

A Randomized Study of a Pregnancy and Disease Prevention Intervention for Hispanic Couples

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CONTEXT: Many Hispanic women are at elevated risk for HIV infection because of the sexual behavior of their male partner. Yet, couple-based risk-reduction interventions for this population have not been developed and scientifically evaluated.

METHODS: A sample of 146 Hispanic couples who received either a risk reduction intervention or the community educational standard of care were followed up at three months (men and women) and six months (women only) to measure the consistency of both condom use and effective contraceptive use, and the frequency of unprotected vaginal sex. Analyses were conducted to identify differences between the two groups at baseline and follow-up interviews, and changes over time.

RESULTS: At follow-up, the two groups did not differ on any risk-related outcomes; over time, both groups increased the reported consistency of condom use and of use of effective contraceptive methods, and reduced their frequency of unprotected sex.

CONCLUSIONS: If further research confirms that simply bringing couples together for a single-session, culturally appropriate risk reduction intervention helps them adopt protective behaviors, more intensive (and costly) interventions may not be necessary.

Perspectives on Sexual and Reproductive Health, 2004, 36(4):162–169

HIV and AIDS have disproportionately affected Hispanic communities in the United States: In 2000, for example, Hispanics made up 13% of the population, but accounted for 19% of new AIDS cases.¹ The incidence of AIDS among Hispanics in 2000 was almost four times the incidence among non-Hispanic whites;² AIDS is now the fourth leading cause of death among Hispanics aged 25–44.³ Although the share of new AIDS cases occurring among women is growing overall, this trend is especially pronounced in the Hispanic population. In 2001, women accounted for a greater proportion of newly diagnosed AIDS cases among Hispanics (23%) than among all non-Hispanic whites (15%).⁴

Heterosexual contact has been the primary source of HIV transmission among Hispanics who have received an AIDS diagnosis, accounting for 47% of cumulative AIDS cases.⁵ Relatively high levels of HIV risk behavior among heterosexually active Hispanic men elevate the risk of their female partners. For example, Hispanic men report higher rates of heterosexual anal intercourse than non-Hispanic men,⁶ and the odds of having multiple partners are twice as high among married Hispanic white men as they are among comparable non-Hispanic white men.⁷ Another consequence of unprotected heterosexual intercourse, unintended pregnancy, also disproportionately affects Hispanics. The rate of unintended pregnancy among Hispanics is 69 per 1,000 women aged 15–44, more than 50% higher than the rate for non-Hispanic white women.⁸ Moreover, Hispanics are less likely than other racial or ethnic groups to use con-

doms,⁹ which can protect against both pregnancy and disease.¹⁰ Some women may be unable to negotiate condom use and other safer-sex behaviors with their partners as a result of gender-based power dynamics.¹¹

Despite the need for HIV interventions for Hispanics, few theoretically based interventions for this population have been developed and scientifically evaluated. Only a few interventions have been designed specifically for Hispanic women,¹² and to our knowledge, none have focused exclusively on Hispanic men.¹³ More often, interventions include men or women of diverse ethnic backgrounds,¹⁴ with relatively low numbers of Hispanics. As Amaro, Vega and Valencia state:

“It is clear that our ‘best science’ has largely left out Hispanics.... Glaring gaps in the literature make evident the need for empirical studies on the effectiveness of HIV prevention strategies that 1) are geared toward Hispanics; 2) are contextual in nature; 3) include the contexts of oppression and gender; and 4) incorporate important ingredients of culture and gender role norms and practices in the design, development and implementation of prevention interventions.”¹⁵

Although two people are involved in the transmission of HIV and other sexually transmitted diseases (STDs), prevention efforts among heterosexuals have focused almost exclusively on women. Moreover, most of these interventions are not designed to address relationship dynamics or do not include both members of a sexual partnership,¹⁶ even

though interventions targeted to couples are more effective than those targeted to men or women alone.¹⁷ Couple-based interventions to encourage condom use may be particularly important, as condom use requires the participation—or at least the cooperation—of both partners.¹⁸

Intervening with both partners and addressing relationship dynamics may be an important strategy for preventing disease and unintended pregnancy among Hispanic couples. Findings from studies with Hispanics, including our own formative work in Los Angeles, indicate that women believe that they have power in their relationships and are involved in making decisions about sexual behavior, including condom use.¹⁹ The extent to which women report joint decision-making is striking. Moreover, in our formative research, women who decided themselves or jointly with their partners to use condoms were more likely to report use, and reported more frequent use, than women who said their partners made that decision.²⁰

Accordingly, we designed, implemented and evaluated the PARTNERS Project, a couple-based intervention aimed at reducing the risk of unintended pregnancy and STDs (including HIV) among young Hispanic women and their male partners.

THE PARTNERS PROJECT

Setting

Two sites—Los Angeles (which ranks second among U.S. cities in the number of AIDS cases²¹) and Oklahoma City—were chosen for project implementation. Women in Los Angeles had to identify themselves as being Hispanic, whereas women in Oklahoma could be of any race or ethnicity. Because of the need for information about culturally appropriate HIV and pregnancy prevention interventions for Hispanics, this article focuses on the participants at the Los Angeles site. Hispanics constituted 29% of 46,442 county residents who had received AIDS diagnoses through June 30, 2003.²² Hispanic women accounted for 36% of all AIDS cases among adult and adolescent women, and the predominant mode of transmission was heterosexual contact (51%).²³

The overall goal of the project was to build an integrated approach to disease and pregnancy prevention within the context of the community and to locate the project within accepted health-related and community services. We collaborated with community-based organizations in East Los Angeles in the design and implementation of the intervention. We conducted all intervention sessions at a community-based clinic that has provided affordable, comprehensive and culturally appropriate health care services to the Hispanic community of East Los Angeles for more than 30 years.

Couple-Based Intervention

• *Development.* The multisite research team designed the intervention in collaboration with community consultants, with members of the target population and with behavioral scientists who had significant experience conducting research with Hispanics. The resulting intervention could be

implemented at both sites and included activities that could be used with participants of different cultures. To inform the design of the intervention, we drew from two conceptual models of HIV risk reduction: Fishbein's Integrated Behavior Change Model²⁴ and the Information-Motivation-Behavioral Skills Model of HIV/AIDS Risk Reduction.²⁵

Because HIV and STD interventions must be culturally sensitive if they are to be successful,²⁶ members of the Los Angeles site team modified the design and content of the general intervention to address the specific needs and characteristics of the Hispanic community in East Los Angeles. We conducted formative research to identify the influence of factors such as cultural norms, communication, power and influencing strategies on couples' sexual behavior, contraceptive use and condom use.²⁷ In addition, we interviewed eight Hispanic women and seven Hispanic men recruited from community-based organizations in East Los Angeles regarding the feasibility, content and acceptability of the intervention. Clinic staff at an East Los Angeles organization that provides services to Hispanic women and men also gave feedback on the curriculum. We tested the intervention with three Hispanic couples recruited from East Los Angeles.

Using the findings both from our formative work and from previous research conducted with Hispanic participants, we adapted the delivery and content of the program to be culturally appropriate for young Hispanics living in the East Los Angeles community. For example, we structured the intervention sessions to be small and personal, in keeping with results of previous studies suggesting that small groups are an effective way to deliver information to Hispanics.²⁸ By using a small-group format and two highly trained, bilingual Hispanic facilitators, we hoped to reflect *personalismo* and *simpatia*—that is, to create a trusting environment among people with whom the participants have had pleasant social interactions.²⁹

Because Hispanic men not only are involved in decision-making on sexual issues such as contraceptive use and condom use, but also see their role in this domain as an important responsibility,³⁰ we designed the intervention to actively engage both members of a sexually active couple and enhance their relationship through skill-based activities. Facilitators provided information and involved participants in open discussions. We conducted some activities in a group setting and others with individual couples.

Consistent with findings from cultural consensus modeling analysis,³¹ couples in our formative study viewed partner communication about condoms and contraceptive methods as normative and believed that couples use condoms for both pregnancy and disease prevention. However, other research indicates that Hispanic couples are more likely to discuss methods to prevent pregnancy than to talk about strategies to prevent STD transmission.³² In addition, Hispanic men and women believe that men are less likely than women to communicate about or suggest condom use.³³ Our intervention thus included skill-building activities to improve communication between partners about

sexual needs, desires and safer-sex strategies.

Finally, interventions with Hispanics that incorporate skill-training components result in more positive changes in risk behavior than purely informational interventions.³⁴ Therefore, the curriculum included skills training in risk reduction (e.g., condom use, mutual monogamy, use of effective contraception), as well as interactive skills-based activities such as behavior modeling, role-playing and games.

• **Content.** The first session provided an introduction to the intervention and covered perceived vulnerability to unintended pregnancy, HIV and other STDs; transmission and prevention of HIV and other STDs; and strategies for safer sex. The second session taught condom use skills; provided more detailed information about other safer-sex strategies, including mutual monogamy and testing; and assisted couples in selecting a healthy safer-sex strategy that worked for them. The third and final session addressed reproductive intentions, including preventing an unintended pregnancy and having a healthy pregnancy, avoiding or controlling triggers leading to unsafe sex, and communicating with a partner about sexual issues. At the end of each session, participants were given condoms, lubricants and relevant handouts.

Couple-Based Comparison Session

The comparison condition presented the community educational standard of care for the prevention of STD transmission and unintended pregnancy. The facilitators provided couples with information about contraception and STDs (including HIV) and answered participants' questions. Additional information was provided through videos and brochures. At the end of the session, participants were given condoms, lubricants and referrals for HIV counseling and testing.

Implementation

The sessions were conducted in English only, Spanish only or a combination of English and Spanish, depending on the preference of the group members. All intervention handouts were available in both English and Spanish.* The three intervention group sessions, each lasting 2.5 hours, occurred over three consecutive weeks. The comparison group session lasted for two hours. Participants in the intervention group received \$15 for each of the first two sessions, \$20 for the third session and a bonus of \$15 after completing all three sessions. Those in the comparison group received \$15. Participants also received stipends for child care and transportation.

A team of two facilitators (one male and one female) and a facilitator assistant led all sessions; the same team led all three sessions for a particular cohort of intervention participants. So that the intervention would be conducted systematically and consistently throughout the study, facilitators participated in training workshops and used

structured protocols, including a manual with standardized scripts.

EVALUATION

We studied the effectiveness of the couple-based intervention using a randomized comparison design. Eligible couples were recruited through the woman; all eligible women were asked to invite their main partner (defined as "someone like a spouse or boyfriend") to participate. After completing a baseline interview, couples were assigned to a cohort of 6–12 couples and were scheduled to begin project participation. On the scheduled date, they were randomized to either the three-session couple-based intervention or the comparison condition. For each cohort, the first session for the intervention group occurred concurrently with the sole comparison group session. Both men and women participated in a three-month follow-up interview, and women completed a six-month follow-up.

Recruitment of Participants

All recruiters were bilingual Hispanic females who either lived in East Los Angeles or had experience providing services to its Hispanic population. They received standardized training in recruitment and screening procedures that included the use of a script and a screening instrument.

Active recruitment sites included community health centers, shopping malls, STD and family planning clinics, community colleges, universities and housing projects in East Los Angeles. When approaching potential female participants, recruiters adhered to a specific script that included eligibility criteria and other project information. Interested individuals were screened briefly to determine eligibility. Passive recruitment strategies consisted of placing printed materials (e.g., posters, flyers and brochures) at various community locations and advertising in local newspapers and on a radio program. The printed materials and ads described the project and asked interested persons or those who wanted more information to call a toll-free phone number. Women who telephoned were offered a screening interview. All printed materials and the screening instrument were in both English and Spanish; the radio program was in Spanish only.

A woman was eligible if she was 18–25 years old, had a male sex partner aged 18 or older, had had sex without a condom within the previous three months, and met one or more of the following criteria: She knew or thought her partner had had sex with someone else even once during the past year; thought her partner might have sex even once with someone else in the next year (assuming they remained together); knew or thought her partner had had an STD during the past year; knew or thought her partner had ever been in prison; knew or thought her partner had ever used injection drugs; knew or thought her partner had ever had sex with a man; had had sex with someone beside her current partner even once during the previous year; thought she might ever have sex with someone else in the future while still involved with her current partner; had had an STD dur-

*The Spanish versions were created by translating English originals into Spanish and back-translating to English; the Spanish versions were then reviewed by a native Spanish speaker for accuracy.

ing the past year; or had ever used injection drugs. Women who were pregnant, intended to become pregnant within the year or reported being HIV-positive were not eligible. Fifty-one percent of the women screened were eligible.

The male partner had to be 18 or older; he did not have to be Hispanic. Both partners had to agree to participate for the couple to be enrolled in the project. Although almost all eligible women agreed to participate, fewer than half (41%) of eligible women and their partners completed the baseline interviews.

A total of 202 women and their male partners completed the baseline interview. Of these couples, 72% enrolled and were randomized to either the intervention group (69) or the comparison group (77). Study participants did not differ significantly from the nonparticipants who completed the baseline interview in their reports of lifetime number of sexual partners (8.0 and 10.0) or in the proportion who were married (18% and 13%), had had an STD in the past year (7% and 4%), had ever been in prison (21% and 16%) or had used a condom the last time they had sex (25% and 26%). Participants, however, had been in relationships with their partners longer (36.1 vs. 26.4 months), and reported higher rates of cohabitation (55% vs. 30%) and of having children (58% vs. 45%). The majority of couples in the intervention (81%) completed all three sessions.

Data Collection

Baseline interviews were conducted between January 2000 and June 2002. Baseline and three-month follow-up interviews took approximately one hour; partners were interviewed concurrently but separately. The six-month follow-up interviews with women also lasted about an hour. The researchers provided compensation for participation in the baseline (\$30), three-month (\$40) and six-month (\$50) interviews, as well as stipends to defray the costs of travel and child care. All interviewers were Hispanic, and participants and interviewers were matched by gender. Participants could choose to be interviewed in either Spanish or English.

The interviewers used a computer-assisted survey interviewing (CASI) system. For the most sensitive sexual and risk behavior questions, participants could enter their responses directly into the computer. Voice recordings allowed the participants to hear each question and response option through headphones as it appeared on the screen. The CASI system allowed for the insertion of participant-specific data (such as the name of a partner or a calendar date). This research was approved by the institutional review boards of the institutions responsible for each site and by the Centers for Disease and Control and Prevention. Written informed consent was obtained from all participants.

Measures

The behavioral outcomes measured were the number of unprotected vaginal sex acts with the main partner, the consistency of condom use with the main partner and the consistency of use of an effective contraceptive method with the main partner.

• *Unprotected vaginal sex acts.* We asked participants how many times in the past 90 days they had had vaginal sex with their partner, and on how many of those occasions they had used a condom. The number of unprotected sexual acts was the difference between those numbers.

• *Consistent condom use.* We constructed a proportional measure of consistency of condom use by dividing the number of times a participant reported using a condom for vaginal sex in the past 90 days with a specific partner by the number of times she or he reported having had vaginal sex with that partner. If either partner reported no vaginal sex at either time point, the couple was excluded from the analyses.

• *Consistent use of effective contraceptives.* We measured this outcome using only women's reports of contraceptive use because at baseline, most participants reported using female-controlled methods (e.g., the pill or the injectable) and because we believed that women's reports of consistency of use (e.g., whether they had skipped a pill) would be more reliable than men's. Also, because women completed a six-month interview, the influence of the intervention on contraceptive use could be assessed over a longer period of time.

In each interview, we asked women what methods they had used to prevent pregnancy with their partner in the past three months. Using data from previous studies,³⁵ we classified methods as effective if the one-year failure rate in typical use was 10% or less. Accordingly, vasectomy, tubal sterilization, the injectable, the implant, the IUD, the pill, the diaphragm, abstinence, and the male and female condom were classified as effective. We classified withdrawal, spermicides, rhythm and the sponge as ineffective. Women who reported using no method, mutual monogamy, or HIV or STD testing were classified as using nothing. For effective methods that require consistent use, we asked follow-up questions to assess consistency of use. For abstinence, we asked women if they had had sex even once in the past three months. For the condom and the diaphragm, we asked women if they had ever had sex in the past three months without using the method. For the pill, we asked women if they had missed more than two pills in any one of the past three months.

Consistent use of an effective method was defined as reliance on sterilization, the IUD, the injectable or the implant, or use of other effective methods that require substantial user compliance and an answer of no to the relevant consistency question. We combined nonuse, use of ineffective methods and inconsistent use of effective methods in one category and created a dichotomous outcome measure—consistent use of an effective method vs. all other categories.

• *Demographic and risk factors.* The interview guide included questions on participants' demographic characteristics, relationship characteristics, risk factors and protective behaviors.

Analytic Approach

The baseline characteristics of the sample are reported by gender and study group. The Pearson chi-square test for categorical variables and one-way analysis of variance

TABLE 1. Baseline characteristics of participants in a study of a couple-based pregnancy and STD prevention program for Hispanics, by gender and study group, Los Angeles, 2000–2002

Characteristic	Females		Males	
	Intervention (N= 55)	Comparison (N=52)	Intervention (N= 55)	Comparison (N=52)
Demographic				
Mean age (SD)	20.67 (2.53)*	21.31 (2.56)*	22.31 (4.38)	23.87 (3.48)
Speak Spanish as well as/ better than English (%)	61.1	55.8	59.3	60.4
Hispanic (%)	100.0	100.0	98.2	92.3
Mexican descent† (%)	94.5	84.6	81.5	83.3
Mean yrs. education (SD)	12.51 (2.42)	12.46 (1.70)	12.47 (2.09)	12.37 (2.53)
Employed (%)	52.7*	46.2*	67.3	78.8
Income ≤\$10,000 (%)	25.9	41.2	36.4†	15.4
Relationship				
Married to partner (%)	16.4	25.0	16.4	23.1
In relationship for >1 yr. (%)	67.3	75.0	63.6†	82.7
HIV/STD risk factors				
>1 partner in past year (%)	41.8	30.8	32.7	28.8
No condom use in past 90 days (%)	34.5	36.5	40.0	38.5
Protective behaviors in past 90 days				
Mean no. of sex acts without condoms (SD)	27.49 (30.99)	29.98 (32.80)	25.16 (30.81)	35.69 (39.92)
Mean proportion of sex acts protected by condoms (SD)	0.31 (0.34)	0.33 (0.37)	0.31 (0.34)	0.32 (0.37)
Consistent use of an effective contraceptive (%)	23.6	36.5	na	na

*Difference between males and females is statistically significant at $p < .05$. The paired t-test was used for continuous variables, and the McNemar test for categorical variables. †Difference between the intervention and the comparison group is statistically significant at $p < .05$. One-way ANOVA was used for continuous variables, and the chi-square test for categorical variables. ‡Individuals who indicated that they were born in Mexico, had a parent born in Mexico or had a grandparent born in Mexico. Notes: SD=standard deviation. na=not applicable.

(ANOVA) for continuous variables were used to test baseline differences between the groups. The paired t-test for continuous outcomes and the McNemar test for paired dichotomous variables were used to test for baseline differences between each woman and her partner.

Mixed ANOVA models were estimated to examine intervention effects on reported condom use while taking into account the dyadic structure of the data. This approach allows for testing of differential effects of an intervention on a woman and her male partner, and of a main effect of time. We estimated a three-way ANOVA, measuring the effects of group (intervention vs. comparison), time (baseline vs. three-month follow-up) and gender of partner; time and gender were treated as within-subjects factors, and group as a between-subjects factor.

A significant group-by-time effect would be of primary interest because it would indicate a change from baseline to follow-up for couples randomized to the intervention relative to the comparison group. A significant main effect of time in the absence of a significant group-by-time interaction would indicate changes between baseline and the three-month follow-up for participants in both study groups. Estimated marginal means predicted by the mixed ANOVA models and the significance of differences based on the F-test for group-by-time interactions are presented. The test for the main effect of time is shown when the intervention effect is not significant. Effects of the intervention on

women's reports of effective contraceptive use at three months and six months were assessed using the chi-square test. Changes within a participant over time were tested with the McNemar test for paired comparisons.

RESULTS

Sample Characteristics

Of the 146 couples who completed the baseline interview and participated in the study, 73% completed the three-month interview and were still intact. (One or both members of 28 couples did not participate in the three-month interview, and 11 couples were no longer intact.) Our analyses are based on data from these 107 couples.

The majority of participants spoke Spanish as well as or better than English and were of Mexican descent (Table 1). The women were significantly younger than the men, and a greater proportion of men than of women were employed. The female partners of the couples in the two groups did not significantly differ from each other on any of the characteristics tested. For men, two significant differences were found: Relative to the comparison group, the intervention group had a smaller proportion of men who reported relationships of more than one year's duration (64% vs. 83%) and a higher proportion with an income of \$10,000 or less (36% vs. 15%). These characteristics were not correlated with the study outcomes (not shown) and therefore were not included in analyses testing the intervention effect.

Effects of the Intervention

At the three-month follow-up, couples in the intervention group were no more likely than those in the comparison group to report having used condoms during vaginal intercourse (Table 2). However, the reported number of unprotected sexual acts decreased for both groups, as indicated by a significant main effect of time. In addition, the consistency of condom use increased for both groups: The proportion of protected acts increased over time. Gender had no significant main or interaction effects.

Women in the intervention group were no more likely

TABLE 2. Marginal means (and standard deviations) from mixed ANOVA model assessing condom use at baseline and at three-month follow-up, by study group

Group and time	No. of unprotected sex acts	% of times condoms used
Intervention		
Baseline	25.6 (27.3)	30.8 (33.9)
3 mos.	20.8 (28.0)	49.2 (35.3)
Comparison		
Baseline	32.2 (28.1)	32.1 (33.9)
3 mos.	23.2 (28.0)	39.3 (35.3)
<i>F</i> for effect of intervention	0.78	2.73
<i>F</i> for effect of time	8.6**	14.35***

Difference between baseline and three-month follow-up interview is statistically significant at $p < .01$. *Difference between baseline and three-month follow-up interview is statistically significant at $p < .001$. Notes: Data reflect use during the past 90 days and are based on couples who were still together at the three-month interview (N=107).

TABLE 3. Percentage of women consistently using an effective method of contraception, by study group and time

Group and time	%
Intervention	
Baseline	23.6
3 mos.	43.6
6 mos.	46.8
Comparison	
Baseline	36.5
3 mos.	44.2
6 mos.	51.2
χ^2 for effect of intervention	
Baseline	2.12
3 mos.	0.00
6 mos.	0.17
χ^2 for effect of time	
3 mos. vs. baseline	17.90***
6 mos. vs. baseline	7.21**

p \leq .01. *p \leq .001. N was 146 at baseline, 107 at three months and 88 at six months.

than women in the comparison group to report having used effective contraceptive methods consistently at three-month and six-month follow-up (Table 3). Reports of consistent use of an effective contraceptive increased for women in both study groups from baseline to three months and from baseline to six months.

DISCUSSION

This study examined the effects of the PARTNERS Project on reported condom use and effective contraceptive use among a sample of young Hispanic couples in East Los Angeles. We did not find a significant intervention effect for condom use or use of effective birth control; instead, reports of both condom use and effective contraceptive use significantly increased between baseline and follow-up for participants in both groups. The absence of an effect of the PARTNERS Project on key health protective behaviors is important, given the substantial intensity, time and resources devoted to the intervention group.

Unfortunately, we cannot determine what was responsible for the observed changes in behavioral outcomes. Plausible explanations include the content and implementation of the intervention and comparison sessions, testing effects and factors in the broader social environment. For example, the same community-based, culturally appropriate recruitment sites, procedures and facilitators were used for both conditions. Those aspects of recruitment and implementation, as well as the enormous effort exerted by the project's field staff to recruit and retain participants (e.g., maintaining contact with participants, providing incentives), may have enhanced the effectiveness of the comparison condition by raising awareness about disease prevention and encouraging self-evaluation and behavioral change. Another possible explanation is that the baseline interviews, which lasted an hour and were conducted face-to-face, may have sensitized participants to their sexual behavior and risk; in combination with the material presented in the inter-

vention or comparison sessions, these interviews may have influenced participants to change their condom and birth control use or to underreport socially undesirable behavior. Finally, something other than the project may have affected both groups. For example, participants may have been exposed to information related to HIV, other STDs or unintended pregnancy through the media or another program in the community.

In addition, bringing couples together for education about the prevention of HIV and other STDs and unintended pregnancy may have been enough to change their use of condoms and other contraceptive methods. The fact that the study was implemented with couples may have been more important than the specific format or content used in the two groups. This interpretation of our findings is supported by Becker and Robinson's review of reproductive health interventions, which indicated that programs targeted at couples were more effective than those targeted at only one partner.³⁶ In addition, El-Bassel and colleagues found that an HIV and STD prevention program designed to focus on the relationship context and involve heterosexual couples was effective in changing safer-sex behavior for both participants enrolled with their partners and women enrolled alone; no changes occurred in a control condition targeted at women only and focusing on education about risk reduction.³⁷

Taken together, these findings suggest the importance of both including couples in intervention efforts and focusing on the relationship context. Future intervention studies will need to disentangle these effects and determine if different intervention designs are more effective for individuals in different types of relationships. For some couples, participating in a single-session intervention reflecting the community educational standard of care may be sufficient to encourage communication, joint decision-making and improved contraceptive and condom use. Behavior change for other, potentially less stable couples may require more attention to relationship dynamics. Finally, participation in couple-based interventions may not be appropriate for women in relationships with a history of domestic violence. Rather, a women-only intervention focused on the relationship context may be indicated.

Some potential limitations should also be noted. First, the sample was a relatively homogenous group of young Hispanic couples (primarily of Mexican descent); the intervention may have different effects when adapted for other cultures or age-groups. In addition, more than a quarter of the couples who completed baseline interviews were lost to follow-up. The couples who did not participate in the project had relationships of shorter duration, reported lower rates of cohabitation and had fewer children. The evaluation of the intervention might have produced different results if all couples who completed baseline interviews had participated in the study.

In addition, the sample was limited to sexually active couples in which both partners agreed to participate. Although almost all eligible women agreed to participate, fewer than

half of these women and their partners completed the baseline interview. This finding suggests that some women may have had difficulty convincing their partners to enroll in the study. Because of this inclusion criterion, we may have recruited a sample of couples in relatively stable partnerships. Unfortunately, we cannot say whether less stable couples were less likely to participate or whether the intervention would have had different effects on less stable couples. The results cannot, therefore, be generalized to other populations of sexually active young couples at risk.

Finally, as is the case with most research on sexual behavior, our outcome measures are based on participants' self-reports. However, the interviewers attempted to minimize underreporting of behaviors that tend to be stigmatized. We matched our interviewers to participants by gender and ethnicity and trained them to establish a comfortable relationship with the participants. Questions about sexual and risk behaviors were strategically placed in the interview, so that they were asked only after interviewers had had an opportunity to develop a rapport with respondents. At the outset of these sections, respondents were reminded that their answers were confidential and that there were no right or wrong answers. Finally, for the most sensitive sexual and risk behavior questions, participants could enter their responses directly into the computer.

The design of this evaluation study had several strengths. Most important, couples were randomly assigned to the intervention or comparison group so that the effectiveness of the intervention could be rigorously tested. In addition, couples were followed over time: Women were interviewed three and six months after the intervention sessions were completed, and men were interviewed three months afterward.

In conclusion, our null findings have implications for the design of future studies. The finding that the three-session, couple-based intervention did not produce an increase in protective behavior raises important questions for further investigation. Further research is also needed to compare the effects of interventions aimed at Hispanic couples with those of interventions aimed at individual men and women. Finally, conducting research with couples is difficult and costly. If, in fact, bringing couples together for a single session that is community-based and culturally appropriate can help them to adopt protective behaviors, then more expensive and elaborate interventions may not be necessary. The seriousness of the HIV epidemic in the Hispanic community underlines the need for additional research that can build on these findings.

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Acknowledgments

This research was supported by cooperative agreements U30/CCU 915062-1-0 and U30/CCU 615166-1-0 with the Centers for Disease Control and Prevention. The authors acknowledge the members of the PARTNERS Project: Christine Galavotti, Heather C. Huszti, Joan Marie Kraft and Katina A. Pappas-DeLuca. The authors thank Stephen G. West and Aaron Taylor for their statistical consultation, the field staff, and the following organizations and clinics, which assisted with recruitment: AltaMed Health Services; Los Angeles Student Health Center, California State University; and the Metropolitan Service Planning Area, Los Angeles County Department of Health Services.

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