus as self-report, one participant in the NCM sample reported being HIV-positive and was transferred to the MLH arm of the study. All participants were paid $30 as an incentive for completing the baseline assessment. University IRB approval was obtained for all study procedures.

Measures

Demographics

Language preference is based on the language used to deliver the baseline assessment. Percent of life lived in the United States was based on taking the difference between a woman's current age and her age at immigration and dividing that difference by her current age and multiplying that ratio by 100. Financial status is based on the answer to a four-item assessment which asked women to choose the category which best described the situation of their household: "(1) Struggling to survive, not enough money to pay bills and buy food; (2) Barely paying the bills; (3) Have the necessities, have money to cover needs; (4) Comfortable, have money to purchase extras." History of cocaine use was coded yes for women who reported ever using cocaine in their lifetime. Country of origin, education, employment status, ever being married, living with one's husband, having a romantic partner, age, and number of children were all based on self-reports.

Transmission Risk

Lifetime injection drug user was coded yes for women who reported ever having injected an illicit drug in their lifetime, all women not reporting lifetime injection drug use were coded as heterosexual contact. Sexually active was coded as yes for women who reported 1 or more sex partners in the previous 6 months, based on an open response to the item: "In the past 6 months, how many different people have you had vaginal or anal sex with?" Unprotected sex was based on answering 1 or more to the following item: "In the past 6 months, how many times have you had unprotected sex with a partner who was HIV negative or of unknown HIV status?" Percentage having unprotected sex was calculated by including only those women who have been sexually active in the past 6 months as the denominator. Lifetime sexual partners was based on an open response to the item: "Over your entire lifetime, how many different people have you had vaginal sex or anal sex with?"

Analysis

Univariate Analysis

Differences in categorical variables were assessed using the Chi-square statistic, and differences in means were assessed with student's *t* statistics.

Multivariate Analysis

Three dependent variables were analyzed: lifetime sexual partners, sexually active, and unprotected sex. Lifetime number of sex partners was analyzed using standard ordinary least squares (OLS) regression. A logarithmic transformation of lifetime sexual partners was performed to adhere to the normality assumptions of OLS. The two dummy variables—sexually active and unprotected sex— were both analyzed using standard logistic regression. For simplicity of presentation, all three multivariate models were constructed from the same set of independent variables. Fit statistics are provided for each model. Other demographic variables were entered into alternative model specifications not presented here, but discarded from the final multivariate models due to lack of improvement in model fit.

Results

Table 1 presents the demographic profiles of the MLH and the NCM. The control group is an excellent match with respect to age, number of children living in the household, country of origin, Spanish language preference, and educational attainment. The NCM families have slightly better financial situations and fewer were unemployed, likely due to the large number of MLH who were not in the workforce due to their illness. There are also significant differences with respect to the number of women who currently had a romantic partner and were married to that partner. It is important to note, however, that there was no significant difference between the two groups with respect to the number who had ever been married.

Table 2 presents the transmission risk behaviors for the sample. Although slightly more HIV-positive women reported histories of injection drug use, there was no significant difference between MLH and NCM with respect to lifetime HIV exposure category. Moreover, there was no significant difference between the two groups with respect to having been sexually active in 6 months prior. Significantly fewer HIV-positive women, however, reported having unprotected sex in the previous 6 months.

Figure 1 presents the distribution of lifetime number of sex partners for the two groups. Although more NCM report only one lifetime partner relative to MLH, most women in either group reported three or fewer lifetime sex partners. Among MLH, 66.1% reported no lifetime injecting behavior and three or fewer sex partners, whereas among NCM this number was 80.2%, a significant difference ($\chi^2 = 7.35$, df = 1, $p < .05$).

Table 3 presents the results from the three multivariate models. Turning first to the OLS of the logged lifetime sexual partners, there remains a significant difference between the two groups of women despite controlling for several covariates. HIV-positive women reported more lifetime sex partners than the healthy women, controlling for all other variables in the model. Women who preferred Spanish were associated with a decrease in reported partners, as were women who reported living with their husband. More partners were reported by women with histories of injection drug use or cocaine use.

In the multivariate logistic regression of current sexual activity, there was no significant difference between HIV-positive and HIV-negative women. Older women were less likely to be sexually active and women who lived with their husbands were three times more likely to be sexually active.

In the final multivariate model, HIV-positive reported a nearly 70% reduction in the odds of having had unprotected sex recently as compared to HIV-negative women, controlling for all other variables in the model. In this model, women who reported histories of cocaine use were nearly six times more likely to have engaged in unprotected sex, controlling for all other variables in the model.

Table 1 Demographic profiles of HIV-positive Latinas (n = 214) and Healthy Controls (111), Los Angeles 2005–2006

Frequencies	HIV + Latinas		Healthy Controls		
	n	%	n	%	Chi-sq.
Country/region of origin					2.43
United States	21	9.8	12	10.8	
Mexico	120	56.1	65	58.6	
Central America	65	30.4	33	29.7	
South America	6	2.8	1	0.9	
Carribean	2	0.9	0	0.0	
Spanish preferred	187	87.4	98	88.3	0.06
Education					7.43
Eighth grade or less	114	53.5	49	44.1	
Some high school	55	25.8	25	22.5	
High school grad	19	8.9	13	11.7	
Some college	17	8.0	14	12.6	
College grad	8	3.8	10	9.0	
Financial status					10.56*
Struggling to survive	56	26.2	24	21.6	
Barely paying bills	96	44.9	36	32.4	
Have necessities	51	23.8	38	34.2	
Comfortable	11	5.1	13	11.7	
Employment status					14.65***
Employed	74	38.3	44	44.0	
Unemployed	73	37.8	50	50.0	
Retired or disabled	46	23.8	6	6.0	
Ever married	139	65.0	83	74.8	3.26
Currently living with husband	42	19.6	58	52.3	36.52***
Has romantic partner	116	54.2	82	73.9	11.98***
History of cocaine use	26	12.2	4	3.6	6.37*
Means	Mean	SD	Mean	SD	t-stat
Age	39.0	8.7	39.3	9.1	0.31
Percent of life in USA	43.7	24.8	46.2	23.1	0.92
Number of children	3.2	1.7	3.1	1.4	0.74

* $p < .05$
** $p < .01$
*** $p < .001$

Discussion

There are several important results to emerge from this study. First, there was no significant difference between the HIV-positive Latinas and the HIV-negative Latinas with respect to lifetime injecting behaviors relative to heterosexual risk. In this sample of low income Latinas living in Los Angeles, the majority had never injected drugs, regardless of whether they were HIV-positive or not. Heterosexual contact was how most of the HIV-positive women were exposed.

Second, HIV-positive Latinas reported significantly more lifetime sexual partners than did HIV-negative Latinas, controlling for several other variables. Women who were currently living with their husbands reported fewer lifetime sex partners, perhaps divorcees and widows

accrued additional partners in subsequent relationships. In keeping with previous findings, women with histories of injection drug use or cocaine use reported more partners [16–19]. Likewise, in keeping with other findings, women who preferred Spanish reported fewer partners, which may reflect the lowered risk taking of less acculturated Latinas in the United States [16–19].

Third, there was no significant difference between HIV-positive Latinas and HIV-negative Latinas, with respect to whether or not they were currently sexually active. Some previous research has suggested that women's desire to continue to be sexually active can be negatively impacted by an HIV diagnosis [20–23]. The multivariate model presented here, however, is a comparison between women living with the disease and those who were not, so the comparison to these studies is imperfect. Not surprisingly,

Table 2 Transmission risk behaviors of HIV-positive Latinas (n = 214) and Healthy Controls (111), Los Angeles 2005–2006

	HIV + Latinas		Healthy Controls		
	n	%	n	%	Chi-sq.
Lifetime transmission risks					
Injection drug use	10	4.7	1	0.9	3.18
Heterosexual contact	204	95.3	110	99.1	
Current transmission risks					
Sexually Active	114	53.5	65	58.6	0.75
Unprotected sex (if active)	34	29.8	32	49.2	6.70**

* $p < .05$

** $p < .01$

*** $p < .001$

older women were less likely to be sexually active and women who were currently living with their husbands were also more likely to be recently sexually active.

Fourth, HIV-positive Latinas relative to HIV-negative Latinas reported less unprotected sex, among those who were sexually active. As has been found in other samples, most HIV-positive women who are currently sexually active are using condoms during sex [24].

Finally, despite the significant difference in the relative number of lifetime partners between the two groups of women, the vast majority of women in this sample, both HIV-positive and HIV-negative, had three or fewer lifetime sexual partners. These results suggest that most low income Latinas living with HIV in Southern California contracted the disease from their primary sexual partner, likely in the

context of a married relationship. These results call into question the appropriateness of the label typically given these women with respect to their route of HIV transmission, "high-risk heterosexual contact." The CDC defines this category as "heterosexual contact with a sex partner known to have, or to be at high risk for, HIV infection." The women in this sample fit this definition, but labeling these women as having engaged in "high-risk" sex is misleading. From the perspective of most of these women, they were engaging in sexual relations with a husband or boyfriend, not "high-risk" sex [2].

These results present an incredible challenge to HIV prevention efforts for Latinas. CDC and prevention programs recommend that women in general, including those in monogamous relationships should be using condoms and women who do not use condoms in these relationships are practicing high-risk sexual behavior [25]. But, women face an even greater challenge. Faced with the possible ongoing struggle of powerlessness within the relationship, to add the decision of condom use may mean the loss of their partner's emotional, social, and even economic assistance [26]. For Latinas mostly born outside the United States, who are of childbearing age, raised in Catholic communities, the recommendation to use condoms with monogamous partners or their spouses appears even more difficult, if not inconceivable [9, 10]. Personal sex beliefs are blurred as faith in the Catholic religion overshadows their choice to use condoms, subjecting them to feelings of guilt and shame [27].

There are a few limitations that must be raised in the context of this study. First, the sample was a convenience

Fig. 1 Total lifetime sex partners, HIV-positive Latinas (n = 214) and Healthy Controls (111), Los Angeles 2005–2006
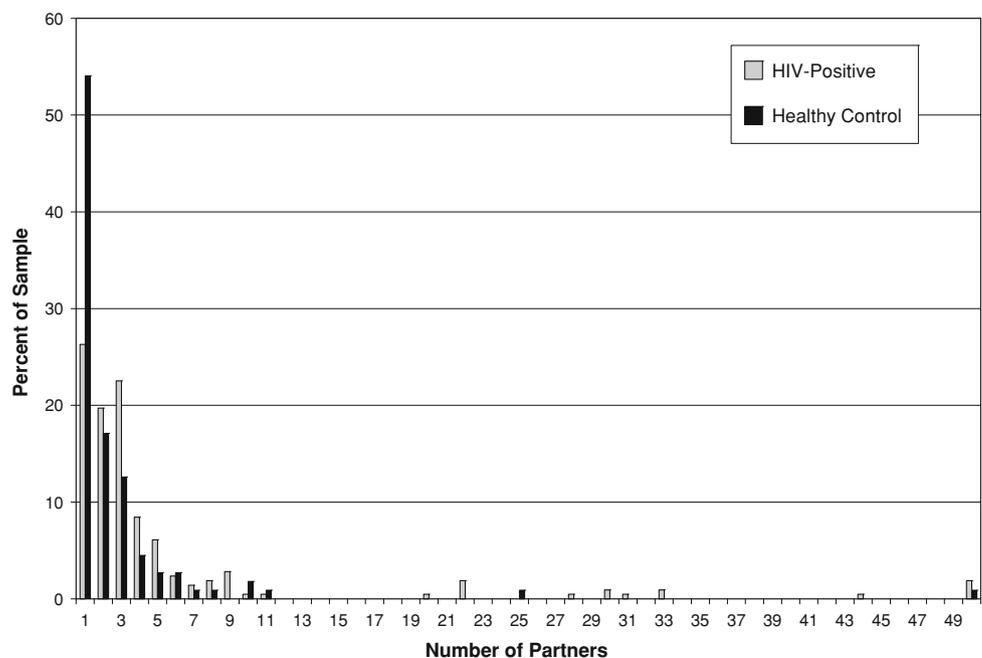
Table 3 Multivariate models of sexual behavior, HIV-positive Latinas ($n = 214$) and Healthy Controls (111), Los Angeles 2005–2006

	OLS of Log (partners)			Logit of sexually active		Logit of unprotected sex	
	Est	SE	t-stat	OR	95% CI	OR	95% CI
HIV-positive	0.31	0.11	2.74**	1.11	(0.64, 1.92)	0.33	(0.16, 0.69)**
Age	−0.01	0.01	−1.09	0.93	(0.90, 0.96)***	1.03	(0.98, 1.08)
Spanish preferred (Yes = 1)	−0.60	0.28	−2.16*	0.94	(0.24, 3.65)	0.91	(0.14, 5.91)
Percent of life lived in USA	0.00	0.00	−0.76	1.01	(0.99, 1.03)	0.99	(0.96, 1.01)
Live with husband (Yes = 1)	−0.31	0.12	−2.57*	3.01	(1.67, 5.42)***	0.85	(0.41, 1.74)
Ever injected drugs (Yes = 1)	0.70	0.35	1.99*	0.23	(0.04, 1.32)	0.65	(0.04, 11.10)
Ever used cocaine (Yes = 1)	0.60	0.22	2.74**	1.67	(0.57, 4.91)	5.72	(1.60, 20.46)**
R^2	0.22						
−2 Log likelihood				384.35		212.93	
n	317			317		173	

* $p < .05$

** $p < .01$

*** $p < .001$

sample of service-seeking Latinas living with HIV and a matched control group. These women were all mothers with children aged 6–20, which may also bias the data toward lower risk women who were caring for children. This may limit the extent to which one can generalize these findings past the population mothers to women in general. These mothers, however, are mirroring the national trends among Latinas, showing increasing levels of heterosexual transmission [2]. Second, no detailed history of transmission route was collected. It is unclear if a woman with two lifetime partners was infected by a primary partner or a one time sexual encounter. Accurate data of this nature, however, is extremely difficult to collect. Finally, data were not collected on husband death due to AIDS, which may account for some of the significant difference between the two samples with respect to total lifetime sex partners.

Conclusion

Much more needs to be done to address the problems associated with heterosexual transmission of HIV/AIDS to Latinas. In particular, prevention efforts must move beyond female empowerment interventions that teach condom negotiation. Such interventions are necessary, but not sufficient to stem the tide of infection in these communities. Interventions also must target the behaviors of men who are the vector of transmission. In order to be culturally sensitive and culturally relevant these interventions should target Latino men's sense of *machisimo* and *familisimo*, both of which place a great emphasis on taking care of one's wife and children as part of a masculine identity. If couples are unwilling to use condoms in the context of supposedly monogamous relationships, then men must use

condoms in any secondary sexual relationship, thus increasing the chances of protecting a wife or partner from HIV infection. This may not be the most ideal solution, but public health must concern itself with the pragmatic issue of curbing infection, not just the dogmatic belief in condoms in all contexts.

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