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**EVALUATION OF A WORKPLACE-BASED PEER EDUCATION  
PROGRAM DESIGNED TO PREVENT AIDS IN UGANDA**

Final report - April 1992

AIDSCOM

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in collaboration with the Federation of Uganda Employers (FUE)  
and the Experiment in International Living (EIL)

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## **TABLE OF CONTENTS**

**Acknowledgements**

**Executive Summary**

**Page**

<b>1. Introduction</b>	<b>1</b>
<b>2. Indicators of Program Activity</b>	<b>6</b>
<b>3. Results from 5 Sites with Before-After Data</b>	<b>9</b>
<b>4. Assessment of Program Effects on Reported Behavior</b>	<b>12</b>
<b>5. Effects of Various Interventions</b>	<b>15</b>
<b>6. Interviews with peer educators</b>	<b>22</b>
<b>7. Discussion and Next Steps</b>	<b>26</b>

## **APPENDICES**

<b>Tables of Survey Results by Site (A through H)</b>	<b>28</b>
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## **EXECUTIVE SUMMARY**

Between March 1990 and October 1991 three surveys of knowledge, attitudes and practices related to AIDS were conducted in eight sites as part of the evaluation of a program implemented by FUE and EIL to train peer educators to deliver AIDS education in workplaces and community organizations in Uganda. By October 1991, all sites had implemented the program, and data were available for at least two points in time for each site. A total of 1599 persons from the target population and 61 peer educators were interviewed.

Indicators of program activity show that the program has been implemented successfully, with significant increases in the number who report talking with a peer educator, attending a talk about AIDS in the workplace, and seeing the dramatic film "It's Not Easy". At the time of the final survey in October 1991, 62% of those interviewed had been exposed to one or more of these interventions.

There were significant increases in specific knowledge and attitudes, including the proportion who know the incubation period can be longer than five years and the proportion who believe others are using condoms. In an aggregate analysis that controlled for time and differences between the sites, the intensity of program implementation in a site was positively associated with using a condom in the last two months. Persons in sites where more than 50% reported exposure to the program were more than four times more likely to have used condoms in the last two months than those in sites where less than 50% had been exposed. In addition, they were eight times more likely to have used condoms consistently with at least one partner.

In an examination of the separate roles of the three different interventions that were part of the program, each additional intervention to which an individual was exposed tended to be associated with higher probability of condom use. Exposure to the film, although it was the least often reported, was most likely to predict condom use. Attending talks and seeing the film were also associated with intervening knowledge that predicted individual condom use: 1) knowledge of AIDS transmission routes and 2) knowledge of the incubation period. Contact with peer educators was associated with increases in the belief that others use condoms, another important predictor of condom use.

The results provide evidence for the success of the program. The combination of contact with peer educators, attendance at talks about AIDS, and viewing the dramatic film is associated with improvements in knowledge and changes in perceived norms. Overall level of program activity in a site was associated with safer sexual behavior.

The level of consistent condom use reported in the last survey is still low in relation to pre-existing infection rates. These findings indicate a need for continuation and intensification of program activities before a substantial impact on HIV transmission rates can be achieved.

## **1. INTRODUCTION**

**AIDSCOM is a public health communication support program funded by the Agency for International Development and administered by the Academy for Educational Development to assist in the creation and implementation of HIV prevention programs in developing countries. Beginning in October 1988, AIDSCOM staff and consultants provided technical assistance to the Federation of Uganda Employers (FUE) and the Experiment in International Living (EIL) for the development of AIDS in the workplace training programs in Uganda. This evaluation was conducted by the Center for International, Health and Development Communication, Annenberg School for Communication, which was a subcontractor on the AIDSCOM project. Planning for the evaluation began in November 1989.**

**Program implementation consisted of training trainers and peer educators, with the expectation that trainers would train peer educators. Peer educators were expected to communicate AIDS prevention messages to co-workers in either formal or informal settings, act as role models for behavior change, and distribute and demonstrate the correct use of condoms. The training sessions used a variety of methods, including lecture/discussion focusing on facts about AIDS transmission and prevention, and interactive exercises such as role plays to address issues of negotiating safer sex with partners. In addition, a dramatic film, "It's Not Easy" was developed to be used in conjunction with the training program.**

**As of March 1992, FUE had implemented the program in 47 of its member companies, and trained a total of 242 trainers and 3866 peer educators. EIL's program over the same time period reached 53 non-governmental organizations (NGOs), community groups and companies that were not FUE members. Eighty-eight trainers and 2092 peer educators were trained. In addition, trainers from both organizations conducted a number of shorter talks in additional companies and community settings. Although it was originally intended for use in training, the film came to be shown widely, and was broadcast on television a number of times.**

**An evaluation was conducted in order to determine whether the program was successfully implemented and the extent to which it resulted in changes in knowledge, attitudes and reported behavior. The evaluation was based on three surveys of knowledge, attitudes and practices conducted between March 1990 and October 1991.**

**In March 1990, interviews were carried out with individuals in five organizations (4 FUE workplaces and one EIL organization) targeted for AIDS training programs. Based on findings from the baseline survey, the original research design was modified. It was decided that a larger number of sites would provide more information, and reduce the problem of confounding due to idiosyncratic differences between the sites. In November 1990 the survey was repeated in all sites except one of the FUE workplaces which had experienced a strike and reorganization during the interim. Sample sizes were reduced so as not to contaminate the smaller sites by interviewing a large percentage of the population and because it was found that cooperation with**

the survey team was better in the first two days of interviewing. Three new sites were added to the research project, including an FUE company where training was about to begin and two similar organizations of civil servants, one of which had received training from EIL. In October 1991, the survey was repeated in all eight organizations, each of which had implemented the program. In all, a total of 1599 persons were interviewed.

Individuals from the organizations were interviewed anonymously by interviewers not associated with the program or the organization. The questionnaire was translated into Luganda and Swahili, and was administered in these languages as well as English depending on the choice of the respondent. In a few cases, interviews were conducted in another language (e.g. Runyankole, Luo) if both the respondent and interviewer were more comfortable speaking it.

The sites were chosen from a pool of organizations that had just begun or were about to begin participation in the peer education program. A number of factors were taken into consideration in selecting sites, including: 1) size of the organization (at least 200), 2) matching to a workplace with a similar population but a different stage of program development, and 3) willingness of management to release employees to be interviewed. One site was chosen to increase the percentage of women that were included in the research.

Site A is a large company engaged in agricultural production in a rural area. Over 5,000 employees and their families live on the site, which is a self-contained community. In March 1990 interviews were conducted in the factory area and in three residential work camps (site A1). At the time of the second survey, it was determined that a limited amount of training had occurred in this area. The employees who had been trained in June could not reach areas outside of the factory area because of limited transportation within the large plantation. Thus, in November 1990 interviews were conducted in three residential camps in a new region of the plantation, remote from where interviews had occurred in March. These data established a second baseline for site A. At that time FUE began direct training of peer educators who lived in the camps to attempt solve the problem of transportation. Two of the camps are geographically adjacent and are referred to as site A2. The third camp is referred to as site A3.

Site B, a manufacturing facility in Jinja with a total employee population of approximately 500, has been involved in the FUE AIDS program since July 1989, when the first training of trainers occurred. Beginning in January 1990, these trainers conducted a series of talks for the employees. The initial data collection occurred in March 1990, after the program had begun. A second training of peer educators was conducted prior to the final survey in October 1991.

Site C is a manufacturing facility in Kampala with a total employee population of approximately 500. Site C had begun the FUE AIDS program in January 1990, immediately prior to the first survey. Prior to beginning the FUE AIDS program, the company had an active family planning program (initiated by Enterprise, another USAID project). Several employees had already been trained as family planning motivators and were distributing condoms. Two training of trainers and three training of peer educators were conducted as part of FUE's AIDS program.

Site D is a transportation company based in Kampala with an employee population of approximately 600. It began the FUE program after the first survey in March 1990. In November 1990, the company was undergoing a strike and reorganization, and permission to conduct the survey could not be obtained. Many of those who were originally trained were no longer employed, and program implementation had not been realized. In April 1991, management agreed to continue the program, additional training occurred, and the company was included in the final survey in October 1991.

Site E is a community-based organization in Kampala that conducts a variety of training programs for young women. The first training of trainers was conducted by EIL in March 1990, after the first survey. Three training sessions for peer educators were conducted by EIL before the final survey in October 1991.

Sites F and G are civil service organizations in the Kampala area with employee populations of 200 and 500 respectively. Both sites were added to the evaluation at the time of the second survey. At that time, Site G had been involved in the EIL AIDS for four months, while site F was scheduled to begin the program after the November 1990. Direct training of peer educators by EIL occurred in both sites prior to the final survey.

Site H, a large manufacturing facility in Jinja with an employee population of approximately 2,000, was also added to the evaluation in November 1990. At that time, no training had yet occurred. Subsequently, FUE conducted two training sessions for peer educators prior to the October 1991 survey.

Table 1 shows the sample sizes for each site at each point in time and dates when training occurred.

**Table 1. Summary of sites surveyed and program activity**

Site	Program activity	March 1990 Survey (n)	Program activity	November 1990 Survey (n)	Program activity	October 1991 Survey (n)
A1		84	TOT 6/90		TOP 7/91	
A2				79	TOP 11/90 TOP 1/91 TOP 4/91 TOP 10/91	42
A3				56	TOP 11/90 TOP 2/91	41
B	TOT 2/89 TOP 2/90	101		35	TOP 9/91	31
C	TOT 1/90	147	TOT 3/90 TOP 8/90	55	TOP 11/90 TOP 8/91	59
D		189	TOT 3/90		TOP 4/91	98
E		102	TOT 3/90 TOT 7/90	55	TOP 3/91 TOP 7/91	47
F				53	TOP 9/91	55
G			TOT 6/90	55	TOP 10/90 TOP 5/91 TOP 6/91	50
H				91	TOP 1/91 TOP 9/91	77
TOTAL		623		476		500

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TOT - Initial training of a small number (2-4) of trainers in the organization.

TOP - Trainers, FUE or EIL conduct a larger (20+) training of peer educators.

Because all sites were not measured at all points in time and the organizations were at different stages of program development at the time of the surveys, the sample cannot be regarded as a simple before-midpoint-after design. Thus different analyses were conducted depending on the question to be answered.

The major questions addressed are:

1) Did the program happen?

After the original training, did trainers and peer educators reach the employee population? This question is addressed in Section 2 by comparing the proportion of persons who attended talks, talked to peer educators, or saw the film at three stages of program development; none, minimal and significant.

2) Did the program work?

In other words, was the program associated with changes in reported knowledge, attitudes and reported behavior? In Section 3, selected indicators from five sites which had data collected before and after training are reviewed. In Section 4, a regression analysis that uses the whole sample and controls for trends over time and differences among the sites is presented. This analysis tests the hypothesis that there is an association between the level of program activity and safer sexual behavior independent of other factors.

3) How did the program work?

Given an increase in reported condom use, which aspects of the program were associated with the increase? Did the program work by changing certain types of knowledge, perceived norms, or both? In Section 5, the contributions of each of the interventions (peer educators, talks, and the film) to changes in knowledge and norms are examined.

## **2. INDICATORS OF PROGRAM ACTIVITY**

### **DID THE PROGRAM HAPPEN?**

The first question to be addressed is whether the program was implemented. Given that the original training was conducted, was the target population reached by the planned interventions? Because the program relies primarily on person-to-person interactions, this is a crucial question to address before looking for program effects. If one reviews the measures of program exposure over time for each site (Appendices A-H), there are clear increases in program activity. However, the absolute levels vary by site and some sites did not have data collected immediately prior to program implementation. Because of this, reviewing the results from each of the eight sites is complex.

To provide a simpler test of the question "Did the program happen?", the samples were combined and classified into three categories of stage of program based on reports from FUE and EIL about when training occurred. The three categories were none, minimal and substantial. "None" was used to describe sites where no training had occurred at the time of the interview survey. "Minimal" was used to describe sites where some training had occurred, but 1) the number of peer educators trained was small relative to the size of the organization, or 2) no training sessions had occurred in the last six months, or 3) trained peer educators were unavailable to implement the program due to relocation or dismissal. "Substantial" was used to describe sites where there had been extensive training of peer educators within the last six months. The terms none, minimal and substantial are used instead of before, early and mature because in some sites program activity was judged to be highest immediately after initial training. Table 2 shows how the sites were classified at each point in time. If there was no data collection at a point in time, the space is left blank.

**Table 2. Classification of stage of program by time of survey**

Site	March 90	November 90	October 91
A1	None		
A2		None	Substantial
A3		None	Minimal
B	Substantial	Minimal	Substantial
C	Minimal	Minimal	Substantial
D	None		Minimal
E	None	Minimal	Substantial
F		None	Minimal
G		Minimal	Substantial
H		None	Minimal

Next, the level of exposure to the interventions reported by respondents in the survey was compared to the classification of the stage of the program. Table 3 shows significant increases in these measures of program activity, indicating that program related activities did indeed follow initial training.

**Table 3. Percent reporting exposure to intervention by stage of program**

	None	Minimal	Substantial
Says company has AIDS education program	11.6	47.1	64.2
Attended talk about AIDS at work	9.2	27.5	53.5
Reports a peer talked to them about AIDS	8.7	18.8	41.3
Saw film	0.0	10.0	31.2
Talk, peer or film	15.4	41.4	74.3
Sample size	654	560	385

These data show a clear association between the level of program activity expected on the basis of training activities and the level experienced by the target population. To compare these results with an analysis by time, during the last survey, when 5 of the 8 sites were judged to be in the substantial stage, 39% reported attending a talk, 31% talked to a peer, 34% had seen the film, and 62% had been exposed to at least one intervention. Twenty-six percent had attended two or more talks. So far, more persons have been reached by formal talks than by individual encounters with peer educators.

### 3. RESULTS FROM FIVE SITES WITH BEFORE-AFTER DATA

#### WHAT KIND OF CHANGES ARE ASSOCIATED WITH THE PROGRAM OVER TIME?

In five of the eight sites, at least one survey was done prior to initial training activity. Table 4 shows selected indicators of knowledge and attitudes before and after training for these five sites. Sites A, D, E, F and H are included. There are significant increases in knowledge of transmission, incubation period and in condom awareness. In addition, perception that others were using condoms increased significantly. Support for discrimination against PWAs decreased significantly, as did the fear of catching AIDS through casual contact.

Table 4. Knowledge and attitudes in 5 sites with before-after data

	Before	After
<i>Knowledge of transmission (unprompted)</i>		
Sex	79.1	92.0
Blood transfusion	36.5	53.3
Needles	51.5	70.8
Mother to infant	8.0	17.4
<i>Other knowledge</i>		
Know incubation period can be more than 5 years	8.7	22.7
Recognize condom	63.4	89.6
Mention condoms as a way to prevent AIDS	6.6	28.2
<i>Attitudes</i>		
Believe others use condoms	35.5	70.1
Afraid of catching AIDS by working next to someone	39.9	23.1
Believe workers with AIDS should be dismissed	44.3	27.5
Sample size	654	415

"Before" includes surveys from March 1990 and November 1990 and "after" includes surveys from November 1990 and October 1991, depending on when training was begun in the site.

Table 5 shows reported sexual behavior for the five sites. The number of partners reported showed no changes, but there were significant increases in the proportion who used condoms.

Table 5. Reported behavior from 5 sites with before-after data

	Before	After
<i>Reported behavior in the last 2 months</i>		
Percent with more than one partner	22.8	21.7
Mean number of partners	1.1	1.1
Sample size	654	415
<i>Condom use among those with at least one partner</i>		
Ever	14.6	24.6
Last two months	3.5	14.2
Always with at least one partner	1.7	6.8
Always	0.6	2.9
Sample size	539	309

"Before" includes surveys from March 1990 and November 1990 and "after" includes surveys from November 1990 and October 1991, depending on when training was begun in the site.

The rural plantation (site A) showed exceptionally large increases in awareness of condoms (29-84% recognition) and last two month use (2% to 12%). This suggests that the program can have a significant impact in rural areas, where exposure to other sources of information and pre-existing knowledge levels are lower.

The results from these five sites provide an illustration of changes in knowledge and reported behavior that occurred over the period of time of the program. However, there were a number of other AIDS prevention activities occurring in Uganda over this time period. Thus, the extent to which inferences about program effects can be made by examining changes before and after training is limited. The "after" data were on the average later in time than the "before" data, and if there were existing upward trends in some of these indicators, the effects of the program would be overestimated. During this period the president of Uganda had made some statements promoting condom use, and a condom marketing campaign was begun by SOMARC, another USAID project operating in Uganda. Newspapers, radio and television frequently mentioned AIDS. In the subsequent sections of this report, additional analyses are carried out in order to

**demonstrate that the program led to the improvements and knowledge and behavior independent of other influences operating over time.**

#### 4. ASSESSMENT OF PROGRAM EFFECTS ON REPORTED BEHAVIOR

##### DID THE PROGRAM WORK?

In the last section, evidence for an increase in condom use over time using data from five sites was presented. However, those data do not provide evidence that the program resulted in the changes, only that there was an increase over the period of study. Another way to determine if the program was associated with the increases is to look at the levels of condom use by each stage of program development based on the amount of training that had taken place (as defined in Section 2).

Table 6 shows the median, mean, and range of last two month condom use percentages for the three stages. In this table, each site at each stage is treated as a unit. For instance, in the "none" stage, seven sites are represented. To calculate the mean, the percentages using condoms at each site are added and divided by seven, the number of sites. This serves to eliminate variation that results from differences in sample size between the sites and gives a better overall picture of the level of condom use at each stage. Condom use is clearly higher in the "minimal" and "substantial" stages than it is the "none" stage.

Table 6. Levels of last two month condom use by stage of program

	None	Minimal	Substantial
Median	2.9	10.3	11.2
Mean	3.9	14.4	16.5
Range	0.0 - 9.6	2.9 - 43.3	3.9 - 50.0
Number of sites	7	7	6

Among those with at least one partner in the last two months

Although viewing the data this way shows higher levels of condom use in sites that had the program in operation, it still does not account for other possible influences over time. Sites in the "minimal" and "substantial" stages were on the average later in time than those in the "none" stage.

In order to test the hypothesis that the program was related to an increase in condom use independent of the impact of other prevention efforts or secular trends, the following analysis was carried out using data from all of the sites and time periods. First, each site at each time was classified according to its level of program realization, as pictured in Table 7. This

variable, called "realized program" is based on the percentage of respondents who reported exposure to any of the interventions (attending a talk, having a peer talk to them, or seeing the dramatic film). This serves to classify sites in terms of the actual reach of the program, instead of one of three categories that were based on initial training input.

Table 7. Level of program realized by site and time

SITE	TIME 1	TIME 2	TIME 3
A1	26.2		
A2		10.1	73.8
A3		7.1	24.4
B	85.2	71.4	74.2
C	63.3	54.6	79.7
D	9.0		52.0
E	35.3	32.7	72.3
F		37.7	83.6
G		38.5	76.0
H		18.7	64.9
Sample size	623	476	500

Next, sites were classified into two groups; 1) less than 50% program realization, and 2) more than 50% program realization. Then a logistic regression equation was calculated with last two month condom use as the dependent variable. The equation held age, sex, educational level and partner number constant. Variables representing each time of measurement and each site were entered. Finally, the program realization variable was entered. This procedure serves to control for individual sociodemographic characteristics, site differences and time, allowing examination of the effects of program level once those effects are eliminated.

The results of this analysis confirmed an association between program level and condom use (Table 8). One analysis focused on persons with at least one partner in the last two months. Individuals in sites where the program had reached more than half of the population were more than four times as likely (odds ratio 4.4, 95% confidence interval 1.6-11.9) to have reported any condom use in the last two months. The result was similar when the analysis focused only on those who had more than one partner or a non-steady partner (odds ratio 4.7, 95% confidence interval 1.1-19.8).

When the outcome measure is consistent condom use with at least one partner in the previous two months, those in heavily exposed sites were eight times as likely to have used condoms consistently (odds ratio 8.5, 95% confidence interval 1.4-51.6).

Table 8. Odds ratios for condom use in relationship to level of program (50% exposure versus less than 50% exposure)

Dependent variable	Odds ratio	95% Confidence interval
Last two month condom use	4.4	1.6 - 11.9
Always use a condom with at least one partner	8.5	1.4 - 51.6
Control variables:		
Age		
Sex		
Number of partners		
Educational level		
Time		
Site differences		n = 1339

There is clear evidence for an association between the program and safer sexual behavior. Levels of program activity as measured by aggregated reports of exposure are associated with increased condom use after controlling for time, differences between sites and individual sociodemographic variables.

The absolute levels of condom use that have been achieved are relatively low in relation to the high pre-existing prevalence of HIV infection in this population, which might suggest a limited impact on transmission rates. Even in sites with high (> 50%) program levels, only 11% report condom use in the last two months. However, it is encouraging that persons who report higher risk behavior (multiple or non-steady partners) report higher condom use (23% in sites with high program levels). Reports of consistent condom use are still rare, but their association with program activities provides encouraging results.

## **5. EFFECTS OF VARIOUS INTERVENTIONS**

### **HOW DID THE PROGRAM WORK?**

The previous section focused on program effects using aggregated measures of program activity in a site and testing for their association with individual reports of condom use. In this section, the association between individual reports of exposure to the program and outcome variables is examined. Given that the program did work, the question becomes "How did it work?". Did the program work by increasing certain types of knowledge, or by changing perceived norms, or both? In this section, two questions are addressed. First, what is the relationship between exposure to the interventions and condom use? Second, what is the relationship between the interventions and intervening knowledge/attitude variables that are associated with condom use? Demonstration of positive relationships between the elements of the program and intervening variables that predict condom use provides additional evidence of program effectiveness and can suggest the mechanism by which change may have occurred.

There were 3 discrete interventions (attendance at formal talks, individual discussions with peer educators, and viewing the film) that were operating as part of the program. Some individuals were exposed to one of these, some to two, and some to all three. This allows the question of the impact of each to be examined. An examination of the effect of being exposed to multiple interventions is also possible. In this section the association between the different components of the program is examined with respect to the following variables: 1) last two month condom use, 2) knowledge about transmission, 3) knowledge of the incubation period and 4) the perception that others use condoms.

### **CONDOM USE AND EXPOSURE TO INTERVENTIONS**

What is the impact of being exposed to more than one intervention? To answer this question, it is necessary to have a substantial number of persons who report exposure to more than one of the program components. Using data from all three surveys, we find that 15% reported at least two exposures, and 4% said they had experienced all three.

Table 9 shows that the level of condom use increased according to the number of interventions an individual reported. Individuals who were exposed to two interventions were more likely to use condoms in the last two months than those who were exposed only to one, and those exposed to all three showed higher use than those exposed to two. Of those who talked to a peer educator, attended a talk about AIDS, and saw the film, 21% had used a condom in the last two months, and 12% had used condoms consistently with at least one partner.

**Table 9. Condom use by number of interventions to which an individual reported exposure**

	Sample size	Last 2 months	Always with at least one partner
None	980	6.1	2.4
One	375	11.7	4.9
Two	188	13.5	4.9
Three	56	21.4	11.9

These results suggest that each intervention has an additional effect even when a person has been exposed to other interventions.

In addition to an additive effect of the interventions, does one of the interventions or a certain combination show a larger impact than the others? To address this question, the data need to show some overlap between the interventions. In other words, some should have seen the film and gone to a talk, and some should have gone to a talk and talked to a peer. Table 10 shows the percentage of survey respondents who reported exposure to interventions in various combinations by stage of the program. When all surveys are combined, there is a fairly even distribution between all of the possible combinations.

Table 10. Percent exposed to various combinations of interventions by stage of program

	None	Minimal	Substantial	Total
Talked to peer educator	8.8	18.8	41.3	20.1
Attended talk	9.2	27.5	53.5	26.3
Saw film	0.3	10.0	31.2	11.1
Peer only	6.0	9.5	9.9	8.1
Talk only	6.4	14.6	17.1	11.9
Film only	0.3	3.6	8.6	3.4
Peer and talk	2.8	7.3	16.1	7.6
Peer and film	0.0	0.9	2.3	0.9
Talk and film	0.0	4.5	7.3	3.3
All 3	0.0	1.1	13.0	3.5
Sample size	654	560	385	1599

When examined separately, talks, peer educators and seeing the film all show significant associations to condom use. Because many people who attended talks also talked to peer educators or saw the film, analyzing the interventions separately does not give the best estimate of their independent effects. To examine their independent effects, last two month condom use was treated as the dependent variable in a logistic regression. The sample consisted of 1339 persons who had at least one sexual partner in the last two months. After controlling for sex, age, educational level and number of partners, the intervention variables were entered. The odds ratios and confidence intervals are shown in Table 11.

**Table 11. Odds ratios for interventions in relation to last 2 month condom use**

	Odds ratio	95% Confidence interval
Talk to peer educator	1.4	0.9 - 2.3
Attend talk	1.5	0.9 - 2.3
Saw film	2.2	1.3 - 3.8

This indicates that those who have seen the film have the greatest probability of condom use. After controlling for seeing the film, talks and peer educators retain positive associations with condom use although they no longer achieve statistical significance at the less than .05 level.

#### **KNOWLEDGE AND BELIEFS THAT ARE PREDICTIVE OF CONDOM USE**

Is there an association between the program interventions and intervening factors which are associated with condom use? In addition to testing for direct associations between reported behavior and exposure to the interventions, it is useful to examine the data for associations between the intervention and intervening variables that predict condom use. The ability to demonstrate positive associations of this type provides additional evidence of program effectiveness and can suggest a mechanism by which change might have occurred.

In an analysis of the baseline survey data done in February 1991, a number of predictors of condom use were identified. These included the AIDS knowledge score (calculated by adding one point for each correct route of transmission mentioned and subtracting one point for each incorrect route mentioned), the knowledge that the incubation period could be more than 5 years, and the belief that others use condoms. This analysis was repeated using the entire sample (n=1339) of persons with at least one partner in the last two months. These variables continue to be significantly associated with condom use after controlling for age, sex, educational level and number of partners (Table 11).

Table 11. Odds ratios for predictors of last 2 month condom use

	Odds ratio	95% Confidence Interval
Age less than 30	1.9	1.2 - 3.0
Educational level	1.1	0.6 - 2.0
Female sex	1.6	1.0 - 2.7
Number of partners	2.7	2.1 - 3.3
AIDS knowledge score	1.5	1.2 - 1.8
Know incubation period is greater than 5 years	2.2	1.4 - 3.5
Believe others use condoms	3.4	2.0 - 5.6

Each of these variables is also significantly correlated with individual contact with peer educators, attending talks, and viewing the film. A potential confounder is that they are also associated with educational level, and people of higher educational level were more likely to be exposed to the interventions. Therefore it is necessary to control for educational level. Another possibility is that the increases over time are due to influences outside of the workplace program. For instance, it is possible that people learned about AIDS transmission and the incubation period from the mass media, which broadcast a number of messages about AIDS during the time periods measured.

In order to control for these possible confounders, each of the predictor variables was analyzed in a multiple regression controlling for educational level and exposure to newspapers, radio and television, and time. Controlling for time can rule out the effect of other events for which there are no measures in the data set. Because program implementation is closely correlated with time, controlling for time can result in an underestimate of the effects of various interventions. However, it provides an extremely conservative measure that is less susceptible to challenge.

The knowledge score varied from -1 to 4. Knowledge of the incubation period ranged from 0 (don't know or less than a week) to 5 (over 10 years). These were treated as interval level variables and analyzed using multiple linear regression. The belief that others use condoms (a yes/no question) was analyzed with logistic regression. Table 12 shows which potential sources of information were significantly associated with the variables. The variable is classified as significant if the p value is less than .05 when all others have been entered.

Table 12. Significant predictors of knowledge and belief

	Knowledge score	Incubation period	Believe others use condoms
	standardized coefficient (linear)	standardized coefficient (linear)	odds ratio (logistic)
Educational level	.276*	.208*	1.3*
Read newspapers	.126*	.045	1.1
Listen to radio	.081*	.047	1.2
Watch TV	.070*	.063*	1.3*
Talk to peer educator	.027	.048	2.1*
Attend talk	.096*	.082*	1.2
Saw the film	.057*	.083*	1.3
Time 2	.155*	-.007	1.3*
Time 3	.165*	.064*	2.8*
n = 1599			

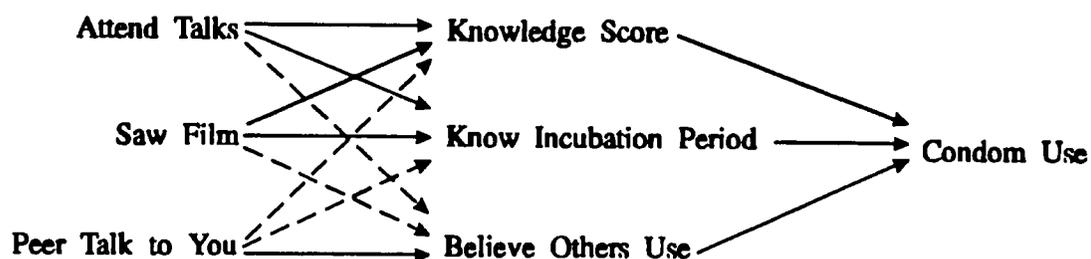
\* significant at  $p < .05$

These results show that educational level is an important determinant of all of the knowledge and belief variables, even after controlling for other potential sources of information. The knowledge score is significantly associated with all of the mass media, with attending talks, and with seeing the film. It also shows a change over time not attributable to these interventions.

Knowledge of the incubation period is associated only with television watching, attending talks and seeing the film. There is also a small association with time. The belief that others use condoms is associated with talking to a peer educator, television watching, and time. It is interesting that basic knowledge is related to exposure to one-way communication activities (attending a talk or seeing the film) but believing that other use condoms is most strongly associated with contact with peers.

Figure 1 illustrates the way in which the various interventions contribute to the intervening knowledge and attitude variables. The dotted arrows illustrate relationships that are not significant after controlling for time and other potential sources of information, while the solid arrows show positive relationships that are still significant after controlling for time and other sources of information.

**Figure 1**  
**Relationship between Intervention, Intervening Knowledge and Attitudes and Condom Use**



### **SUMMARY**

Condom use is directly associated with individual reports of exposure to peer educators, talks and the film, and increases in relation to the number of interventions one is exposed to. When all three are taken into account, the film shows the strongest association.

In addition to the direct association between seeing the film and condom use, the data suggest that each of the workplace interventions has had an impact on knowledge or beliefs that predict condom use. Talks and viewing the film are important determinants of knowledge, while peer educators are important with respect to norms about condom use. It appears that these interventions have resulted in changes independently of other potential sources of information, although other sources have had an impact as well.

## 6. INTERVIEWS WITH PEER EDUCATORS

In October and November 1991, 56 peer educators from the eight evaluation sites and five from another FUE company were interviewed to provide data to supplement the KAP survey. The interviews were designed to provide information on the level of activity reported by peer educators, their knowledge and attitudes, and constraints they faced in their role as peer educators. The peer educators were identified by a convenience methodology in which the interviewers attempted to contact persons whose names were obtained from the trainers or from training participant lists. Because random sampling was not used, the results can not be considered to be representative of all peer educators.

### BASIC CHARACTERISTICS OF PEER EDUCATORS

The majority (87%) of peer educators who were interviewed had been trained within the last 6 months, and all but 8% had received at least three days of training. Fifty-nine percent were male. Ninety-seven percent had completed a primary school education, and 21% had completed secondary school. Thus the educational level of peer educators is higher than the target population in the organizations, of whom only 75% have completed primary school.

The age range was from 18 to 46, with a median age of 31. Twenty-five percent were in supervisory positions, and 21% were in positions that are considered "key" positions for imparting information with respect to AIDS (nurse, welfare officer, trainer or instructor).

A subset of the peer educators (34) were asked questions that were the same as the general survey so that some comparison could be made. Peer educators with some secondary school education were compared to respondents from the general survey in October 1991 who had some secondary school. Peer educators demonstrated a high level of knowledge about AIDS, and knew more than their peers in some areas (Table 15). Peer educators were more knowledgeable about transmission, the incubation period, and means of prevention. They were not significantly different from their workmates with respect to fear of casual transmission, support for discrimination in the workplace, or belief that they were susceptible to getting AIDS.

Although they were more likely to mention condoms as a way to prevent AIDS, peer educators were not significantly more likely to have ever used a condom than the workplace population. However, among the four peer educators with no secondary education, three or 75% said they had used condoms, which is significantly higher than the 14% rate among the general workers who did not attend secondary school (Fischer's exact test,  $p = .012$ ).

Table 14. Comparison between peer educators and others

	Peer educators	Comparison group	Significance by chi square
Transmission by blood transfusion	80%	62%	< .05
Transmission from mother to infant	63%	19%	< .001
Know incubation period can be more than 5 years	67%	31%	< .001
Mention abstinence as a means of prevention	43%	12%	< .001
Mention condoms as a means of prevention	73%	30%	< .001
Afraid of catching AIDS by working next to someone	17%	17%	NS
Workers with AIDS should be fired	3%	16%	NS
Believes can get AIDS	70%	70%	NS
Ever used a condom	35%	27%	NS
Sample size	30	353	

### REPORTED LEVELS OF ACTIVITY

Each peer educator was asked to describe the last two times they had talked to someone about AIDS, and to give details on the time, place, number of people, whether or not they talked to coworkers or persons outside the organization, and the content of the conversation. Sixty-six percent gave their last encounter as occurring within the last week, with a median of four days. Just 31% also described the next to last encounter as also occurring within the last week. The median time since the next to last encounter was 14 days. The results for reported activities in the last month are shown in Table 15.

Table 15. Activities reported by peer educators in the month preceding the interview

	Median	Range
Number of coworkers talked to	10	0 - 180
Number of others talked to	10	0 - 200
Number of condom demonstrations	3	0 - 20
Number of condoms distributed	25	0 - 1000
n=56		

These reports suggest peer educators were equally as likely to talk to coworkers as they were to others such as friends and relatives. In addition, 50% of the last encounters were described as consisting of talking to groups of two or more persons, indicating that one on one encounters account for about half of reported activity. In 41% of the cases the peer educator began the discussion about AIDS. Joining ongoing discussions or having an individual begin talking to them about AIDS initiated 47% of the last encounters.

The content of the conversation described varied from simple discussions about someone who had died of AIDS leading to giving facts and correcting misconceptions to more in-depth discussions in which a peer educator gave advice to the individual about changing sexual behavior. Condoms were mentioned in 56% of encounters, while reducing the number of partners was mentioned in 35%. More than half involved giving facts and correcting misconceptions.

#### **CONSTRAINTS FACED BY PEER EDUCATORS**

The questionnaire also focused on any difficulties peer educators faced in carrying out their role.

A majority of peer educators (65%) said that they didn't have enough condoms. More than half (55%) said that some people were resistant. Fewer mentioned constraints of time (10%), or that they were not comfortable in their role (7%). Thirty-one percent said they were not experiencing any difficulties.

**SUMMARY**

Individuals trained as peer educators show high levels of knowledge. Many report being active in imparting information to their peers on an informal basis. Two major constraints on their activities emerged from the interviews; a shortage of condoms and difficulty in dealing with resistant individuals.

## 7. DISCUSSION AND NEXT STEPS

The results provide evidence for the success of the program. Although there were some difficulties in implementation that led to changes in program strategies, in the end a good deal was accomplished. In six of the evaluation sites, program activities reached more than 70% of the workers. Those who were exposed exhibited higher knowledge levels and were more likely to believe others used condoms, both of which were related to safer behavior. The combination of contact with peer educators, attendance at talks about AIDS, and viewing the dramatic film is associated with improvements in knowledge, changes in perceived norms, and reduced support for discrimination against PWAs. Persons in sites with program reach levels of more than 50% were 4 times more likely to report condom use.

Although there has been a significant increase, the overall level of condom use reported in the last survey is still low in relation to pre-existing infection rates. These findings indicate a need for continuation and intensification of program activities before a substantial impact on HIV transmission rates can be achieved.

Results from interviews with peer educators suggest a need for building skills in the area of dealing with resistant individuals. Continued training and supervision of peer educators is needed to increase the level of activity. Screening of potential peer educators prior to training may help to identify individuals likely to be successful. The supply of condoms to peer educators needs to be increased. This is especially important for programs outside Kampala and in rural settings.

The results provide justification for continuation of the workplace program and for attempts to use the peer education model in other programs. It should be noted that the population under study was composed predominantly of urban men of high educational level who were exposed to the program in a workplace setting. Some of the peer educators were in specialized roles (such as nurses or trainers) which gave them opportunities to serve as sources of information. Implementing a peer education program outside of structured organizations raises new issues. The extent to which a person to person intervention can be implemented and maintained outside of a structured environment is not known. While this study provides evidence of success in the workplace, it does not assure success in more informal community settings. Data from the rural plantation suggest the program can show the greatest impact among populations where educational levels and exposure to other sources of information are low.

The data suggest that the film shows the strongest associations with some of the positive changes. However, caution should be exercised in assuming that widespread promotion of the film will produce similar results. Most of the persons who reported seeing the film were fluent in English and of high educational level, and many had also attended talks or had contact with peer educators.

## **RECOMMENDATIONS FOR FUTURE RESEARCH AND EVALUATION**

**Rec. 1 - Resources for impact evaluation should be first directed to studying the operation of the program in community based settings.**

**Rec. 2 - Evaluation in the workplace should move toward studying maintenance of behavior changes, evaluating methods for increasing consistent condom use, monitoring levels of program implementation, and increasing the reach and intensity of the program.**

**Rec. 3 - The film needs to be systematically pretested in a population more representative of the population of Uganda (e.g. not fluent in English) to determine if changes in knowledge and attitudes result when the specifics of the film are translated and discussed by a moderator.**

**Rec. 4 - A cohort of peer educators should be followed for one year after training to determine their program histories: how many continue significant activities over time; what those activities are; and what constraints there are in realizing their intended roles. A cohort should be followed in a community and a workplace setting, with attention given to changes in attitudes and behavior change among the peer educators themselves. This type of research will help to further refine the training techniques and lead to increased intensity of contact with peer educators.**

**Rec. 5 - A cost analysis per person reached by the interventions should be planned, using data from the peer educator cohort study mentioned in recommendation 4.**

**Appendix A1. Individual characteristics and exposure to program**

<b>SITE A</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Sample size</b>	<b>84</b>	<b>135</b>	<b>83</b>
<b>Male %</b>	<b>71.4</b>	<b>83.0</b>	<b>83.1</b>
<b>Female %</b>	<b>28.6</b>	<b>17.0</b>	<b>16.9</b>
<b>Mean age</b>	<b>31.3</b>	<b>31.5</b>	<b>28.3</b>
<b>Married %</b>	<b>67.9</b>	<b>61.5</b>	<b>60.2</b>
<b>Steady partner %</b>	<b>11.9</b>	<b>17.8</b>	<b>18.1</b>
<b>No partner %</b>	<b>20.2</b>	<b>20.7</b>	<b>21.7</b>
<b>Education %</b>			
<b>Completed primary or higher</b>	<b>50.0</b>	<b>22.2</b>	<b>39.8</b>
<b>Read %</b>			
<b>English</b>	<b>63.9</b>	<b>32.6</b>	<b>45.8</b>
<b>Other language</b>	<b>73.8</b>	<b>55.6</b>	<b>62.7</b>
<b>Media exposure %</b>			
<b>Newspaper</b>	<b>58.3</b>	<b>28.1</b>	<b>33.7</b>
<b>Radio</b>	<b>74.7</b>	<b>70.4</b>	<b>68.7</b>
<b>TV</b>	<b>11.1</b>	<b>5.2</b>	<b>7.2</b>
<b>Says company has AIDS education program</b>	<b>15.5</b>	<b>5.9</b>	<b>42.2</b>
<b>Attended talk</b>	<b>19.0</b>	<b>4.4</b>	<b>34.9</b>
<b>Someone from work</b>	<b>6.0</b>	<b>0.7</b>	<b>18.1</b>
<b>From outside</b>	<b>13.1</b>	<b>1.5</b>	<b>16.9</b>
<b>Mention condoms/negotiation</b>	<b>0.0</b>	<b>0.0</b>	<b>15.7</b>
<b>Talked to peer educator</b>			
<b>Unprompted</b>	<b>4.8</b>	<b>0.7</b>	<b>10.8</b>
<b>Prompted</b>	<b>10.7</b>	<b>1.5</b>	<b>28.9</b>
<b>Mention condoms/negotiation</b>	<b>0.0</b>	<b>0.0</b>	<b>7.2</b>
<b>Saw "It's Not Easy"</b>	<b>0.0</b>	<b>0.0</b>	<b>12.0</b>

**Appendix A2. Knowledge and attitudes related to AIDS**

<b>SITE A</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>	<b>84.5</b>	<b>78.5</b>	<b>88.0</b>
aware only of slim	11.9	21.5	8.4
<b>How can someone get AIDS?</b>			
Sex	73.8	74.1	80.7
Blood transfusion	26.2	14.1	30.1
Needles	38.1	28.9	51.8
Mother to child	3.6	7.4	13.3
Insect bites	2.4	3.7	2.4
Used clothing	0.0	0.0	1.1
Witchcraft	1.2	0.0	1.2
Don't know	21.4	25.9	16.9
<b>Can AIDS be spread by:</b>			
Healthy looking people	79.0	60.0	80.7
A mother to child during pregnancy	84.3	68.9	86.7
Used clothing	50.6	52.2	24.1
<b>Can AIDS be cured by:</b>			
Doctors	3.7	1.5	1.2
Medicine	1.2	0.7	0.0
<b>How can someone prevent AIDS?</b>			
One partner	54.8	50.4	67.5
Zero grazing	10.7	5.9	7.2
Love carefully	8.3	9.6	7.2
Abstain from sex	3.6	10.4	7.2
Condoms	4.8	3.7	37.3
Clean needles	28.6	12.6	15.7
Care with blood	9.5	8.9	8.4
Test before marriage	1.2	1.5	4.8
Don't know	18.5	27.4	12.0
<b>Believes can prevent AIDS</b>	<b>71.8</b>	<b>68.7</b>	<b>78.0</b>
<b>What could you do to prevent AIDS?</b>			
<b>(asked of those who said they could prevent getting AIDS)</b>			
One partner	51.2	43.0	45.8
Zero grazing	2.4	1.5	3.6
Love carefully	1.2	5.2	6.0
Abstain from sex	9.5	19.3	15.7
Condoms	7.1	2.2	16.9
Clean needles	17.9	15.6	7.2
Care with blood	7.1	5.9	2.4

**Appendix A3. Perceptions of others behavior and condom knowledge**

<b>SITE A</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner	52.4	48.5	54.2
Use condoms	12.2	10.6	42.2
<b>Men at work</b>			
More than one partner	46.9	42.7	57.8
Use condoms	9.9	5.6	45.8
<b>Women at work</b>			
More than one partner	50.0	48.5	45.8
Use condoms	8.8	1.6	34.1
<b>Susceptibility</b>			
No	41.7	38.5	25.3
Don't know	13.1	22.2	18.1
Yes, not likely	25.0	23.0	39.8
Very likely	20.2	16.3	16.9
<b>Believe workers with AIDS should be dismissed</b>	<b>57.3</b>	<b>60.4</b>	<b>37.3</b>
<b>Afraid of catching AIDS by working next to someone</b>	<b>48.8</b>	<b>54.5</b>	<b>26.5</b>
<b>Mean knowledge score</b>	<b>1.3</b>	<b>1.1</b>	<b>1.7</b>
<b>Know incubation period &gt; 5years</b>	<b>6.0</b>	<b>5.2</b>	<b>16.9</b>
<b>Recognize condom</b>	<b>47.4</b>	<b>29.1</b>	<b>84.3</b>
<b>Unaware of condoms</b>	<b>27.4</b>	<b>40.7</b>	<b>7.2</b>
<b>Knows places to get condoms</b>	<b>25.0</b>	<b>20.0</b>	<b>38.6</b>
<b>Mentions worksite as a source of condoms</b>	<b>0.0</b>	<b>0.7</b>	<b>22.9</b>

**Appendix A4. Reported behavior and condom use**

<b>SITE A</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Mean number of partners	1.0	1.2	1.2
Percent with multiple partners	15.5	24.4	22.9
Mean risk score	1.0	1.2	1.1
Ever used a condom	9.6	5.3	16.3
Use in last two months			
% all sexually active	2.9	1.8	11.9
% multiple partners	0.0	3.0	21.1
Would never want to use (unprompted)	50.0	32.3	32.4
Difficult to ask partner	66.7	72.6	47.2
Unaware or unfamiliar	73.8	63.0	31.3

**Appendix B1. Individual characteristics and exposure to program**

<b>SITE B</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Sample size	101	35	31
Male %	89.1	80.0	93.5
Female %	10.9	20.0	6.5
Mean age	33.8	34.6	34.9
Married %	91.1	91.4	96.8
Steady partner %	4.0	8.6	3.2
No partner %	4.9	0.0	0.0
Education %			
Completed primary or higher	69.9	71.4	58.1
Read %			
English	77.0	71.4	83.9
Other language	86.9	88.6	87.1
Media exposure %			
Newspaper	81.8	71.4	80.6
Radio	91.9	94.3	93.5
TV	29.3	14.3	48.4
Says company has AIDS education program	69.3	74.3	61.3
Attended talk	64.4	68.6	58.1
Someone from work	17.8	8.6	12.9
From outside	47.5	60.0	45.2
Mention condoms/negotiation	12.9	5.7	12.9
Talked to peer educator			
Unprompted	21.8	8.6	0.0
Prompted	56.4	37.1	38.7
Mention condoms/negotiation	2.0	2.9	3.2
Saw "It's Not Easy"	2.0	2.9	51.6

**Appendix B2. Knowledge and attitudes related to AIDS**

<b>SITE B</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>	<b>97.0</b>	<b>88.6</b>	<b>100.0</b>
aware only of slim	3.0	11.4	0.0
<b>How can someone get AIDS?</b>			
Sex	86.1	91.4	93.5
Blood transfusion	41.6	31.4	58.1
Needles	70.3	71.4	77.4
Mother to child	9.9	28.6	19.4
Insect bites	3.0	8.6	0.0
Used clothing	1.0	2.9	0.0
Witchcraft	0.0	2.9	0.0
Don't know	7.9	8.6	0.0
<b>Can AIDS be spread by:</b>			
Healthy looking people	94.9	88.6	93.5
A mother to child during pregnancy	75.2	85.7	96.8
Used clothing	33.3	37.1	22.6
<b>Can AIDS be cured by:</b>			
Doctors	9.2	2.9	10.3
Medicine	12.9	5.7	6.5
<b>How can someone prevent AIDS?</b>			
One partner	74.3	88.6	77.4
Zero grazing	18.8	14.3	19.4
Love carefully	5.9	8.6	16.1
Abstain from sex	6.9	8.6	12.9
Condoms	7.9	8.6	16.1
Clean needles	40.6	48.6	29.0
Care with blood	18.8	28.6	22.6
Test before marriage	4.0	11.4	3.2
Don't know	5.0	2.9	0.0
<b>Believes can prevent AIDS</b>	<b>93.9</b>	<b>100.0</b>	<b>93.5</b>
<b>What could you do to prevent AIDS?</b>			
<b>(asked of those who said they could prevent getting AIDS)</b>			
One partner	76.2	77.1	74.2
Zero grazing	10.9	8.6	3.2
Love carefully	3.0	14.3	0.0
Abstain from sex	3.0	5.7	6.5
Condoms	9.9	8.6	22.6
Clean needles	35.6	37.1	12.9
Care with blood	10.9	25.7	12.9

**Appendix B3. Perceptions of others behavior and condom knowledge**

<b>SITE B</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner	41.4	37.2	51.6
Use condoms	42.0	34.3	54.8
<b>Men at work</b>			
More than one partner	34.0	37.1	45.2
Use condoms	34.0	37.1	54.8
<b>Women at work</b>			
More than one partner	26.0	34.3	41.9
Use condoms	19.8	40.0	38.7
<b>Susceptibility</b>			
No	44.6	37.1	19.4
Don't know	10.9	11.4	9.7
Yes, not likely	31.7	34.3	61.3
Very likely	12.9	17.1	9.7
<b>Believes workers with AIDS should be dismissed</b>	47.5	42.9	20.0
<b>Afraid of catching AIDS by working next to someone</b>	28.0	28.6	25.8
<b>Mean knowledge score</b>	1.9	2.1	2.5
<b>Know incubation period &gt; 5years</b>	12.9	8.6	25.8
<b>Recognize condom</b>	82.2	77.1	83.9
<b>Unaware of condoms</b>	11.9	8.6	3.2
<b>Knows places to get condoms</b>	68.3	62.9	87.1
<b>Mentions worksite as a source of condoms</b>	39.6	34.3	54.8

**Appendix B4. Reported behavior and condom use**

<b>SITE B</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Mean number of partners	1.3	1.3	1.3
Percent with multiple partners	25.7	22.9	22.6
Mean risk score	1.2	1.3	1.3
Ever used a condom	11.1	8.6	22.6
Use in last two months			
% all sexually active	8.6	2.9	13.3
% multiple partners	23.1	0.0	14.3
Would never want to use (unprompted)	54.2	65.6	31.0
Difficult to ask partner	40.9	77.4	55.2
Unaware or unfamiliar	29.7	51.4	29.0

**Appendix C1. Individual characteristics and exposure to program**

<b>SITE C</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Sample size	147	55	59
Male %	91.8	90.9	94.9
Female %	8.2	9.1	5.1
Mean age	33.8	35.2	32.2
Married %	86.4	89.1	88.1
Steady partner %	8.2	5.5	6.8
No partner %	5.4	5.5	5.1
Education %			
Completed primary or higher	92.5	80.0	94.9
Read %			
English	91.8	87.3	93.2
Other language	92.5	96.4	98.3
Media exposure %			
Newspaper	89.1	87.3	93.2
Radio	95.2	98.2	96.6
TV	40.8	58.2	42.4
Says company has AIDS education program	43.5	74.5	88.1
Attended talk	17.0	34.5	44.1
Someone from work	4.1	5.5	30.5
From outside	12.9	29.1	15.3
Mention condoms/negotiation	2.7	1.8	11.9
Talked to peer educator			
Unprompted	4.1	5.5	15.3
Prompted	23.1	25.5	42.4
Mention condoms/negotiation	3.4	1.8	6.8
Saw "It's Not Easy"	0.7	3.6	49.2

**Appendix C2. Knowledge and attitudes related to AIDS**

<b>SITE C</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>	<b>97.3</b>	<b>100.0</b>	<b>100.0</b>
aware only of slim	2.0	0.0	0.0
<b>How can someone get AIDS?</b>			
Sex	95.9	90.9	93.2
Blood transfusion	42.9	32.7	64.4
Needles	65.3	70.9	78.0
Mother to child	6.8	9.1	18.6
Insect bites	2.7	0.0	1.7
Used clothing	1.4	3.6	0.0
Witchcraft	0.0	0.0	0.0
Don't know	3.4	9.1	0.0
<b>Can AIDS be spread by:</b>			
Healthy looking people	87.7	85.5	89.8
A mother to child during pregnancy	84.8	89.1	94.9
Used clothing	26.7	21.8	1.7
<b>Can AIDS be cured by:</b>			
Doctors	4.1	0.0	3.4
Medicine	9.0	1.8	0.0
<b>How can someone prevent AIDS?</b>			
One partner	62.6	76.4	83.1
Zero grazing	28.6	23.6	15.3
Love carefully	12.9	3.6	3.4
Abstain from sex	6.1	12.7	15.3
Condoms	20.4	9.1	37.3
Clean needles	40.8	27.3	30.5
Care with blood	25.9	10.9	23.7
Test before marriage	4.1	9.1	11.9
Don't know	2.7	1.8	0.0
<b>Believes can prevent AIDS</b>	<b>84.9</b>	<b>81.8</b>	<b>93.1</b>
<b>What could you do to prevent AIDS?</b> (asked of those who said they could prevent getting AIDS)			
One partner	48.3	56.4	86.4
Zero grazing	21.7	12.7	3.4
Love carefully	6.1	1.0	0.0
Abstain from sex	4.1	10.9	5.1
Condoms	15.0	7.3	18.6
Clean needles	21.8	12.7	18.6
Care with blood	12.2	7.3	6.8

**Appendix C3. Perceptions of others behavior and condom knowledge**

<b>SITE C</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner	43.4	49.1	57.6
Use condoms	46.9	30.9	71.2
<b>Men at work</b>			
More than one partner	36.6	38.2	53.4
Use condoms	51.4	25.5	75.9
<b>Women at work</b>			
More than one partner	44.8	38.2	47.4
Use condoms	15.2	25.5	64.9
<b>Susceptibility</b>			
No	35.4	32.7	6.8
Don't know	15.0	3.6	11.9
Yes, not likely	40.1	25.5	61.0
Very likely	9.5	38.2	20.3
<b>Believes workers with AIDS should be dismissed</b>			
	15.2	9.1	1.7
<b>Afraid of catching AIDS by working next to someone</b>			
	26.2	30.9	16.9
<b>Mean knowledge score</b>			
	2.0	1.9	2.5
<b>Know incubation period &gt; 5 years</b>			
	24.5	25.5	37.3
<b>Recognize condom</b>			
	91.1	92.7	100.0
<b>Unaware of condoms</b>			
	2.7	3.6	0.0
<b>Knows places to get condoms</b>			
	83.7	81.8	100.0
<b>Mentions worksite as a source of condoms</b>			
	74.1	34.5	91.5

**Appendix C4. Reported behavior and condom use**

<b>SITE C</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Mean number of partners</b>	<b>1.3</b>	<b>1.5</b>	<b>1.3</b>
<b>Percent with multiple partners</b>	<b>32.7</b>	<b>36.4</b>	<b>27.1</b>
<b>Mean risk score</b>	<b>1.3</b>	<b>1.4</b>	<b>1.3</b>
<b>Ever used a condom</b>	<b>38.0</b>	<b>27.8</b>	<b>52.5</b>
<b>Use in last two months</b>			
<b>% all sexually active</b>	<b>16.9</b>	<b>7.7</b>	<b>12.7</b>
<b>% multiple partners</b>	<b>25.0</b>	<b>10.0</b>	<b>37.5</b>
<b>Would never want to use (unprompted)</b>	<b>47.7</b>	<b>39.1</b>	<b>40.7</b>
<b>Difficult to ask partner</b>	<b>56.1</b>	<b>50.0</b>	<b>35.6</b>
<b>Unaware or unfamiliar</b>	<b>12.9</b>	<b>12.7</b>	<b>5.1</b>

**Appendix D1. Individual characteristics and exposure to program**

<b>SITE D</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Sample size</b>	<b>189</b>	<b>N/A</b>	<b>98</b>
<b>Male %</b>	<b>89.4</b>		<b>83.7</b>
<b>Female %</b>	<b>10.6</b>		<b>5.1</b>
<b>Mean age</b>	<b>34.5</b>		<b>35.6</b>
<b>Married %</b>	<b>89.4</b>		<b>87.8</b>
<b>Steady partner %</b>	<b>5.8</b>		<b>4.1</b>
<b>No partner %</b>	<b>4.8</b>		<b>8.2</b>
<b>Education %</b>			
<b>Completed primary or higher</b>	<b>76.2</b>		<b>77.6</b>
<b>Read %</b>			
<b>English</b>	<b>72.5</b>		<b>73.2</b>
<b>Other language</b>	<b>93.7</b>		<b>96.9</b>
<b>Media exposure %</b>			
<b>Newspaper</b>	<b>87.2</b>		<b>94.9</b>
<b>Radio</b>	<b>97.9</b>		<b>92.9</b>
<b>TV</b>	<b>30.1</b>		<b>42.9</b>
<b>Says company has AIDS education program</b>	<b>5.8</b>		<b>57.1</b>
<b>Attended talk</b>	<b>3.2</b>		<b>34.7</b>
<b>Someone from work</b>	<b>2.6</b>		<b>4.1</b>
<b>From outside</b>	<b>0.5</b>		<b>29.6</b>
<b>Mention condoms/negotiation</b>	<b>0.0</b>		<b>8.2</b>
<b>Talked to peer educator</b>			
<b>Unprompted</b>	<b>0.5</b>		<b>3.1</b>
<b>Prompted</b>	<b>6.9</b>		<b>17.3</b>
<b>Mention condoms/negotiation</b>	<b>0.0</b>		<b>3.1</b>
<b>Saw "It's Not Easy"</b>	<b>0.0</b>		<b>28.6</b>

**Appendix D2. Knowledge and attitudes related to AIDS**

<b>SITE D</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>	<b>94.2</b>		<b>97.9</b>
aware only of slim	5.8		1.0
<b>How can someone get AIDS?</b>			
Sex	96.8		96.9
Blood transfusion	25.9		40.8
Needles	45.0		57.1
Mother to child	2.6		9.2
Insect bites	3.2		0.0
Used clothing	1.1		0.0
Witchcraft	0.5		0.0
Don't know	2.1		1.0
<b>Can AIDS be spread by:</b>			
Healthy looking people	86.0		92.9
A mother to child during pregnancy	88.8		94.9
Used clothing	32.6		17.5
<b>Can AIDS be cured by:</b>			
Doctors	2.1		1.0
Medicine	2.1		0.0
<b>How can someone prevent AIDS?</b>			
One partner	83.1		91.8
Zero grazing	28.0		6.1
Love carefully	11.6		2.6
Abstain from sex	6.3		6.1
Condoms	2.1		24.5
Clean needles	21.7		37.8
Care with blood	6.9		30.6
Test before marriage	2.1		3.1
Don't know	1.1		1.0
<b>Believes can prevent AIDS</b>	<b>94.1</b>		<b>91.5</b>
<b>What could you do to prevent AIDS?</b>			
(asked of those who said they could prevent getting AIDS)			
One partner	82.5		78.6
Zero grazing	5.3		5.1
Love carefully	2.6		0.0
Abstain from sex	2.6		3.1
Condoms	2.1		11.2
Clean needles	7.4		12.2
Care with blood	2.1		5.1

**Appendix D3. Perceptions of others behavior and condom knowledge**

<b>SITE D</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner	52.1		68.8
Use condoms	23.4		56.4
<b>Men at work</b>			
More than one partner	43.6		60.2
Use condoms	17.7		41.6
<b>Women at work</b>			
More than one partner	35.8		45.9
Use condoms	7.5		44.3
<b>Susceptibility</b>			
No	44.4		12.2
Don't know	16.9		17.3
Yes, not likely	27.5		63.3
Very likely	11.1		7.1
<b>Believe workers with AIDS should be dismissed</b>	32.6		27.8
<b>Afraid of catching AIDS by working next to someone</b>	33.0		22.7
<b>Mean knowledge score</b>	1.5		2.0
<b>Know incubation period &gt; 5years</b>	6.3		23.5
<b>Recognize condom</b>	76.9		91.8
<b>Unaware of condoms</b>	7.4		3.1
<b>Knows places to get condoms</b>	52.9		75.5
<b>Mentions worksite as a source of condoms</b>	8.5		28.6

**Appendix D4. Reported behavior and condom use**

<b>SITE D</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Mean number of partners</b>	<b>1.5</b>		<b>1.4</b>
<b>Percent with multiple partners</b>	<b>39.2</b>		<b>31.6</b>
<b>Mean risk score</b>	<b>1.4</b>		<b>1.3</b>
<b>Ever used a condom</b>	<b>17.6</b>		<b>25.0</b>
<b>Use in last two months</b>			
<b>% all sexually active</b>	<b>2.2</b>		<b>15.9</b>
<b>% multiple partners</b>	<b>5.4</b>		<b>29.0</b>
<b>Would never want to use (unprompted)</b>	<b>57.5</b>		<b>60.2</b>
<b>Difficult to ask partner</b>	<b>62.1</b>		<b>60.2</b>
<b>Unaware or unfamiliar</b>	<b>27.5</b>		<b>19.4</b>

**Appendix E1. Individual characteristics and exposure to program**

<b>SITE E</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Sample size</b>	<b>102</b>	<b>55</b>	<b>47</b>
<b>Male %</b>	<b>2.9</b>	<b>1.8</b>	<b>0.0</b>
<b>Female %</b>	<b>97.1</b>	<b>98.2</b>	<b>100.0</b>
<b>Mean age</b>	<b>22.9</b>	<b>23.2</b>	<b>20.4</b>
<b>Married %</b>	<b>21.6</b>	<b>20.0</b>	<b>6.4</b>
<b>Steady partner %</b>	<b>33.3</b>	<b>24.5</b>	<b>40.4</b>
<b>No partner %</b>	<b>45.1</b>	<b>55.1</b>	<b>53.2</b>
<b>Education %</b>			
<b>Completed primary or higher</b>	<b>92.2</b>	<b>83.6</b>	<b>97.9</b>
<b>Read %</b>			
<b>English</b>	<b>91.2</b>	<b>78.2</b>	<b>100.0</b>
<b>Other language</b>	<b>86.3</b>	<b>85.5</b>	<b>70.2</b>
<b>Media exposure %</b>			
<b>Newspaper</b>	<b>81.2</b>	<b>63.6</b>	<b>91.5</b>
<b>Radio</b>	<b>92.1</b>	<b>89.1</b>	<b>97.9</b>
<b>TV</b>	<b>65.3</b>	<b>54.5</b>	<b>72.3</b>
<b>Says company has AIDS education program</b>	<b>28.4</b>	<b>41.8</b>	<b>59.6</b>
<b>Attended talk</b>	<b>22.5</b>	<b>32.7</b>	<b>46.8</b>
<b>Someone from work</b>	<b>0.9</b>	<b>1.8</b>	<b>0.0</b>
<b>From outside</b>	<b>21.6</b>	<b>30.9</b>	<b>46.8</b>
<b>Mention condoms or negotiation</b>	<b>2.9</b>	<b>5.5</b>	<b>14.9</b>
<b>Talked to peer educator</b>			
<b>Unprompted</b>	<b>2.9</b>	<b>3.6</b>	<b>4.3</b>
<b>Prompted</b>	<b>13.7</b>	<b>5.5</b>	<b>38.3</b>
<b>Mention condoms or negotiation</b>	<b>0.0</b>	<b>1.8</b>	<b>10.6</b>
<b>Saw "It's Not Easy"</b>	<b>0.0</b>	<b>0.0</b>	<b>68.1</b>

**Appendix E2. Knowledge and attitudes related to AIDS**

<b>SITE E</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>How can someone get AIDS?</b>			
Sex	97.1	100.0	100.0
Blood transfusion	53.9	74.5	63.6
Needles	69.6	78.2	89.4
Mother to child	10.8	32.7	21.3
Insect bites	2.0	0.0	0.0
Used clothing	1.0	0.0	0.0
Witchcraft	2.0	0.0	0.0
Don't know	1.0	0.0	0.0
<b>Can AIDS be spread by:</b>			
Healthy looking people	94.1	92.7	91.5
A mother to child during pregnancy	95.0	100.0	89.4
Used clothing	11.9	5.5	6.4
<b>Can AIDS be cured by:</b>			
Doctors	5.0	0.0	0.0
Medicine	3.0	0.0	0.0
<b>How can someone prevent AIDS?</b>			
One partner	62.7	74.5	85.1
Zero grazing	7.8	3.6	14.9
Love carefully	6.9	0.0	2.1
Abstain from sex	36.3	18.2	23.4
Condoms	10.8	23.6	46.8
Clean needles	51.0	21.8	38.3
Care with blood	29.4	18.2	19.1
Test before marriage	9.8	9.1	21.3
Don't know	1.0	0.0	0.0
<b>Believes can prevent AIDS</b>	<b>87.3</b>	<b>69.1</b>	<b>97.8</b>
<b>What could you do to prevent AIDS?</b> (asked of those who said they could prevent getting AIDS)			
One partner	36.3	32.7	38.3
Zero grazing	1.0	0.0	0.0
Love carefully	4.9	0.0	0.0
Abstain from sex	34.3	30.9	25.5
Condoms	6.9	12.7	31.9
Clean needles	30.4	10.9	19.1
Care with blood	16.7	10.9	4.3

**Appendix E3. Perceptions of others behavior and condom knowledge**

<b>SITE E</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner	51.0	60.0	61.7
Use condoms	59.8	60.0	78.7
<b>Men at work</b>			
More than one partner	34.2	32.7	47.7
Use condoms	32.9	51.9	47.7
<b>Women at work</b>			
More than one partner	41.2	43.6	45.7
Use condoms	38.2	47.3	65.2
<b>Susceptibility</b>			
No	46.1	30.9	34.0
Don't know	15.7	32.7	8.5
Yes, not very likely	19.6	21.8	42.6
Very likely	18.6	14.5	14.9
<b>Believe workers with AIDS should be dismissed</b>	44.1	47.3	6.4
<b>Afraid of catching AIDS by working next to someone</b>	40.2	34.5	19.1
<b>Mean knowledge score</b>	2.1	2.8	2.8
<b>Know incubation period &gt; 5 years</b>	13.7	14.5	27.7
<b>Recognize condom</b>	68.6	81.8	95.7
<b>Unaware of condoms</b>	6.9	14.5	0.0
<b>Knows places to get condoms</b>	44.1	34.5	78.7
<b>Mentions worksite as a source of condoms</b>	1.0	7.3	25.5

**Appendix E4. Reported behavior and condom use**

<b>SITE E</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Mean number of partners</b>	<b>0.6</b>	<b>0.8</b>	<b>0.2</b>
<b>Percent with multiple partners</b>	<b>4.9</b>	<b>20.0</b>	<b>2.1</b>
<b>Mean risk score</b>	<b>0.6</b>	<b>0.6</b>	<b>0.2</b>
<b>Ever used a condom</b>	<b>14.7</b>	<b>26.4</b>	<b>36.2</b>
<b>Use in last two months</b>			
<b>% sexually active</b>	<b>9.6</b>	<b>43.3</b>	<b>50.0</b>
<b>% multiple partners</b>	<b>0.0</b>	<b>72.7</b>	<b>100.0</b>
<b>Would never want to use (unprompted)</b>	<b>40.4</b>	<b>30.4</b>	<b>20.5</b>
<b>Difficult to ask partner</b>	<b>63.6</b>	<b>44.7</b>	<b>27.9</b>
<b>Unaware or unfamiliar</b>	<b>21.6</b>	<b>30.9</b>	<b>4.3</b>

**Appendix E1. Individual characteristics and exposure to program**

<b>SITE F</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Sample size</b>		<b>53</b>	<b>55</b>
<b>Male %</b>		<b>83.0</b>	<b>78.2</b>
<b>Female %</b>		<b>17.0</b>	<b>21.8</b>
<b>Mean age</b>		<b>25.5</b>	<b>29.2</b>
<b>Married %</b>		<b>66.0</b>	<b>89.1</b>
<b>Steady partner %</b>		<b>17.0</b>	<b>7.3</b>
<b>No partner %</b>		<b>17.0</b>	<b>3.6</b>
<b>Education %</b>			
<b>Completed primary or higher</b>		<b>100.0</b>	<b>98.2</b>
<b>Read %</b>			
<b>English</b>		<b>100.0</b>	<b>100.0</b>
<b>Media exposure %</b>			
<b>Newspaper</b>		<b>98.1</b>	<b>98.2</b>
<b>Radio</b>		<b>100.0</b>	<b>100.0</b>
<b>TV</b>		<b>60.4</b>	<b>72.7</b>
<b>Says company has AIDS education program</b>		<b>18.9</b>	<b>56.4</b>
<b>Attended talk</b>		<b>9.4</b>	<b>45.5</b>
<b>Someone from work</b>		<b>1.9</b>	<b>21.8</b>
<b>From outside</b>		<b>5.7</b>	<b>21.8</b>
<b>Mention condoms/negotiation</b>		<b>0.0</b>	<b>12.7</b>
<b>Talked to peer educator</b>			
<b>Unprompted</b>		<b>1.9</b>	<b>5.5</b>
<b>Prompted</b>		<b>28.3</b>	<b>56.4</b>
<b>Mention condoms/negotiation</b>		<b>1.9</b>	<b>18.2</b>
<b>Saw "It's Not Easy"</b>		<b>3.8</b>	<b>30.9</b>

**Appendix F2. Knowledge and attitudes related to AIDS**

<b>SITE F</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Aware of AIDS		100.0	100.0
How can someone get AIDS?			
Sex		100.0	96.4
Blood transfusion		71.7	63.6
Needles		69.8	80.0
Mother to child		7.5	14.5
Insect bites		1.9	0.0
Used clothing		0.0	0.0
Witchcraft		3.8	0.0
Don't know		0.0	0.0
Can AIDS be spread by:			
Healthy looking people		90.6	98.1
A mother to child during pregnancy		100.0	96.4
Used clothing		9.4	12.7
Can AIDS be cured by:			
Doctors		1.9	5.5
Medicine		5.7	5.5
How can someone prevent AIDS?			
One partner		75.5	87.3
Zero grazing		26.4	29.1
Love carefully		11.3	10.9
Abstain from sex		5.7	7.3
Condoms		13.2	29.1
Clean needles		39.6	32.7
Care with blood		24.5	25.5
Test before marriage		11.3	5.5
Don't know		0.0	0.0
Believes can prevent AIDS		90.6	92.5
What could you do to prevent AIDS? (asked of those who said they could prevent getting AIDS)			
One partner		69.8	76.4
Zero grazing		1.9	5.5
Love carefully		9.4	1.8
Abstain from sex		7.5	0.0
Condoms		1.9	21.8
Clean needles		13.2	21.8
Care with blood		7.5	9.1

**Appendix F3. Perceptions of others behavior and condom knowledge**

<b>SITE F</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner		77.4	80.8
Use condoms		54.7	72.7
<b>Men at work</b>			
More than one partner		67.9	69.1
Use condoms		41.5	63.6
<b>Women at work</b>			
More than one partner		56.6	74.5
Use condoms		20.8	56.4
<b>Susceptibility</b>			
No		43.3	13.0
Don't know		20.8	13.0
Yes, not likely		26.4	64.8
Very likely		9.4	9.3
<b>Believe workers with AIDS should be dismissed</b>		34.0	21.8
<b>Afraid of catching AIDS by working next to someone</b>		32.1	20.4
<b>Mean knowledge score</b>		2.4	2.5
<b>Know incubation period &gt; 5years</b>		21.2	38.0
<b>Recognize condom</b>		94.3	100.0
<b>Unaware of condoms</b>		0.0	0.0
<b>Knows places to get condoms</b>		56.6	80.0
<b>Mentions worksite as a source of condoms</b>		0.0	23.6

**Appendix F4. Reported behavior and condom use**

<b>SITE F</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Mean number of partners</b>		1.0	1.2
<b>Percent with multiple partners</b>		11.3	20.0
<b>Mean risk score</b>		1.0	1.2
<b>Ever used a condom</b>		11.8	18.2
<b>Use in last two months</b>			
<b>% all sexually active</b>		2.2	3.8
<b>% multiple partners</b>		0.0	9.1
<b>Would never want to use (unprompted)</b>		32.6	40.4
<b>Difficult to ask partner</b>		50.0	49.1
<b>Unaware or unfamiliar</b>		15.1	25.5

**Appendix G1. Individual characteristics and exposure to program**

<b>SITE G</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Sample size</b>		<b>52</b>	<b>50</b>
<b>Male %</b>		<b>94.2</b>	<b>94.0</b>
<b>Female %</b>		<b>5.8</b>	<b>6.0</b>
<b>Mean age</b>		<b>28.1</b>	<b>28.1</b>
<b>Married %</b>		<b>69.2</b>	<b>78.0</b>
<b>Steady partner %</b>		<b>17.3</b>	<b>12.0</b>
<b>No partner %</b>		<b>13.5</b>	<b>10.0</b>
<b>Education %</b>			
<b>Completed primary or higher</b>		<b>98.1</b>	<b>92.0</b>
<b>Read %</b>			
<b>English</b>		<b>100.0</b>	<b>100.0</b>
<b>Media exposure %</b>			
<b>Newspaper</b>		<b>100.0</b>	<b>100.0</b>
<b>Radio</b>		<b>100.0</b>	<b>100.0</b>
<b>TV</b>		<b>42.3</b>	<b>66.0</b>
<b>Says company has AIDS education program</b>		<b>26.9</b>	<b>44.0</b>
<b>Attended talk</b>		<b>25.0</b>	<b>52.0</b>
<b>Someone from work</b>		<b>9.6</b>	<b>10.0</b>
<b>From outside</b>		<b>17.3</b>	<b>42.0</b>
<b>Mention condoms/negotiation</b>		<b>1.1</b>	<b>10.0</b>
<b>Talked to peer educator</b>			
<b>Unprompted</b>		<b>3.8</b>	<b>6.0</b>
<b>Prompted</b>		<b>23.1</b>	<b>50.0</b>
<b>Mention condoms/negotiation</b>		<b>0.0</b>	<b>4.0</b>
<b>Saw "It's Not Easy"</b>		<b>0.0</b>	<b>32.0</b>

**Appendix G2. Knowledge and attitudes related to AIDS**

<b>SITE G</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>		<b>100.0</b>	<b>100.0</b>
<b>How can someone get AIDS?</b>			
Sex		<b>100.0</b>	<b>90.0</b>
Blood transfusion		<b>57.7</b>	<b>66.0</b>
Needles		<b>88.5</b>	<b>78.0</b>
Mother to child		<b>15.4</b>	<b>28.0</b>
Insect bites		<b>0.0</b>	<b>4.0</b>
Used clothing		<b>0.0</b>	<b>0.0</b>
Witchcraft		<b>0.0</b>	<b>0.0</b>
Don't know		<b>0.0</b>	<b>0.0</b>
<b>Can AIDS be spread by:</b>			
Healthy looking people		<b>96.2</b>	<b>96.0</b>
A mother to child during pregnancy		<b>96.2</b>	<b>88.0</b>
Used clothing		<b>11.5</b>	<b>4.1</b>
<b>Can AIDS be cured by:</b>			
Doctors		<b>0.0</b>	<b>2.0</b>
Medicine		<b>7.7</b>	<b>2.0</b>
<b>How can someone prevent AIDS?</b>			
One partner		<b>78.8</b>	<b>86.4</b>
Zero grazing		<b>13.5</b>	<b>20.0</b>
Love carefully		<b>13.5</b>	<b>10.0</b>
Abstain from sex		<b>0.0</b>	<b>10.0</b>
Condoms		<b>9.6</b>	<b>30.0</b>
Clean needles		<b>59.6</b>	<b>40.0</b>
Care with blood		<b>40.4</b>	<b>26.0</b>
Test before marriage		<b>11.5</b>	<b>6.0</b>
Don't know		<b>0.0</b>	<b>0.0</b>
<b>Believes can prevent AIDS</b>		<b>90.4</b>	<b>98.0</b>
<b>What could you do to prevent AIDS?</b> (asked of those who said they could prevent getting AIDS)			
One partner		<b>69.2</b>	<b>82.0</b>
Zero grazing		<b>5.8</b>	<b>8.0</b>
Love carefully		<b>3.8</b>	<b>4.0</b>
Abstain from sex		<b>9.6</b>	<b>4.0</b>
Condoms		<b>7.7</b>	<b>26.0</b>
Clean needles		<b>19.2</b>	<b>30.0</b>
Care with blood		<b>9.6</b>	<b>8.0</b>

**Appendix G3. Perceptions of others behavior and condom knowledge**

<b>SITE G</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner		76.9	69.4
Use condoms		75.0	60.0
<b>Men at work</b>			
More than one partner		75.0	54.0
Use condoms		57.7	72.0
<b>Women at work</b>			
More than one partner		67.3	42.0
Use condoms		38.5	48.0
<b>Susceptibility</b>			
No		44.2	38.0
Don't know		17.3	10.0
Yes, not likely		26.9	40.0
Very likely		11.5	12.0
Believe workers with AIDS should be dismissed		32.7	12.0
Afraid of catching AIDS by working next to someone		26.9	14.0
Mean knowledge score		2.6	2.6
Know incubation period > 5years		13.2	29.1
Recognize condom		96.2	98.0
Unaware of condoms		0.0	0.0
Knows places to get condoms		75.0	72.0
Mentions worksite as a source of condoms		1.9	14.0

**Appendix G4. Reported behavior and condom use**

<b>SITE G</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Mean number of partners</b>		<b>1.1</b>	<b>1.1</b>
<b>Percent with multiple partners</b>		<b>21.2</b>	<b>12.0</b>
<b>Mean risk score</b>		<b>1.1</b>	<b>1.0</b>
<b>Ever used a condom</b>		<b>34.0</b>	<b>28.6</b>
<b>Use in last two months</b>			
<b>% all sexually active</b>		<b>8.7</b>	<b>9.1</b>
<b>% multiple partners</b>		<b>18.2</b>	<b>50.0</b>
<b>Would never want to use (unprompted)</b>		<b>34.1</b>	<b>29.5</b>
<b>Difficult to ask partner</b>		<b>50.0</b>	<b>59.5</b>
<b>Unaware or unfamiliar</b>		<b>13.5</b>	<b>24.0</b>

**Appendix H1. Individual characteristics and exposure to program**

<b>SITE H</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
Sample size		98	77
Male %		82.4	83.1
Female %		17.6	16.9
Mean age		32.8	38.8
Married %		80.2	92.2
Steady partner %		14.3	3.9
No partner %		5.5	3.9
Education %			
Completed primary or higher		85.7	83.1
Read %			
English		90.1	98.7
Other language		96.9	97.4
Media exposure %			
Newspaper		97.9	96.1
Radio		89.0	97.4
TV		28.6	42.9
Says company has AIDS education program		5.5	39.0
Attended talk		4.4	20.8
Someone from work		2.2	5.2
From outside		2.2	14.3
Mention condoms/negotiation		0.0	3.9
Talked to peer educator			
Unprompted		1.1	7.8
Prompted		15.4	35.1
Mention condoms/negotiation		1.1	3.9
Saw "It's Not Easy"		0.0	28.6

## Appendix H2. Knowledge and attitudes related to AIDS

<b>SITE H</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Aware of AIDS</b>		<b>96.7</b>	<b>100.0</b>
<b>How can someone get AIDS?</b>			
Sex		<b>97.8</b>	<b>88.3</b>
Blood transfusion		<b>61.5</b>	<b>63.6</b>
Needles		<b>80.2</b>	<b>85.7</b>
Mother to child		<b>20.9</b>	<b>20.8</b>
Insect bites		<b>4.4</b>	<b>2.6</b>
Used clothing		<b>2.2</b>	<b>0.0</b>
Witchcraft		<b>1.1</b>	<b>0.0</b>
Don't know		<b>2.2</b>	<b>3.9</b>
<b>Can AIDS be spread by:</b>			
Healthy looking people		<b>95.6</b>	<b>96.1</b>
A mother to child during pregnancy		<b>95.6</b>	<b>87.0</b>
Used clothing		<b>22.0</b>	<b>21.1</b>
<b>Can AIDS be cured by:</b>			
Doctors		<b>3.3</b>	<b>2.6</b>
Medicine		<b>3.3</b>	<b>5.2</b>
<b>How can someone prevent AIDS?</b>			
One partner		<b>74.7</b>	<b>77.9</b>
Zero grazing		<b>12.1</b>	<b>11.7</b>
Love carefully		<b>12.1</b>	<b>13.0</b>
Abstain from sex		<b>14.3</b>	<b>13.0</b>
Condoms		<b>13.2</b>	<b>14.3</b>
Clean needles		<b>51.6</b>	<b>58.4</b>
Care with blood		<b>27.5</b>	<b>40.3</b>
Test before marriage		<b>9.9</b>	<b>7.8</b>
Don't know		<b>5.5</b>	<b>1.3</b>
<b>Believes can prevent AIDS</b>		<b>96.7</b>	<b>06.1</b>
<b>What could you do to prevent AIDS?</b> (asked of those who said they could prevent getting AIDS)			
One partner		<b>70.3</b>	<b>72.7</b>
Zero grazing		<b>5.5</b>	<b>3.9</b>
Love carefully		<b>3.3</b>	<b>6.5</b>
Abstain from sex		<b>15.4</b>	<b>11.7</b>
Condoms		<b>12.1</b>	<b>24.7</b>
Clean needles		<b>31.9</b>	<b>26.0</b>
Care with blood		<b>15.4</b>	<b>18.2</b>

**Appendix H3. Perceptions of others behavior and condom knowledge**

<b>SITE H</b>	<b>Time 1</b>	<b>Time 2</b>	<b>Time 3</b>
<b>Perceptions of others</b>			
<b>Friends</b>			
More than one partner		58.2	67.5
Use condoms		41.8	51.9
<b>Men at work</b>			
More than one partner		59.3	62.3
Use condoms		33.0	56.7
<b>Women at work</b>			
More than one partner		56.0	53.2
Use condoms		25.3	30.3
<b>Susceptibility</b>			
No		26.4	6.5
Don't know		15.4	19.5
Yes, not likely		42.9	55.8
Very likely		15.4	18.2
Believe workers with AIDS should be dismissed		41.8	19.5
Afraid of catching AIDS by working next to someone		29.7	16.9
Mean knowledge score		2.4	2.6
Know incubation period > 5years		13.2	27.3
Recognize condom		75.8	87.0
Unaware of condoms		4.4	1.3
Knows places to get condoms		44.0	68.8
Mentions worksite as a source of condoms		2.2	29.9