

**KNOWLEDGE, ATTITUDES AND PRACTICES OF
SEX WORKERS AND
MEN WHO HAVE SEX WITH MEN
IN CENTRAL AMERICA**

**PAN AMERICAN SOCIAL MARKETING ORGANIZATION
(PASMO)**

2001

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ACRONYMS

AIDS =	Acquired Immune Deficiency Syndrome
CEPRESI =	Centro Para la Educación y Prevención del SIDA
HIV =	Human Immunodeficiency Virus
IEC =	Information, education and communication
ILPES =	Instituto Latinoamericano de Prevención Educativa en Salud
KAP =	Knowledge, attitudes and practices
LACEN =	Latin American and Caribbean Epidemiological Network
MOH =	Ministry of Health
MSM =	Men who have sex with men
NGO =	Non-Governmental Organization
PASMO =	Pan American Social Marketing Association
SWs =	Sex workers
UNAIDS =	United Nations Program on AIDS
WHO =	World Health Organization

EXECUTIVE SUMMARY

Objective

This study was conducted to understand the extent to which the knowledge, attitudes and practices of men who have sex with men (MSM) and sex workers (SWs) in Central America have changed from 1997 to 2000. During this time, the Pan American Social Marketing Organization (PASMO) and other non-governmental organizations (NGOs) implemented a program intervention on HIV/AIDS. PASMO began working in Central America in 1996, and VIVE condom was first launched in 1997 in Costa Rica. VIVE condom was launched in Guatemala, El Salvador, Belize, and Nicaragua in 1998, and in Panama and Honduras in 2000. In 1999 PASMO developed a targeted behavior change strategy focusing on vulnerable populations. It launched inter-personal behavior change models targeting SWs and MSM the same year. PASMO developed generic mass media campaigns in 2000 to address unplanned pregnancy and prevention of STDs/HIV/AIDS and a risk assessment.

Study Design

This study was conducted with representative samples of 1,500 low-income MSM (300 per country) and 2000 low-income SWs (400 per country) in the metropolitan areas of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. It discusses changes among the two groups that occurred between 1997 and 2000 in the exposure to information on HIV/AIDS, the perceived risk of contracting HIV/AIDS, perceived self-efficacy, correct condom use skills, and condom usage.

Changes among MSM

- Risky sexual activity decreased among MSM between 1997 and 2000 while it increased among those who had sex with women
- Increased channels of communication did not translate to an increased number of MSM who know the benefits of using condoms with sporadic partners
- MSM's knowledge on some benefits of condoms increased during the study period
- Although there was no change in correct condom use, MSM who participated in PASMO activity had better skills
- MSM improved in some indicators of self-efficacy
- The low consistent condom use among MSM did not change during the study period
- Condoms are now more affordable and MSM buy at their preferred outlet.

Changes among SWs

- Although risky sexual activity decreased among SWs between 1997 and 2000, over one-third still had unprotected vaginal sex
- An increased percentage of SWs were exposed to multiple channels of information on condoms during the study period but this did not significantly increase their knowledge on condom benefits
- Self-efficacy did not improve during the study period. There was lower self-efficacy to use condoms with healthy looking clients
- Less than one-third of SWs had correct condom use skills and there was no change during the study period.

- More of those who participated in a PASMO activity demonstrated correct condom skills than non-participants.
- Consistent condom use increased among SWs, but only a small percentage used condoms with spouses or free union partners.
- The percentage of SWs who buy condoms from brothels increased. At the same time, more of them preferred to buy them from pharmacies.
- The majority of SWs think that condoms are cheap but an increasing number now think that condoms are expensive.

Conclusions

MSM: There was a significant decrease in risky sexual activity among MSM while risky sexual activity increased among bisexuals. The increase in exposure to multiple channels of information on condoms did not translate to increased knowledge on all aspects of its benefits. This may explain the low self-efficacy and low consistent condom use. Programming that provide consistent quality information on all benefits of condoms (and the importance of correct condom use) may improve self-efficacy and consistent condom use among MSM.

SWs: Although risky sexual behavior decreased during the study periods, over one-third of SWs still have unprotected sex. Programming that provide quality information on all benefits of condoms through multiple channels of communication may increase self-efficacy and consistent condom use among SWs. Increased distribution and promotion of condoms through pharmacies and non-traditional outlets can improve condom visibility and accessibility.

CHAPTER 1

INTRODUCTION

1.1 Background on PASMO

Established in 1996, the Pan American Social Marketing Organization (PASMO) is dedicated to increasing demand for and consistent use of priority health products and services among low-income consumers and other vulnerable populations in the Central American region. PASMO uses social marketing techniques to:

- increase knowledge of condoms and correct, consistent use
- increase access to affordable condoms, especially among high-risk groups
- establish an effective regional social marketing organization that will a) maximize the public health impact, b) minimize financial vulnerability, and c) strengthen institutional capacity
- create positive behavior change by implementing PSI's targeted communication and behavior change models.

VIVE (Live!) condoms hit the Costa Rican market in 1997 and have since been launched in Guatemala, El Salvador, Belize, Nicaragua, Honduras, and Panama. Affordable *VIVE* condoms—which range in price from US \$0.30 per 3-pack in Nicaragua to US \$0.85 per 3-pack in Panama—are made available through a variety of traditional and non-traditional outlets including pharmacies, supermarkets, bars, and nightclubs. The slogan *VIVE Tu Mejor Momento* (Live your best moment) appears on *VIVE* packaging and accompanies print materials and mass media activities such as TV, radio, billboard, and newspaper ads.

To accomplish its goals, PASMO employs targeted communication and behavior change strategies, condom social marketing techniques, community-based distribution networks, and continuous research and program evaluation. PASMO also works through local NGOs to reach target groups.

1.2 Study Objective

Since 1996, PASMO has developed and maintained an effective regional social marketing program with the goal of enhancing the Central American capacity to respond to HIV/AIDS. In order to assess overall progress toward this goal, PASMO has conducted baseline (1997) and follow-up (2000) knowledge, attitude, and practice (KAP) surveys among men who have sex with men (MSM) and commercial sex workers (SWs) in the region. This study examines the changes in key behavior change indicators among the target populations. It discusses changes in condom usage, perceived access to affordable condoms, understanding of correct condom use, perceived self-efficacy in condom use, and knowledge of HIV/AIDS prevention.

Research is a critical component in PASMO's social marketing program. Survey results from a baseline study in 1997 informed program interventions. The findings from the follow-up study in 2000 will help PASMO to evaluate its efforts and those of partner NGOs. Research findings from this study will help PASMO to develop appropriate promotional materials; create interpersonal models; and fine-tune the information and behavior change strategy.

1.3 Background on Central America

The five countries in Central America selected for this study (Costa Rica, Guatemala, El Salvador, Honduras, and Nicaragua), represent 79% of the total land area in Central America. The 33,535,179 people living in these five countries are predominantly Mestizos and Amerindians, with minority populations of African and European descent (US Census Bureau, 2000).

Demographic indicators vary across countries in Central America. The birth rates range from 21 per 1000 in Costa Rica to 35 per 1000 in Guatemala, and the death rates vary from 4 per 1000 in Costa Rica to 7 per 1000 in Guatemala. Population growth rates range from 1.7% in Costa Rica to 2.6% in Guatemala and fertility rates from 2.5 in Costa Rica to 4.7 in Guatemala. The average life expectancy in Guatemala is 66.2 years compared to 75.8 years in Costa Rica. The percentages of the Central American population living in poverty range from 48% in El Salvador to 75% in Guatemala (US Census Bureau, 2000). Literacy also varies across countries, only 56% of Guatemalans are literate, compared to 95% of Costa Ricans.

1.4 HIV/AIDS in Central America

Available data suggests that HIV/AIDS is increasing in Central America. Due to a lack of adequate surveillance, the actual number of HIV/AIDS cases in the region is unknown. Modes of transmission differ somewhat among countries. UNAIDS (2000b) statistics suggest mainly heterosexual transmission in Honduras. In Costa Rica HIV is still transmitted primarily during unprotected sex by MSM. The difference in the rate of infection between men and women

is reducing. In the early 1990s, it was 8 or 9 men per a woman but today is about 3 or 4 men to a woman.

Increased awareness and knowledge of HIV/AIDS have existed simultaneously with misconceptions and myths about unsafe sexual practices and low individual evaluation of the risk of been infected (UNAIDS, 1996).

Key goals of most intervention efforts include increasing the amount and quality of surveillance data and promoting prevention activities among high-risk groups (LACEN, 2000). Due to differences in behavior, self-definition, and the social stigmas associated with an infected patient, seeking information and treatment, many high-risk groups remain difficult to reach. Also in a predominantly macho culture, most gay men would not publicly identify their sexual orientation. (LANCEN, 2000).

This study provides trends in the indicators of behavior change in Central America. The findings provide insight on trends in risky sexual behavior, self-efficacy, knowledge of correct condom use and consistent condom use among MSM and SWs. PASMO hopes to use these findings to strengthen its own prevention efforts and those of partner NGOs in the region.

CHAPTER 2

METHODOLOGY

2.1 Sample Design

Due to differences in their sexual life styles, identification, visibility, and location, the sampling designs for MSM and SWs were different. This was particularly true for the construction of the sampling frames. To maximize the usefulness of results, the sample design for 1997 and 2000 were comparable for both target populations.

2.1.1 Sampling Design for MSM

The 1,500 MSM included in this survey were adults age 18 or older who lived in or near their primary metropolitan area at the time of the survey (except for Honduras, in which MSM were interviewed in San Pedro Sula). Since this sub-group was difficult to identify and locate, consideration was given during the construction of sampling frame to easy access to areas where they usually congregate. Interviewers who were MSM constructed the sampling frame since they were more likely to know where to find other MSM.

In each country between three and eight establishments where MSM were likely to visit were included in the study. The cooperation of establishment owners enabled the collection of detailed information on days and hours of operation, and an estimated number of visitors per establishment per day.

The estimated number of patrons was used to apportion the sample in each country with the probability proportional to the size of the estimated population that visit the establishments.

Since the volume of traffic to any establishment may depend on the hour of the day, interview times were selected at random to reduce this bias. At a randomly selected hour, the first five MSM that visited the establishment were interviewed. Since the probability of inclusion in the samples depends on frequency of visits, the study attempted to weight each sample. Despite the weighting, the distribution of the weighted samples was not significantly different from that of the unweighted samples.

2.1.2 Sampling Design for SWs

The study includes 2,000 sex workers who lived in the primary metropolitan areas of each country at the time of interview (except for Honduras, in which SWs were interviewed in San Pedro Sula). The samples in each country were drawn to represent sex workers in the low socioeconomic group and who meet their clients at either known sex establishments or on the street. The sampling design included a listing of social meeting places, sex establishments, and street areas where sex workers gather (bars, taverns, saloons, and other meeting places).

Two lists were compiled. The first included known sex establishments, their opening and closing times, the average number of sex workers that work there per day, and their work schedule. The second list included information on location, meeting and possible pick-up areas, addresses of blocks covered, days worked, and the working hours for SWs who meet clients on the street. Additional information was collected from street SWs on whether they were limited to one street or whether they worked freely throughout an area.

The information gathered was used to estimate the total number of SWs in an area. The bias in estimation was recognized since sex workers – particularly those who meet clients on the streets – were very mobile. The estimated number of SWs per area was used to select SWs with probability proportion to size. The first five SWs in an establishment at a randomly selected hour were interviewed. For SWs on the street, interviews were conducted with SWs at a given location at a randomly selected hour of the day. Information on the frequency of visits was intended to weight the data; however, this was unnecessary, since weights did not significantly alter the sample distribution.

2.2 Data Collection

The implementation of the surveys for both MSM and SWs was done by ILPES (Instituto Latinoamericano de Prevencion y Educacion en Salud), a research agency in San Jose, Costa Rica. A coordinator and five interviewers based in each metropolitan area pre-tested the questionnaire, checked for inconsistencies, and collected the data. Questions included demographic characteristics, types of partners, sexual behavior, use of condoms with clients, self-efficacy, awareness and knowledge of HIV/AIDS, and channels of information on HIV/AIDS. Additional questions involved knowledge and use of lubricants, drug and alcohol use, awareness and participation in HIV/AIDS prevention activities, and knowledge and attitudes about HIV/AIDS treatment (cocktail). The final pre-coded questionnaire consisted of approximately 200 questions. Each interview lasted roughly 26 minutes and data collection lasted about three weeks. The degree of cooperation among SWs and MSM was generally high (above 90%).

2.3 Data Analysis

Most of the tables in this report present adjusted percentages for 1997 and 2000. Other tables show percentages for only 2000 reflecting indicators on program activities introduced after 1997.

Multiple classification analysis (MCA) was used to derive percents adjusting for sample differences in age, level of education, and residence. The statistical significance (P-trends) of changes in percentages between the two time periods was determined with the F-test.

CHAPTER 3

MEN WHO HAVE SEX WITH MEN

3.1 Sample Characteristics

Seventy-one percent of MSM were aged 29 or younger and 29% were aged 30 or older (Table 1). Ninety-three per cent of MSM had at least some secondary education. The majority of MSM were single (94%) and had no children (85%), 60% had one or more dependants. Sixty-six percent considered themselves to be homosexual, while 26% defined themselves as bisexual and 8% considered themselves to be heterosexual. Thirty-eight percent earned less than \$200 per month, while 29% earned between \$200 and \$400 per month, and 33% earned more than \$400 per month.

3.2 Risky sexual behavior

As Table 2 shows, between 1997 and 2000, there were significant declines in risky sexual behavior among MSM and a slight increase in risky sexual behavior with women. The percentage of MSM who had been penetrated by a man without a condom in the past 12 months decreased from 33% to 28% ($p < .001$). While the percentage who had had unprotected anal sex with a woman increased by 2% (7% to 9%, $p < .05$).

At the same time, there was a significant increase in bisexual activity among MSM (Table 3). In 1997, 27% claimed to have had sex with both men and women, compared to 33% in 2000 ($p < .001$).

**Table 1: Demographic characteristics of MSM
in Central America**

	%
Age Group	
< 20	16
20 – 24	33
25 – 29	22
30 – 34	16
35 or more	13
Total (N)	1490
Level of Education	
Some primary/completed primary	7
Some secondary or more	93
Total (N)	1483
Religion	
None	18
Catholic	62
Other Christians	20
Total (N)	1450
Marital Status	
Not married	94
Married/living with partner	6
Total (N)	1490
Number of Children	
None	85
One or more	15
Total (N)	1495
Number of Dependents	
None	60
One or more	40
Total (N)	1483
Estimated Income (per month in dollars)	
200 or less	38
201 – 400	29
401 or more	33
Total (N)	1500
Self Definition	
Heterosexual	8
Homosexual/Gay/Ambiente	66
Bisexual/Others	26
Total (N)	1494

Table 2: Trends in MSM's risky sexual activity (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Penetrated a man in the last 12 months without using a condom	%	31	32	.504
	N	1490	1487	
Penetrated by a man in the last 12 months without using a condom	%	33	28	.001***
	N	1483	1480	
Had vaginal sex last 12 months without using a condom	%	21	23	.091
	N	1491	1488	
Had anal sex with a woman in last 12 months without using a condom	%	7	9	.035*
	N	1491	1488	
Had oral sex last 12 months without using a condom	%	27	26	.525
	N	1487	1482	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

Table 3: Trends in MSM's type of sexual partners (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Currently have sex with men, women or both:				
Have sex with only men	%	73	67	.001***
	N	1491	1487	
Have sex with men and women	%	27	33	.001***
	N	1491	1487	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

MSM's increased risky sexual activity with women and the growing bisexual behavior is of concern. This suggests regionally that MSM may be prominent in the transmission of HIV in the general population.

3.3 Awareness and Knowledge of HIV/AIDS

3.3.1 Exposure to Information about HIV/AIDS

By 2000, MSM had received significantly more information on condoms through the mass media and interpersonal sources than they had in 1997 (Table 4). The percentage that learned about condoms on the television increased from 52% to 76% ($p < .001$), and the percentage who heard about them on the radio grew from 40% to 68% ($p < .001$). The percentage of MSM who received information about condoms through the newspaper increased from 46% to 70% ($p < .001$).

The number of MSM who received information from other sources also increased during the study period. In 1997, 76% of MSM received information about condoms from friends, compared to 81% in 2000 ($p < .001$). The number who received information from partners or lovers increased from 67% to 71% ($p < .05$), from family members 23% to 38% ($p < .001$), and the church 7% to 13% ($p < .001$). The percentage of MSM who received information from an MOH workshop increased from 41% to 46% ($p < .05$), and from the government phone line on AIDS from 9% to 16% ($p < .001$). NGO phone lines and workshops both declined as sources of information on AIDS (22% to 19%; $p < .05$; and 40% to 36%, $p < .05$ respectively). Twenty percent of the MSM had received information about condom on the Internet in 2000.

**Table 4: Trends in exposure of MSM to information on HIV/AIDS
(adjusted percentages)***

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Have you received information about condoms from:				
TV	%	52	76	.000***
	N	1491	1483	
Radio	%	40	68	.000***
	N	1491	1484	
Newspapers	%	46	70	.000***
	N	1491	1484	
Pamphlets/posters	%	85	85	.634
	N	1491	1480	
Friends	%	76	81	.001***
	N	1491	1482	
Partner/lover	%	67	71	.037*
	N	1491	1482	
Family	%	23	38	.000***
	N	1491	1481	
Organizations for gays	%	56	57	.770
	N	1491	1481	
Church or church minister	%	7	13	.000***
	N	1490	1484	
Workshop activity with MOH	%	41	46	.043*
	N	1491	1488	
Govt. phone line on AIDS	%	9	16	.000***
	N	1344	1483	
NGO phone line on AIDS	%	22	19	.048*
	N	1456	1485	
NGO workshop on AIDS	%	40	36	.021*
	N	1490	1485	
The internet	%	-	20	-
	N		1490	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

3.3.2 MSM's Knowledge of the Advantages of Condoms

Knowledge of the advantages of using condoms was measured by series of questions asking respondents why they used condoms with partners. Findings in Table 5 show increases in the percentage of MSM who said AIDS and STDs are reasons for using condoms with stable male partners (80% to 89%, $p < .01$, from 77% to 85%, $p < .05$, respectively). There were no significant changes in reasons why MSM used condoms with sporadic male partners.

**Table 5: Trends in MSM's reasons for using condoms
(adjusted percentages)***

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Use condoms with stable male partners:				
For hygiene	%	28	34	.106
	N	578	509	
To prevent STDs	%	77	85	.038*
	N	578	509	
To prevent AIDS	%	80	89	.012**
	N	578	509	
For other reasons	%	14	10	.066
	N	568	506	
Use condoms with occasional male partners:				
For hygiene	%	29	28	.749
	N	939	898	
To prevent STDs	%	80	79	.475
	N	938	897	
To prevent AIDS	%	85	84	.359
	N	938	899	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

3.4 Exposure to Specific Social Marketing Programs

PASMO’s condom social marketing advertisements may have contributed to MSM’s awareness and knowledge about condoms and HIV/AIDS prevention. Table 6 shows that the majority of MSM in Central America (75%) have been exposed to VIVE condom advertisements. Fifty-eight percent had seen or heard the “tu eliges” campaign, 47% recalled seeing the “bus” advertisement, 41% recalled the “la seguridad” campaign, and 38% had been exposed to the “birthday” campaign.

Table 6: Percentage of MSM exposed to specific social marketing advertisements

Indicators		2000
Seen or heard advertisement on VIVE condoms	%	75
	N	1492
Have seen on TV advertisement about:		
The bus	%	47
	N	1493
The birthday	%	38
	N	1492
“Tu Eliges”	%	58
	N	1491
“La seguridad tiene muchos nombres”	%	41
	N	1492
Other commercials	%	7
	N	1492

3.5 Participation in PASMO Activities

As Table 7 shows, only 21% of the MSM in Central America had directly participated in a PASMO activity. Sixteen percent of MSM had participated in condom demonstration exercises, and 14% had attended an AIDS prevention activity or a “Noches VIVE.” Sixteen percent of the men interviewed had seen VIVE condom displays, while only 4% had seen the VIVE mobile.

Table 7: Percentage of MSM who participated in PASMO activities

Indicators	2000	
Participation in PASMO Activities		
Any PASMO activities	%	21
	N	1493
Prevention of AIDS	%	14
	N	1493
To promote correct condom use	%	16
	N	1493
Seen any VIVE condom displays	%	16
	N	1493
Las “Noches VIVE”	%	14
	N	1493
Seen VIVE Movil	%	4
	N	1493
Other activities	%	3
	N	1492

3.6 Condom Availability and Accessibility

3.6.1 Usual and preferred source of condoms

Findings in Table 8 show an increase from 3% to 8% ($p < .001$) in the number of MSM whose usual source of condoms is a store or supermarket. There was a decrease in the percentage who buy condoms from NGOs (16% to 3%; $p < .001$), also a decline in the percentage who buy from other sources (15% to 3%; $p < .001$). Fewer MSM prefer to buy condoms from NGOs (10% to 5%, $p < .001$). The percentage that preferred to obtain condoms in non-traditional outlets increased between 1997 and 2000 (10% to 15%, $p < .001$). There was no significant change in the percentage of MSM whose main source of condoms was pharmacy, which was also their preferred source.

3.6.2 Opinion about the price of condoms

Findings in Table 8 suggest that condoms are now increasingly affordable to low-income MSM. The percentage who believed that condoms are expensive decreased significantly from 22% in 1997 to 11% in 2000 ($p < .001$). MSM who believed that the price of condoms are regular also increased from 28% to 32% ($p < .01$) and those who believed that condoms are cheap increased from 50% to 57% ($p < .001$) in the same period.

Table 8: Trends in MSM's reported availability and affordability of condoms (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Usual Source of Condoms				
Source of condoms is store/supermarket	%	3	8	.000***
	N	1491	1481	
Source of condoms is private pharmacy	%	62	61	.357
	N	1491	1481	
Source of condoms is NGO	%	16	3	.000***
	N	1491	1481	
Other sources of condoms	%	15	3	.000***
	N	1491	1481	
Preferred Source of Condoms				
Preferred source of condoms is store/supermarket	%	8	7	.606
	N	1491	1481	
Preferred source of condoms is private pharmacy	%	64	65	.634
	N	1491	1481	
Preferred source of condoms is NGO	%	10	5	.000***
	N	1491	1481	
Preferred other sources of condoms	%	10	15	.000***
	N	1491	1481	
Opinions about the price of condoms				
Condoms are expensive	%	22	11	.000***
	N	1388	1393	
Condom prices are regular	%	28	32	.007**
	N	1388	1393	
Condoms are cheap	%	50	57	.000***
	N	1388	1393	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

3.7 Self-efficacy

Table 9 indicates a positive trend in MSM's perceived ability to use condoms with partners. The percentage of MSM who would use a condom with a lover increased from 57% to 61% ($p < .05$). Those who would use condom even if their partner would withdraw before ejaculating increased from 80% to 86% ($p < .001$). The percentage that would use condom while masturbating also increased from 26% to 36% ($p < .001$). Although indicators of self-efficacy improved during the period, there still remains a gap between condom use with lovers and with known partners. Fewer MSM would use condoms with their lover than they would with a known partner.

Table 9: Trends in MSM's intended condom use with various partners (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
% who would use condoms if:				
Use drug or alcohol	%	83	85	.444
	N	1432	1438	
Partner is known	%	70	71	.306
	N	1462	1448	
Use condom with lover	%	57	61	.045*
	N	1459	1444	
Partner will not ejaculation inside	%	80	86	.000***
	N	1439	1447	
I will not ejaculate inside	%	83	85	.197
	N	1435	1450	
If practice masturbation	%	26	36	.000***
	N	1444	1429	

*Percentages are adjusted for sample differences in age, level of education residence country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

3.8 Demonstration of Skills in Condom Use

Respondents in this study were asked if they would like to participate in demonstrating their condom use skills with an anatomical model. Table 10 presents results of only those who participated in the demonstration. Four skill components were examined: 1) opening a condom wrapper with fingers at the corner, 2) removing air by holding the condom at the tip with fingers, 3) rolling the condom completely to the base of the dildo, and 4) removing the condom from the dildo while holding the ring.

Table 10: Trends in MSM's skills in condom use (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
MSM demonstrated how to use a condom				
Tear condom wrapper with fingers at the corner	%	75	77	.142
	N	1364	1231	
Hold the end of the condom with fingers	%	67	69	.224
	N	1364	1230	
Unroll the condom correctly to cover the entire dildo	%	89	92	.008***
	N	1362	1233	
Remove the condom from the dildo holding the ring	%	84	75	.000***
	N	1364	1227	
Correct demonstration of at least two skills of condom use	%	90	92	.265
	N	1364	1234	
Correct demonstration of at least three skills of condom use	%	76	75	.755
	N	1364	1234	
Correct demonstration of condom use (four basic skills)	%	51	48	.147
	N	1364	1234	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001; the Ns represent MSM who participated in condom demonstration.

The findings in Table 10 indicate little improvement in MSM's correct condom use skills during the study periods. Although the percentage that correctly unrolled the condom over the dildo increased from 89% to 92% ($p < .001$), the percentage that demonstrated correct condom removal decreased from 84% to 75% ($p < .001$) and no significant improvement in the number of MSM who demonstrated all four components of correct use.

3.9 Participation in PASMO Skills Demonstration and Condom Use

Findings in Table 11 suggest an association between the demonstration of correct condom use skills and participation in PASMO activities. Eighty-five percent of MSM who participated in a PASMO activity correctly opened the condom wrapper, compared to 76% of non-participants ($p < .001$). Eighty percent of those who participated in a PASMO activity held the tip of the condom before applying on dildo, compared to 67% of non-participants ($p < .001$). MSM who participated in PASMO activities were more likely than non-participants to correctly demonstrate two components of condom use skills (96% vs. 91%, $p < .001$), three components (84% vs. 74%; $p < .001$), and all four components (56% vs. 47%; $p < .01$). Although MSM who participated in PASMO activities were more likely to demonstrate all four basic skills, the percentage that had participated was low. PASMO model on condom skills may be more effective than those of other organizations.

Table 11: Percentage of MSM who participated in a PASMO activity by demonstration of correct use of condoms (2000)

Indicators	Participated in any PASMO activity			
		No	Yes	P-value
MSM demonstrated how to use condom				
Tear condom wrapper with fingers at the corner	%	76	85	.001***
	N	948	290	
Hold the end of the condom with fingers	%	67	80	.000***
	N	947	290	
Unroll the condom correctly to cover the entire dildo	%	92	95	.192
	N	950	290	
Remove the condom from the dildo holding the ring	%	75	78	.299
	N	944	290	
Correct demonstration of at least two skills of condom use	%	91	96	.001***
	N	950	290	
Correct demonstration of at least three skills of condom use	%	74	84	.000***
	N	950	290	
Correct demonstration of condom use (four basic skills)	%	47	56	.005**
	N	950	290	

Note Chi Square statistics; * = $P < 0.05$, ** = $P < 0.01$ and *** = $p < 0.001$

3.10 Condom Use

Table 12 shows a decrease in the number of MSM who used condoms in their last sex act with a stable male partner or lover (53% to 49%, $p < .05$). The percentage of MSM who used condoms with all partners was relatively low in both 1997 and 2000. Part of the reason for this may be the overriding lack of risk perception evident from the increasing bisexual relationships.

Table 12: Trends in the percentage of MSM who used a condom in last sex act by Type of partner (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Used condoms in last sex act with:				
Stable male partner or lover	%	53	49	.031*
	N	1488	1482	
Sporadic male partner	%	61	62	.525
	N	1487	1479	
All male partners	%	36	33	.074
	N	1491	1488	
All partners (male and female)	%	24	25	.554
	N	1491	1488	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

3.11 Knowledge and Use of Lubricants

The findings in Table 13 show that the percentage of MSM who know about lubricants increased from 83% in 1997 to 86% in 2000 ($p < .05$). There was no significant change in the number who ever used or are currently using lubricants in the same period. This may be due to promotional problems and the high unit price of lubricants, which makes it less accessible to many MSM.

Table 13: Trends in MSM's knowledge and use of lubricants (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Knows what a lubricant is	%	83	86	.035*
	N	1491	1481	
Ever used a lubricant	%	65	67	.149
	N	1489	1478	
Currently using a lubricant	%	44	45	.635
	N	1488	1476	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

CHAPTER 4

SEX WORKERS

4.1 Characteristics of SWs

As Table 14 indicates, 52% of SWs were in their 20's and 35% were older. Most SWs had at least some primary school education (88%). While most SWs were single (75%), most had one or more children or dependants (91% and 95% respectively). Sixty percent of SWs charged \$9 or less per client, and 50% reported poverty-level incomes of \$200 or less per month. Fifty-seven percent defined themselves as SWs, while 25% referred to themselves as prostitutes and 18% did not give a common definition or had no definition.

4.2 Risky Sexual Activity

The findings in Table 15 show a decrease in the percentage of sex workers who engaged in risky sexual behavior in the 12 months prior to 1997 and 2000. In 1997, 58% reported having had unprotected vaginal sex in the past month compared to only 37% in 2000 ($p < .001$). But the number who had unprotected oral sex increased during the same time period (7% to 9%, $p < .01$). The number of SWs who had sex with only men did not change during the period (Table 16).

Table 14: Demographic characteristics of sex workers in Central America

	%
Age Group	
< 20	14
20 – 24	30
25 – 29	22
30 – 34	14
35 or more	21
Total (N)	1982
Level of Education	
No education	12
Some primary/completed primary	51
Some secondary or more	37
Total (N)	1983
Religion	
None	19
Catholic	59
Other Christians	22
Total (N)	2000
Marital Status	
Not married	75
Married/living with partner	26
Total (N)	2000
Number of Children	
None	10
Two or less	50
Three or more	41
Total (N)	1989
Number of Dependents	
None	5
Two or less	31
Three or more	64
Total (N)	1990
Estimated Income (per month in dollars)	
200 or less	50
201 – 400	34
401 or more	17
Total (N)	1991
Average payment by client	
Less than 9 dollars	60
10 dollars or more	40
Total (N)	1991
Self Definition of Work	
Others/Don't know	18
Women in prostitution/prostitute	25
Sex worker	57
Total (N)	1874

Table 15: Trends in risky sexual activity of SWs (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Had vaginal sex last month without a condom	%	58	37	.000***
	N	1473	1964	
Had anal sex last month without a condom	%	8	8	.566
	N	1472	1955	
Had oral sex last month without a condom	%	7	9	.010**
	N	1471	1967	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

Table 16: Trends in the proportion of SWs who currently have sex with men (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Currently have sex with men, women or both:				
Have sex with only men	%	94	95	.133
	N	1472	1967	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

4.3 Awareness and Knowledge of SWs about HIV/AIDS

4.3.1 Exposure to HIV/AIDS Information

Table 17 shows that, in general, between 1997 and 2000 SWs were more exposed to information about condoms. The percentage of SWs who saw condom ads on television increased from 55% to 70% (p < .001) during the period. Those who heard about condoms on the radio increased from 47% to 66% (p < .001) and those who read about them in newspapers increased from 46% to 61% (p < .001).

Interpersonal communication was also an important source of information for sex workers. The percentage of SWs who heard about condoms from partners increased from 44% to 50% ($p < .001$), from family members 29% to 32% ($p < .05$), and from a church from 7% to 10% ($p < .001$). The number of SWs that heard about condoms from the MOH and NGO workshops on AIDS decreased from 69% to 61% ($p < .001$) and from 29% to 23% ($p < .001$), respectively. Also, SWs who heard about condoms from organizations for sex workers declined from 63% to 58% ($p < .01$).

4.3.2 SWs' Knowledge of the Advantages of Condoms

Table 18 shows no significant change in the percentage of SWs who know reasons for using condoms. Those who provided other reasons for using condoms increased from 6% in 1997 to 9% in 2000 ($p < .001$). The percentage of SWs who used condoms to prevent STDs and AIDS was fairly high but there was no significant change between the two study periods.

**Table 17: Trends in SWs' exposure to information on HIV/AIDS
(adjusted percentages)***

Indicators		Baseline	Follow-up	P(trend)
Have you received information about condoms from:		1997	2000	
TV	%	55	70	.000***
	N	1473	1968	
Radio	%	47	66	.000***
	N	1471	1966	
Newspapers	%	46	61	.000***
	N	1471	1961	
Pamphlets/posters	%	74	72	.105
	N	1472	1965	
Friends	%	70	69	.573
	N	1470	1961	
Partner/lover	%	44	50	.000***
	N	1471	1964	
Family	%	29	32	.029*
	N	1467	1951	
Organizations for sex workers	%	63	58	.004**
	N	1472	1960	
Church/ministry	%	7	10	.001***
	N	1468	1955	
Workshop activity with MOH	%	69	61	.000***
	N	1471	1964	
Govt. phone line on AIDS	%	8	10	.072
	N	1177	1963	
NGO phone line on AIDS	%	11	12	.633
	N	1473	1968	
NGO workshop on AIDS	%	29	23	.000***
	N	1472	1963	
Internet	%	-	4	-
	N		1969	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

**Table 18: Trends in SWs' reasons for using condoms
(adjusted percentages)***

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Use condoms with clients:				
To prevent pregnancy	%	32	30	.191
	N	1445	1942	
To prevent STDs	%	89	91	.130
	N	1446	1942	
To prevent AIDS	%	74	75	.553
	N	1447	1942	
For hygiene	%	13	14	.666
	N	1447	1938	
For other reasons	%	6	9	.002***
	N	1445	1932	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

4.4 Exposure to Social Marketing Programs

As Table 19 indicates, the majority of sex workers (55%) have been exposed to VIVE advertising. Forty-one percent reported seeing the “bus” advertisement, 43% had seen the “tú eliges” spot, and 35% recalled hearing or seeing the “birthday” advertisement. One-third (32%) had seen or heard the “la seguridad tiene muchos nombres” campaign.

4.5 Participation in PASMO programs

Only 9% of SWs had participated in a PASMO activity. Eight percent had participated in a condom demonstration exercise, 7% had attended an AIDS prevention activity, 7% recalled seeing VIVE condom displays, 2% had attended a “Noches Vive” activity, and only 3% had seen the “VIVE Movil.” These lower percentages may be explained by the fact that up until 2000, most PASMO sponsored activities with the target group were through partner NGOs in the region.

Table 19: Percentage of SWs exposed to specific social marketing advertisements

Indicators		2000
Seen or heard advertisement on VIVE condom	%	55
	N	1986
Have seen on TV advertisement about: The bus	%	41
	N	1986
The birthday	%	35
	N	1985
“Tu Eliges”	%	43
	N	1986
“La seguridad tiene muchos nombres”	%	32
	N	1986
Other commercials	%	6
	N	1986

Table 20: Percentage of SWs who participated in PASMO activities

Indicators		2000
Participation in PASMO Activities		
Any PASMO activities	%	9
	N	1987
Prevention of AIDS	%	7
	N	1986
To promote correct condom use	%	8
	N	1986
Seen any VIVE condom displays	%	7
	N	1987
Las “Noches VIVE”	%	2
	N	1968
Seen VIVE Movil	%	3
	N	1968
Other activities	%	1
	N	1967

4.6 Condom Availability and Accessibility

4.6.1 SWs' Usual and Preferred Sources of Condoms

Table 21 shows that between 1997 and 2000, the percentage of SWs who buy condoms from brothels increased from 21% to 32% ($p < .001$) and from 13% to 18% ($p < .001$) for health establishments). At the same time, the percentage who prefer to buy condoms from NGOs and bars decreased from 27% to 9% ($p < .001$) and 6% to 1% ($p < .001$), respectively. The proportion of SWs who do not to buy condoms increased from 8% to 11%.

The proportion of SWs who preferred to buy condoms from pharmacies increased significantly from 54% to 64% ($p < .001$) and for health establishments from 4% to 6% ($p < .05$). Fewer women preferred to buy condoms from bars (15% to 9%, $p < .001$), and from NGOs (11% to 5%, $p < .001$).

4.6.2 SWs' Opinions about the Price of Condoms

Although the majority of SWs believe that condoms are cheap, more now believe that condoms are affordable. In 1997, 18% considered them to be expensive, compared to 22% in 2000 ($p < .01$). At the same time, the proportion who believed that the price is average increased from 12% to 17% ($p < .001$) and the number who believed the price to be inexpensive decreased from 70% to 61% ($p < .001$).

Table 21: Trends in SWs' reported availability and affordability of condoms (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Usual Source of Condoms				
Private pharmacy	%	25	26	.441
	N	1444	1876	
Health establishment	%	13	18	.000***
	N	1444	1876	
Bar or Disco	%	6	1	.000***
	N	1444	1876	
NGO	%	27	9	.000***
	N	1444	1876	
Business or brothel	%	21	32	.000***
	N	1444	1876	
Do not buy condoms	%	8	11	.005**
	N	1444	1876	
Preferred source of condoms				
Private pharmacy	%	54	64	.000***
	N	1444	1953	
Health establishment	%	4	6	.021*
	N	1444	1953	
Bar or disco	%	15	9	.000***
	N	1444	1953	
NGOs	%	11	5	.000***
	N	1444	1953	
Business or brothel	%	11	13	.063
	N	1444	1953	
Opinions about the Price of Condoms				
Condom price is expensive	%	18	22	.004**
	N	1409	1889	
Condom price is regular	%	12	17	.001***
	N	1409	1889	
Condom is cheap	%	70	61	.000***
	N	1409	1889	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = p < .05, ** = p < .01 and *** = p < 0.001

4.7 Self-efficacy

The indicators presented in Table 22 a mixed result of change in self-efficacy between 1997 and 2000. SWs' intentions to use condoms with regular clients increased from 78% to 82% ($p < .01$). The proportion that would use condoms with healthy looking clients decreased from 84% to 79% ($p < .001$) during the same time. There were no significant changes in other indicators of self-efficacy although the proportion of SWs who would use condoms while under the influence of drugs or alcohol, when clients pay more, and when clients insist were large majorities in both years (at least 78%). The reason for a lack of improvement in the indicators of self-efficacy may be due to the fact that many SWs are street workers and therefore, difficult to target with specific activities.

Table 22: Trends in SWs' intended condom use with various partners (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
% who would use condoms if:				
Used drugs or alcohol	%	94	93	.522
	N	1447	1927	
Partner is regular client	%	78	82	.004**
	N	1457	1931	
Partner is husband or lover	%	39	41	.258
	N	1412	1924	
Client pays more	%	84	86	.171
	N	1409	1926	
Client insists	%	87	89	.146
	N	1451	1932	
Client looks healthy	%	84	79	.000***
	N	1449	1879	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

4.8 SWs' Skills in Condom Usage

Overall, we had mixed findings on the changes in condoms use skills of SWs between 1997 and 2000. As Table 23 shows, those who correctly opened the condom wrapper from the corner decreased from 75% to 71% ($p < .01$) while those who unrolled the condom correctly to cover the entire dildo increased from 65% to 70% ($p < .01$). The percentage of SWs who demonstrated at least three basic condom skills increased from 61% to 65% ($p < .05$). Only few, (about 30%) demonstrated the four aspects of the correct use of condoms and there was no significant increase during the study period. These findings may be explained by the fact that condom demonstration activities are not priorities for partner NGOs. Also, in some countries, Street SWs are common and difficult to reach with specific activity.

Table 23: Trends in SWs' skills demonstration of Correct condom use (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
SWs who demonstrated how to use condoms				
Tear condom wrapper with finger at the corner	%	75	71	.005**
	N	1383	1680	
Hold the end of the condom with her finger	%	48	51	.078
	N	1383	1679	
Unroll the condom correctly to cover the entire dildo	%	84	83	.221
	N	1382	1678	
Remove the condom from the dildo holding the ring	%	65	70	.002**
	N	1382	1682	
Correct demonstration of at least two skills of condom use	%	85	83	.103
	N	1383	1685	
Correct demonstration of at least three skills of condom use	%	61	65	.032*
	N	1383	1685	
Correct demonstration of condom use (four basic skills)	%	30	31	.565
	N	1383	1685	

* Percentages are adjusted for sample differences in age, level of education and residence; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$; the Ns represent SWs who participated in condom demonstration.

4.9 Condom Demonstrations and Use

In general, more SWs who participated in PASMO activities had condom use skills than non-participants. Seventy-one percent of participants were able to hold the tip of the condom, compared to 49% of non-participants ($p < .001$). The percentage of participants who unrolled condoms to the base of the dildo was 92%, compared to 82% of non-participants. Also, 83% of participants removed the condom from the dildo holding the ring, as compared to 69% non-participants ($p < .001$). Ninety-four percent of participants had two basic skills compared to 83% of non-participants, for three basic skills (79% vs. 64%, $p < .001$), and for four basic skills (46% vs. 29%, $p < .001$). These findings suggest that more PASMO initiated demonstration exercises may improve condom use skills among SWs.

Table 24: Percentage of SWs who participated in a PASMO activity by demonstration of correct use of condoms (2000)

Indicators	Participated in any PASMO activity			
	No	Yes	P-value	
SWs who demonstrated how to use condoms				
Tear condom wrapper with fingers at the corner	% N	70 1536	74 167	.296
Hold the end of the condom with fingers	% N	49 1535	71 166	.000***
Unroll the condom correctly to cover the entire dildo	% N	82 1534	92 167	.002**
Remove the condom from the dildo holding the ring	% N	69 1538	83 166	.000***
Correct demonstration of at least two skills of condom use	% N	83 1538	94 168	.000***
Correct demonstration of at least three skills of condom use	% N	64 1538	79 168	.000***
Correct demonstration of condom use (four basic skills)	% N	29 1538	46 168	.000***

Note Chi Square statistics; * = $P < 0.05$, ** = $P < 0.01$ and *** = $p < 0.001$

4.10 Condom Use

Table 25 shows that the percentage of SWs who used condoms in their last sex act increased for all types of partners except spouses and those in free unions. The percentage who used condoms during the last sex act with regular clients increased from 83% to 93% ($p < .001$) and those who used them with sporadic clients increased from 91% to 96% ($p < .001$). The number who used condoms with all clients in the last sex act increased from 71% to 77% ($p < .001$). The small proportion of SWs who used condoms with their spouse or free union partner in 1997 became even smaller in 2000 (27% vs. 21%, $p < .01$). These findings suggest that SWs are not using condoms with their spouse and are at risk of contracting HIV as well as transmitting it to the general population.

Table 25: Trends in SWs' condom use in the last sex act by partner types (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Use condoms in last sex act with:				
Regular client	%	83	93	.000***
	N	1338	1774	
Sporadic client	%	91	96	.000***
	N	1435	1847	
Spouse or free union	%	27	21	.008**
	N	755	967	
All clients in last sex act	%	71	77	.000***
	N	1472	1959	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

4.11 Knowledge and Use of Lubricants

There was a decline in both awareness and usage of lubricants during the study period. Table 26, shows that the percentage of SWs who were aware of lubricants decreased from 59% in 1997 to 52% ($p < .001$) in 2000. Those who ever used condoms decreased from 39% to 35% ($p < .05$) and there was a decrease for those currently using, from 22% to 17% ($p < .001$). A lack of promotional activities and the price of lubricants may explain the low level of use.

Table 26: Trends in indicators of lubricants (adjusted percentages)*

Indicators		Baseline 1997	Follow-up 2000	P(trend)
Knows what a lubricant is	%	59	52	.000***
	N	1473	1968	
Ever used a lubricant	%	39	35	.018*
	N	1472	1964	
Currently using a lubricant	%	22	17	.000***
	N	1470	1957	

*Percentages are adjusted for sample differences in age, level of education residence and country; p(trend) * = $p < .05$, ** = $p < .01$ and *** = $p < 0.001$

CHAPTER 5

CONCLUSIONS AND PROGRAM IMPLICATIONS

5.1 Men who have Sex with Men

- In general, risky homosexual activity among MSM decreased, while risky bisexual activities increased between 1997 and 2000. Findings also suggest that the number of MSM who had sex with women increased at the same time. MSM who have sex with both men and women may contribute to the transmission of HIV/AIDS to the general population.
- Although the number of MSM who had information on condoms from multiple channels increased during the study period, this did not translate to increased knowledge of the benefits of using condoms with sporadic male partner. This casts doubts on the quality of information provided through these channels. Programming that provides focussed and quality information on all benefits of condoms using all channels of communication may be more effective in increasing MSM's knowledge on all benefits of using condoms with any partner.
- MSM had high levels of knowledge on some benefits of using condoms (STDs and AIDS prevention) but few use condoms for hygiene. The lack of knowledge about all benefits of condoms suggests a gap in information, which may be contributing to lower self-efficacy in using condoms with lovers. Program interventions that increase knowledge on the benefits of using condoms may increase self-efficacy and consistent condoms use among MSM.

- While the proportion of MSM who use condoms correctly slightly increased during the study period, more of those who participated in PASMO activities demonstrated correct condom use than non-participants. Programming that increases participation in PASMO activities may increase correct condom use skills among MSM in the region.
- Findings suggest that improvement in some indicators of self-efficacy may not translate to increased consistent condom use with all partners. Program interventions that identify and improve the weak indicators of self-efficacy may increase consistent condom use among MSM.
- Findings suggest a perceived increased affordability of condoms during the study period. An increased number of MSM think that condoms are cheap and prefer to buy condoms at their actual source. Programs that increase the visibility and affordability of condoms may increase condom use by MSM.

5.2 Sex Workers

- Although findings indicate a decline in risky sexual activity among SWs, the number who had unprotected vaginal sex was still high (over one-third in the last month before the 2000 survey). Programming that intensifies awareness of the risk of unprotected sex may reduce risky sexual activity among SWs.
- The percentage of SWs exposed to multiple channels of information about condoms increased during the study period but this did not reflect in all aspects of knowledge on the

benefits of condoms. There may be some deficiency in the kind of information that SWs were exposed to since findings show that the majority of SWs know only two benefits of condoms (i.e. prevents STDs and HIV/AIDS). Program interventions that provide quality information on all benefits of condoms may increase SWs' self-efficacy and consistent condom use with all partners.

- Although correct condom use skills was generally low among SWs during the study period, more of those who participated in a PASMO activity demonstrated correct condom use than non-participants. These findings suggest that programs that involve skills demonstration exercises may increase skills among SWs.
- In general, self-efficacy did not improve during the study period except for SWs who would use condoms with regular clients. Self-efficacy declined among those who would use condoms with healthy looking clients. There was no significant increase in any other indicators of self-efficacy. The level of knowledge of condom benefits may be influencing self-efficacy. Programming that improve self-efficacy through the provision of information on all aspects of condom benefits and other related activities may increase consistent condom use among SWs.
- There was increased consistent condom use with all clients during the period of study but few use with their spouse or free union partner. The inability of SWs to use condoms with all clients may be explained by the level of knowledge on condom benefits and the inconsistent findings on self-efficacy. Programming that improves the level of knowledge about the

benefits of using condoms, that teach condom use skills, and aim to improve self-efficacy may increase SWs' consistent condom use with all partners.

- Overall, findings did not suggest increased accessibility of condoms during the study period. The majority of SWs think that condoms are expensive or just regular. SWs prefer to buy condoms from pharmacies but an increased number of them buy from health establishments and brothels. Program interventions that want to improve accessibility and affordability of condoms among SWs may need to increase visibility of condoms in pharmacies and advertise their affordable price.

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