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Zimbabwe (2006): HIV Prevention TRaC Study among the General Population (15-49 years)

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Summary

Background & Objectives

This report presents the findings of the second round of a national survey of HIV-related behaviors and behavioral determinants in Zimbabwe. The survey is part of a periodic survey conducted annually by PSI Zimbabwe. Data for this round was collected from July to September of 2006. The first survey was completed in August 2005. The survey collected data from 100 different enumeration areas, randomly selected from the Zimbabwe master sampling frame, a national frame that is used by the central statistical office for national population based surveys.

The main objectives of the survey were to estimate changes in reported behavior and behavioral determinants among 15-49 year old males and females, evaluate PSI's programme interventions, and identifying drivers of behavior change. A number of behaviors were assessed such as, condom use, and knowledge of HIV status. The study also explored new areas of behaviours (i.e. cross-generation sex as well as stigma and discrimination). Based on these findings and other national statistics, PSI designs and implements a variety of behavior change interventions.

The analysis of this survey differs from a traditional 'Knowledge, Attitudes and Practices' survey in that 1) the analysis explicitly relates changes in behaviors to respondents' exposure to campaigns thus enabling understanding of how behavior is related to the various levels of exposure as well as attribution of the change to PSI's interventions and 2) 'segmentation analysis' is used to measure differences between 'behavers' and 'non-behavers' across presumed determinants of behavior to better understand what is driving behavior change.

Description of Intervention

The Zimbabwe program goal is to reduce the rate of new HIV infections and to a smaller extent, mitigate the impact of HIV and AIDS. As part of its objective, PSI/Z's activities include behavior change communications to promote safer sexual practices and address HIV related stigma , social marketing of HIV related products (male and female condoms) and provision of HIV services (voluntary counseling and HIV testing and post-test support services). The condom social marketing program is designed to increase correct and consistent condom use by targeting communication and distribution efforts at high risk population groups. Condom related communication activities address barriers to correct and consistent condom use within different relationships. Distribution efforts are focused on increasing accessibility and availability of condoms at the national level, with an increased focus on ensuring equity of access and coverage within high risk zones. PSI/Z implements a

comprehensive mass media communications portfolio targeting to enhance condom use, delaying onset of sex, create demand for HIV testing & counseling and reduction in number of sexual partners. These communications reach millions of Zimbabweans every year through electronic media (television, radio), print & outdoor media. The mass media campaigns are supported by a growing interpersonal communications on some of the above mentioned behaviors. Separate impact evaluation of these is planned.

Methodology

For all the two survey rounds, adult population, ages 15-49 years were interviewed. The respondents were chosen from the same enumeration areas as was in the first round for comparability. A total of 2200 respondents were interviewed in the 2006 survey. This is equally split between urban and rural areas (50% urban and 50% rural). Additionally, more than half of the sample is not married (51%), is between the ages of 15-29 (68%), and has secondary education (65%). The gender distribution is 48% women and 52% men.

For the two rounds, the data collection tool was a questionnaire using dichotomous (yes/no) measures questions to measure population characteristics, exposure to (recall of) PSI activities, reported behaviors, and the presumed determinants of those behaviors grouped under the headings of 'opportunity', 'ability' and 'motivation' per the PSI Behavior Change Framework (Chapman and Patel, 2004).[1] Four and five-point Likert scales were also used to provide a richer measure of behavioral determinants such as perceptions of product and service availability, outcome expectations and other constructs. The measures for these variables were constructed based on prior research and were included in the analysis after conducting a reliability and validity check where applicable. After data collection, logistic regression, analysis of variance, and other descriptive statistics were used to perform the monitoring, evaluation, and segmentation analysis.

Main Findings

This report compares the results of the 2005 and 2006 surveys. Trends in reported behaviors such as condom use, use of VCT (knowledge of HIV status), HIV related stigma & discrimination are discussed. Linkages between PSI interventions and behavioral trends are included in this report. In addition, segmentation analysis of cross-generation sex is also discussed.

[1] Refer to Appendix C for a description of the framework.

Condom Use

Reported consistent condom use with regular partners remained stable and low: 14% in 2005 and 15% in 2006. Consistent condom use in non-regular relationships showed a significant increase from 69% in 2005 to 81% in 2006. There is a strong correlation between increased exposure to PSI condom-related communication activities and increase in consistent condom use in non-regular relationships. The monitoring analysis showed positive movement in a number of determinants of consistent condom use in non-regular relationships between the two surveys:

- Perceived availability increased significantly from 54% in 2005 to 73% in 2006;
- Perceived brand attributes increased significantly from 44% to 71%;
- Social support also increased significantly and
- Outcome expectations also showed a dramatic increase (from 48% to 86.3%) between the 2 survey periods
- Correct knowledge also shifted in the right direction.
- There was no change in the self efficacy scores between the 2 periods.
- Exposure impact on these behavioral trends was less clear.

Similar trends can be seen with regards to determinants of consistent condom use in regular relationships, though with some attributes moving in the opposite direction.

Regarding determinants of consistent condom use in regular relationships only some knowledge level and product benefits (outcome expectations) indicators changed significantly between 2005 and 2006:

- The proportion reporting that the risk of HIV transmission can be reduced by having sex with one faithful, uninfected partner increased from 87% to 93%.
- Similarly, the proportion reporting that risk of HIV infection can be reduced by using condoms consistently increased from 64% to 83%.
- The proportion reporting that condoms are effective in preventing HIV/STI infection increased from 53% to 76%.

A significant number of determinants of consistent condom use in regular relationships such as social support, perceived availability, and self efficacy did not change.

Findings also showed that personal risk perception within different types of relationships remains low. Only 8% of respondents perceived themselves to be at high risk of HIV infection in regular relationships. Similarly, only 15% perceive themselves to be at high risk of HIV infection in non-regular relationships.

Cross Generational Sex

About 15% of all youths report having had sex with a partner who was 10 or more years older in the past year. This is high as it represents 35% of sexually active young women, 15-24 years.

The segmentation analysis identified four determinants of cross generation sex among young women: social norms, self efficacy to negotiate, attitudes, and outcome expectations.

Specifically, young females who report having sex with older partners have less socially acceptable behaviors (social norms). For instance, they believe that having sex with older men is normal, and that having a sugar daddy is normal. They also have likes towards relationships with older men (attitudes) and they do not know how to negotiate advances by older men (Self efficacy to negotiate). For instance, they report less ability to say no to sex with older men who offer money in exchange for sex; and they are more likely to perceive positive benefits out of relationships with older men (outcome expectations).

VCT Use

The proportion reporting ever been tested increased significantly from 20% in 2005 to 24% in 2006. However, some of the major determinants of 'knowledge of status' such as outcome expectations did not change in the positive direction within the referenced period. Other determinants (social support, perceived availability, social norms & self efficacy) remained unchanged.

Analysis of ever testing and exposure to PSI's VCT communication campaigns suggests that individuals with high exposure are more likely to report uptake of VCT services (e.g., 14% vs. 27% and 28%, no exposure to low and high exposure for respondents ever testing for HIV infection).

Stigma and Discrimination

Levels of HIV related stigma and discrimination are very high in Zimbabwe. The measure for stigma & discrimination was based on the ICRW scales that include four dimensions of stigma – fear of casual transmission, shame & blame at individual & community level, disclosure and enacted stigma. Individual disclosure was not explored in this survey for ethical reasons.

Fear of casual transmission of HIV is very high in Zimbabwe in spite of high knowledge levels around HIV and AIDS. A significant proportion of respondents believe that HIV can be transmitted

casually. For example, about 48% of respondents report fear of infection through exposure to saliva of a person with HIV or AIDS; 40% report fear of infection through playing with a child who has HIV and or AIDS; and 38% report fear of transmission through exposure to sweat of a person with HIV and AIDS.

About 64% individuals blame people with HIV and AIDS. In addition, as much as 50% of respondents also believe that people in their communities blame people with HIV and AIDS.
Enacted stigma is also high. About 56% report that people with HIV and AIDS are treated differently in their communities. About 38% know someone who was abandoned by a partner/spouse; 24% know someone who was abandoned by a family and 32% know someone who was isolated in household (isolation include either eating alone, using separate utensils and or sleeping in own room)

Segmentation analysis of knowledge of HIV status and stigma and discrimination suggests that individuals reporting knowledge of HIV status (ever tested) are least likely to have fear of casual transmission and more likely to be aware of discrimination.

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Monitoring Table (1 of 4) [table 1]
Risk: Sexually active adults (15-49 years)
Behavior: Consistent condom user with a regular partner

	MONITORING		
INDICATORS	**2005** (N=754)	**2006** (N=520)	**Sig**
BEHAVIOR/USE			
Report always using a condom with a regular partner	13.7	15.1	NS
OPPORTUNITY			
Availability	57.6	53.9	NS
Brand Attributes	52.3	59.4	**
ABILITY			
Self efficacy	60.6	50.1	***
Social Support	43.5	46.3	NS
Knowledge	56.8	75.4	***
MOTIVATION			
Outcome Expectation	40.6	64.4	***
Risk Perception	-	7.5	-

Notes:
*p<0.05, ** p<0.01; *** p<0.001; NS=Not Significant
-Adjusted for Age, gender, SES, place of residence, level of education and marital status

Monitoring Analysis (1 of 4)

The key condom use behavior measured in this survey is reported consistent condom use (always using condoms). This behavior was examined between two different partner types: regular non-marital and non-regular partners. A regular partner was defined as a partner who one does not live with nor is married to the respondent but is someone with whom the respondent maintains a steady sexual relationship. A non-regular partner was defined as a sexual partners that one is not married to and has never lived with and had sex with occasionally. This is in line with the Zimbabwean national M&E indicators.

The monitoring table shows the results for reported consistent condom use and determinants of consistent condom use with regular partners among sexually active men and women in the 15-49 age groups from the 2005 and 2006 surveys respectively.

The table displays proportions for key condom use behaviors with regular partners. These proportions are adjusted for different sample characteristics in the two surveys. Asterisks indicate a statistically significant difference in reported behavior over time.

The findings show no significant behavior change in consistent condom use with a regular sexual partner from 14% in 2005 to 15% in 2006. The following trends were observed among behavioral determinants of consistent use of condoms in regular relationships:

- Proportion reporting that Protector Plus condoms brand attributes are attractive (perceived quality, reliable, strong & effective) increased significantly from 52% to 59%.
- Proportion reporting correct knowledge increased significantly from 57% to 75%. This increase is explained by significant changes in two of the three selected knowledge scale items: the proportion reporting that ‘the risk of HIV transmission can be reduced by having sex with one faithful, uninfected partner’ increased significantly from 87% to 93%. Similarly, the proportion reporting that ‘risk of HIV infection can be reduced by using condoms consistently’ increased from 64% to 83%. Proportion agreeing that a health looking person can be infected with HIV remained high (95%) and did not change significantly over time.
- Outcome expectations increased significantly from 41% to 64%. On this determinant, both scale items increased significantly:

- Proportion reporting that condoms are effective in preventing HIV/STI infection increased from 53% to 76% while those reporting that using condoms consistently reduces chances of infection also increased from 53% to 71%.

- Perceived product availability and social support remained low and unchanged between the time periods.
- Proportion reporting ability to use condoms (self efficacy) declined significantly from 61% to 50%.
- Risk perception is very low in regular relationships. Percentage reporting that they are at high risk of HIV infection in is only 7%.

Evaluation Table (1 of 3) [table 2]
Risk: Sexually active adults (15-49 years)
Behavior: Consistent condom user with a regular partner

INDICATORS	EVALUATION				
	2005		2006		Sig.
	Ref. (N=754)	None (N=67)	Low (N=102)	High (N=351)	
BEHAVIOR/USE					
Report always using a condom with a regular partner	13.7[a]	22.0[a]	12.9[a]	14.5[a]	NS
OPPORTUNITY					
Availability					
Brand Attributes	52.3[a]	63.3 [a,b]	56.4 [a,b]	59.6[b]	NS
ABILITY					
Self efficacy	60.6[a]	56.9 [a,b]	44.5[b]	50.5[b]	**
Social Support					
Knowledge	56.8[a]	78.8[b]	76.7[b]	74.5[b]	***
MOTIVATION					
Outcome Expectation	40.6[a]	69.7[b]	65.5[b]	63.2[b]	***
Risk Perception	-	-	-	-	

Notes:
*p<0.05, ** p<0.01; *** p<0.001; NS=Not Significant
-Evaluation: Subscripts (a,b,c) are for pair-wise comparisons of exposure levels. Numbers that share the same subscript are not statistically significantly different from one another while numbers that do not share the same letter are different.
-Adjusted for Age, gender, SES, place of residence, level of education and marital status

Evaluation Analysis (1 of 3)

The evaluation table represents the association between behavioral trends and exposure to the Protector Plus[2] communication campaigns during the period under review. Column two shows the adjusted proportions for the behavioral indicators from 2005, that serves as the reference point. Columns three to five classify respondents according to their level of exposure to PSI's activities; based on the level of exposure.

The low exposure category shows individuals who recall only one message, medium exposure group includes those recalling 2 messages, and the high exposure column shows people reporting 3 or more messages. The types of communication messages include 'Condoms are strong and effective'; 'Condoms can prevent HIV'; 'Use one condom each time'; 'Condoms work'; 'Condoms are reliable'; and 'Always carry condoms'. Communication campaign messages were also focussed on promoting discussions around condoms and positive brand attributes for Protector Plus.

It should be noted that many of those who do not specifically recall elements of campaigns are also likely to have been 'exposed' to activities. However, for the purposes of this analysis, they would be reported in the 'none' column.

Evaluation analysis suggests a negative impact of communications on brand attributes and self efficacy. No clear link is observed for knowledge and outcome expectations with exposure because sexually active adults within any level of exposure (though significantly different and higher than the reference levels) do not use condoms differently from those with no exposure.

[2] Socially marketed branded male condoms

Monitoring Table (2 of 4) [table 3]
Risk: Sexually active adults (20-49 years)
Behavior: Consistent condom user with a non-regular partner

	MONITORING		
INDICATORS	**2005** (N=475)	**2006** (N=239)	**Sig.**
BEHAVIOR/USE			
Report always using a condom with a non-regular partner	69.5	80.7	**
OPPORTUNITY			
Availability	53.8	72.9	***
Brand Attributes	44.1	71.1	***
ABILITY			
Self efficacy	58.4	64.5	NS
Social Support	41.1	60.2	***
Knowledge	50.2	81.8	***
MOTIVATION			
Outcome Expectation	37.4	74.9	***
Risk Perception	**Not collected**	14.5	-

Notes:
*p<0.05, ** p<0.01; *** p<0.001; NS=Not Significant
-Adjusted for Age, gender, SES, place of residence, level of education and marital status

Monitoring Analysis (2 of 4)

The above monitoring table highlights trends of condom use in non-regular sexual relationships. The findings show that the proportion of respondents reporting 'using a condom all the time with a non-regular sexual partner' increased significantly from 70% to 81%. The table also shows significant shifts in the following determinants of consistent condom use in non-regular relationships:

- Proportion reporting that condoms are readily available and accessible (perceived availability) increased significantly from 54% in 2005 to 73% in 2006.
- Perceived brand attributes also increased significantly from 44% to 71%.
- Percentage reporting that they social support for condom use (peers approve of condom use, comfortable carrying condoms etc.) increased from 41% to 60%
- Correct knowledge levels increased significantly from 50% to 82%. All the three measures of HIV related knowledge increased significantly:
  - Proportion reporting that the risk of HIV transmission can be reduced by having sex with one faithful, uninfected partner increased from 83% to 91%;
  - Those reporting that the risk of HIV infection can be reduced using condoms consistently increased from 58% to almost universal (96%); and
  - The percentage agreeing that a health looking person can be infected with HIV increased from 93% to 96%
- Similarly, perceived product benefits (outcome expectations) also increased significantly from 37% to 75%. This increase is explained by significant increases in both measures of outcome expectation:
  - Proportion reporting that condoms can be effective in preventing HIV infection almost doubled from 48% to 86%;
  - Proportion reporting that using condoms consistently reduces chances of infection increased from 48% to 80%.
  - There was no change in perceived individual ability to use condoms (self efficacy)

Evaluation Table (2 of 3) [table 4]
Risk: Sexually active adults (20-49 years)
Behavior: Consistent condom user with a non-regular partner

INDICATORS	EVALUATION				
	2005	2006			
	Reference (N=475)	**None** (N=36)	**Low** (N=37)	**High** (N=166)	**Sig. by Exposure**
BEHAVIOR/USE					
Report always using a condom with a non-regular partner	69.5[a]	78.3[a,b]	76.1[a,b]	82.2[b]	**
OPPORTUNITY					
Availability	53.8[a]	78.3[b]	70.2[a,b]	72.4[b]	***
Brand Attributes	44.1[a]	69.7[b]	67.6[b]	72.1[b]	***
ABILITY					
Self efficacy	-	-	-	-	
Social Support	41.1[a]	63.4[b]	48.6[a,b]	62.1[b]	***
Knowledge	50.2[a]	75.1[b]	80.1[b]	83.5[b]	***
MOTIVATION					
Outcome Expectation	37.4[a]	71.3[b]	71.5[b]	76.3[b]	***

Notes:
*p<0.05, ** p<0.01; *** p<0.001; NS=Not Significant
-Evaluation: Subscripts (a,b,c) are for pair-wise comparisons of exposure levels. Numbers that share the same subscript are not statistically significantly different from one another while numbers that do not share the same letter are different.
-Adjusted for Age, gender, SES, place of residence, level of education and marital status

Evaluation Analysis (2 of 3)

Evaluation analysis shows that; overall exposure to PSI's condom related communication campaigns is positively related to consistent condom use in non-regular relationships. Specifically, high exposure seems to make a difference. About 82% among those with high exposure reported consistent condom use compared to 69% among those in the reference category.

No clear distinction of the impact of different exposure levels is observed among the determinants of consistent condom use in non-regular relationships because exposure levels do not vary from those reporting no exposure.

Segmentation Table (1 of 3) [table 5]
Risk: Sexually active females (15-24 years)
Behavior: Consistent condom user with a non-regular partner

Adjusted Means for levels of Behavior and Behavioral Determinants of Cross Generational Sexual Activity among young females, 15 to 24 years, Zimbabwe, 2006

INDICATORS (Scales: 1 to 4; 4 = Strongly Agree, 1 = Strongly Disagree)	BEHAVERS Ever Had sex with partner less than 10 years older (N=124)	NON-BEHAVERS Had sex with partners who are 10years or more older (N=69)	Odds Ratios	Sig.
OPPORTUNITY	Mean	Mean		
Social Norms	2.88	2.61	2.75	*
ABILITY	Mean	Mean		
Social Support	2.83	2.92	-	NS
Self-efficacy to negotiate	2.99	2.77	2.48	*
MOTIVATION	Mean	Mean		
Perceived threat	2.93	2.82	-	NS
Attitudes	3.06	2.77	3.01	**
Beliefs	2.46	2.21	-	NS
Outcome Expectation	2.41	2.34	-	NS
Population Characteristics				
Age			-	NS
Education	Young women with secondary education and above are less likely to engage in cross generation relationships compared to those with less education		**7.36**	**
Marital Status (never married, ever married)			-	NS
Never Married				
Ever Married				
Socio-Economic Status	High socioeconomic women are least likely to engage in cross-generation sex compared to those in low economic classes		**3.24**	*
Place of Residence (Rural vs. Urban)				NS

Notes:
NS = Not Significant* = p<0.05, ** = p<0.01, *** = p<0.001

Segmentation Analysis (1 of 3)

Overall, about 15% of all youths report having had sex with a partner who was 10 or more years older in the past year. This is high as it represents 35% of all sexually active young women, 15-24 years. Tables 5 and 6 present 'segmentation analyses for cross generation sex among young women in the 15-24 age group. The segmentation is carried out as follows: at risk respondents (in this case, female youths, 15 to 24 years) are divided into two groups of 'behavers' (those who report never having sex and those reporting having had sex with age mates i.e. age difference is less than 10 years) and 'non-behavers' (those who report having had sex with partners who were 10 or more years older). Then, the behavers and non-behavers are characterized in terms of behavioral determinants (grouped under the headings of 'opportunity', 'ability', and 'motivation' using the PSI Behavior Change Framework). Finally, the behavers and non-behavers are described in terms of a set of population characteristics. Simply put, the segmentation tables compare behavers and non-behavers across a set of behavioral and population characteristics. The aim is to determine which factors influence practice of cross generation sex. Where there is a significant difference between behavers and non-behavers for a given factor, that factor is considered to be a determinant of that risk behavior. Note that even 'low' values for a given factor should not be considered relevant if they are the same for users and non-users.

Characteristics of younger women who report being sexually active in the last year with males their own age (less than 10 years age difference) are shown in the 'behavers' column and those who report having had sex with men who are 10 years or more older are shown in the 'non-behavers' column. These two columns show means representing the mean value of responses to a scaled question in which 1 = disagree strongly, 2 = disagree, 3 = agree, and 4 = agree strongly. Values of 2 and above correspond to agreement. Values of below 2 correspond to disagreement. The "OR" column presents the odds ratios for significant bubbles. Odds ratios are measures of the size of the effect of each determinant variable on the outcome variable. The higher (greater than one) the odds ratios, the greater the effect.

Table 5 is a segmentation analysis of cross generation sex among sexually active young females using females reporting having sex with age mates as 'behavers'. The findings identify three behavioral factors that appear to be determinants of cross generation sex practice. 'Non- Behavers' are more likely to report 1) lower levels of acceptable social norms towards practice of cross generation sex, and are 2.7 times more likely to practice cross generation sex compared to behavers. 2) lower self-efficacy to negotiate sex with older men. Odd ratios for this determinant are similar to the earlier determinant (social norms); and 3) more positive attitudes towards having relationships with age

mates. On the other hand, behavers are less likely to see cross-gen relationships as fun or normal or more satisfying than relationships with their own age mates. In addition young females with these attitudes are 3.18 times more likely to practice cross generation sex compared to the behavers.

Specifically, young females who report having sex with partners who are 10 years or more older do not have socially acceptable behaviors (social norms). For instance, they believe that having sex with older men is normal, and that having a sugar daddy is normal. They also have likes towards relationships with older men (attitudes); for instance they are more likely to have sexual relationships with older men than with their own age mates. Non behavers also report having limited ability to negotiate sexual advances by older men (self efficacy to negotiate sex). For instance, they report less ability to say no to sex with older men who offer money in exchange for sex; and they do not feel as confident to say no to sexual advances by older men compared to behavers.

Apart from identifying factors that are significantly related to a behavior, segmentation analysis also shows factors that are not significantly different between behavers and non-behavers, and are therefore presumed to be less important in driving this particular risky behavior. This analysis found no relationship between the practice of cross generation sex and five behavioral determinants: social support, perceived threat, beliefs and outcome expectations i.e. perceived benefits of engaging in cross generation sex. Behavers and non-behavers are equally likely to have no social support for engaging in cross generation relationships, to be capable of avoiding older partners, to know the risk involved with relationships with older men, to have the same thoughts (beliefs) about cross generation relationships and to perceive the same benefits of relationships with older men (means above 2 for all determinants).

In terms of population characteristics, education and socio-economic status differentiates behavers from non-behavers. Young females who are least educated i.e. secondary level and lower and in lower socio economic bracket are more likely to engage in cross generation relationships.

Segmentation Table (2 of 3) [table 6]
Risk: Sexually active females (15-24 years)

INDICATORS (Scales: 1 to 4; 4 = Strongly Agree, 1 = Strongly Disagree)	BEHAVERS {Never had sex } (N=269)	NON-BEHAVERS {Had sex with partners who are 10years or more older} (N=69)	Odds Ratios	Sig.
OPPORTUNITY	**Mean**	**Mean**		
Social Norms	3.24	2.86		NS
ABILITY	**Mean**	**Mean**		
Social Support	3.30	3.14	-	NS
Self-efficacy to negotiate	3.31	2.61	3.71	***
MOTIVATION	**Mean**	**Mean**		
Perceived threat	2.94	2.97	-	NS
Attitudes	3.51	2.67	2.40	**
Beliefs	2.59	2.01		**NS**
Outcome Expectation	2.77	2.12	4.38	**
Population Characteristics				
Age	Younger women are least likely to engage in cross generation sex compared to older counterparts.		0.67	**
Education(secondary plus vs. secondary and less education)				**NS**
Marital Status (never married vs. ever married)	Women in some form of a relationship are least likely to engage in cross generation relationship compared to those who are single.		3.5	***
Socio-Economic Status (High vs. low)	High socioeconomic women are least likely to engage in cross-generation sex compared to those in low economic classes.		6.51	**
Place of Residence(rural vs. urban)				**NS**

Notes:
NS = Not Significant, * = p<0.05, ** = p<0.01, *** = p<0.001

Segmentation Analysis (2 of 3)

Table 6 is a segmentation analysis of cross generation sex comparing the same non-behavers discussed earlier to young females reporting never had sex. In this context three behavioral determinants are significantly different between behavers and non-behavers: self efficacy to negotiate, attitudes and outcome expectations. Outcome expectations were not significant in the previous table but become significant when the analysis is performed with those reporting never had sex. Young females reporting sex with partners 10 years or more older are 4.38 times more likely to perceive positive benefits out of relationships with older men (outcome expectations).

Comparing young females who never had sex with those reporting sex with men who are 10 years or more older confirms that, earlier identified factors: social support, perceived threat and beliefs do not appear to influence cross generation relationships.

Across the population characteristics, this further analysis confirms that younger females in lower socio-economic status are more likely to engage in cross generation sex. In addition the analysis suggests that young never married females are 3.5 times more likely to engage in cross generation relationships.

Monitoring Table (3 of 4) [table 7]

Risk: Men and women (15-49 years)

Behavior: Stigma and discrimination

Dimensions /Indicators	August 2006 N= 2201 (%)
Fear of casual transmission	
You could become infected with HIV if you are exposed to the saliva of a person with HIV or AIDS	48.2
You could become infected with HIV if you are exposed to the sweat of a person with HIV or AIDS	37.6
Your child could become infected with HIV if they play with a child who has HIV or AIDS	39.6
Caring for a person living with HIV or AIDS	32.0
You could become infected with HIV if you eat food prepared by PLHA	27.6
To touch a PLHA	11.3
To sleep in the same room with PLHA	9.8
To share eating utensils with PLHA	34.7
To sit next to someone who is showing signs of AIDS	11.2
You could become infected with HIV if exposed to the excreta of a person with HIV or AIDS	53.6
Shame and blame – Individual	64.1
It is the women prostitutes that spread HIV in our community	44.0
People with HIV/AIDS should be ashamed of themselves	82.6
I would be ashamed if someone in my family had HIV/AIDS	83.1
People with HIV/AIDS are promiscuous	71.7
Promiscuous men are the ones who spread HIV in our community	40.1
Promiscuous women are the ones who spread HIV in our community	38.5
HIV is a punishment from God	71.6
I would feel ashamed if I was infected with HIV	76.7
HIV is a punishment for bad behavior	70.5
People with HIV/AIDS are to blame for bringing the disease to the community	69.6
Shame and blame – Community	49.9
It is the women prostitutes that spread HIV in our community	40.6
People with HIV/AIDS should be ashamed of themselves	74.5
They would be ashamed if someone in their family had HIV/AIDS	74.1
People with HIV/AIDS are promiscuous	59.5
Promiscuous men are the ones who spread HIV in our community	37.7
Promiscuous women are the ones who spread HIV in our community	36.9
HIV is a punishment from God	36.9
They would feel ashamed if they were infected with HIV	72.2
HIV is a punishment for bad behavior	64.0
People with HIV/AIDS are to blame for bringing the disease to the community	61.3
Enacted Stigma (Discrimination)	
Do people in your community treat people suspected of having HIV/AIDS or PLHA differently?	56.1
Know someone who was:	
• Excluded from a social gathering(wedding, funeral, party, community association group)	21.8
• Excluded from a social gathering(wedding, funeral, party, community association	21.8

group)	
• Treated differently at a social gathering	32.1
• Abandoned by their spouse/partner	38.5
• Abandoned by their family/sent away from the family	23.9
• Isolated in household e.g. Made to eat alone/made to use separate utensils/made to sleep alone in own room	31.5
• No longer visited, or visited less by family members and friends	21.2
• Visitors Increased to “check them out”	28.1
• Teased, insulted, or sworn at	24.0
• Lost customers to buy their produce/goods or lost job	28.9
• Been denied promotion/further training	26.0

Monitoring Analysis (3 of 4)

Table 7 shows unadjusted proportions on HIV related stigma and discrimination. Findings suggest very high levels of stigma and discrimination across all dimensions. Fear of casual transmission ranged from 10% to a high of 54%. For instance, proportion reporting fear of HIV infection through exposure to the excreta of a person with HIV and AIDS is 54%, 48% report fear of infection through exposure to saliva of a person with HIV or AIDS and about 40% have fear of infection from merely playing with a child that has HIV and AIDS. This is particularly high despite the high HIV related knowledge levels among Zimbabweans.

Similarly, scores on the "shame and blame" dimension were very high; overall scores 64% at individual level dimension and 50% at community level dimension. Ensuing are some of the main shame and blame practices (or is it attitudes?) at individual level:

- 83% agree that people with HIV/AIDS should be ashamed of themselves;
- 83% report that they would be ashamed if someone in their family had HIV/AIDS;
- About 77% report that they would be ashamed of themselves if they were HIV positive; and
- 72% believe that HIV infection is a punishment from God.

Instances of shame and blame at the community level include fairly similar practices. Respondents reported that most people in their community would most likely agree that:

- People with HIV/AIDS should be ashamed of themselves (75%);
- They would be ashamed if someone in their family had HIV/AIDS (74%);
- They would feel ashamed if they were infected with HIV (72%); and
- HIV is a punishment for bad behavior (64%)

Enacted stigma (discrimination) is also high. About 56% report that people suspected of having HIV and AIDS are treated differently in their community. About 38% report that they know someone who was abandoned by spouse; 32% report knowing someone who was isolated in the household and 29% report knowing someone who lost customers due to this suspicion.

Monitoring Table (4 of 4) [table 8]
Risk: Men and women (16-49 years)
Behavior: HIV testing

INDICATORS	MONITORING		
	2005 (N= 3506)	**2006** (N=2197)	**Sig. by Year**
BEHAVIOR/USE			
Reported knowing HIV status	20.2	24.1	**
OPPORTUNITY			
VCT Availability	42.0	32.0	***
Social Norms	28.0	27.4	NS
ABILITY			
Social Support	29.1	28.7	NS
Self-Efficacy	48.3	46.5	NS
MOTIVATION			
Outcome Expectation	54.1	49.1	**

Notes:
NS = Not significant, * = p<0.05, ** = p<0.01, *** = p<0.001
- Adjusted for all population characteristics

Evaluation Table (3 of 3) [table 9]
Risk: Men and women (16-49 years)
Behavior: HIV testing

INDICATORS	EVALUATION				
	2005	**2006**			
	Reference (N=3506)	**None** (N=585)	**Low** (N= 707)	**High** (N=905)	**Sig. by Exposure**
BEHAVIOR/USE					
Reported knowing HIV status	20.2[a]	14.5[b]	26.6[c]	28.2[c]	**
OPPORTUNITY					
VCT Availability	42.0[a]	31.3[b,c]	29.0[b]	34.6[c]	***
Social Norms	28.0[a]	26.9[a]	28.4[a]	28.4[a]	NS
ABILITY					
Social Support	29.1[a]	30.1[a]	29.7[a]	29.7[a]	NS
Self-Efficacy	48.[3a]	45.8[a]	47.6[a]	48.5[a]	NS
MOTIVATION					
Outcome Expectation	54.1[a]	50.4[a,b]	46.1[b]	50.6[a,b]	**

Notes:
NS = Not significant, * = p<0.05, ** = p<0.01, *** = p<0.001
- Numbers that share the same subscript are not statistically significantly different from one another while numbers that do not share the same letter are different.
- Adjusted for all population characteristics

Monitoring Analysis (4 of 4) and Evaluation Analysis (3 of 3)

Table 8 and 9 show Monitoring and Evaluation results for ever testing for HIV among respondents ages 16 years and above from the 2005 and 2006 surveys. The monitoring table displays proportions for key HIV testing behavior and its determinants. These proportions are adjusted for different sample characteristics in the two surveys (i.e. age, marital status, education, socio-economic status, and place of residence). Asterisks indicate a statistically significant difference in reported behaviors over time.

With this in hindsight, table 8 shows that the percentage reporting "ever testing for HIV" increased significantly from 20% in 2005 to 24% in 2006. The table also shows that perceived availability of VCT services, and perceived benefits (outcome expectations) of HIV testing declined significantly between the two years. In addition, social norms, social support, and self efficacy remained unchanged during this period.

Table 9 represents the association between behavioral trends i.e. knowledge of HIV status, its determinants and exposure to PSI's New Start communication campaigns. Column two shows proportions for the behavioral indicators from 2005, which serves as the reference point. Columns two to five classify respondents according to their level of exposure to PSI's communication campaign promoting uptake of VCT; based on the level of exposure.

Exposure was measured through recall of messages. Low exposure category shows individuals who recall only one message, medium exposure group includes those recalling 2 messages, and the high exposure column shows people reporting 3 or more messages. The types of New Start VCT communication messages included**:**

- Take control. Find out your HIV status today;
- Do you know your HIV status;
- Get Real. Find out your HIV status today;
- It is important to Know your status early;
- It is important to know HIV status as a couple;
- It is important to know status whether you are positive or negative;
- It is important Know your HIV status before marriage ;
- It is important to now your HIV status before having a baby; and
- I know my HIV status, I am in control.

Analysis of ever testing and exposure to PSI's New Start communication campaigns show a positive impact on ever testing suggesting that individuals with at least low exposure i.e. low recall of messages are likely to report uptake of VCT services (e.g., 15% vs. 27% and 28%, no exposure to low and high exposure for respondents ever testing for HIV infection.

There is no positive effect of communications on determinants of uptake of HIV testing and counseling.

Segmentation Table (3 of 3) [table 10]
Risk: Men and women (16-49 years)
Behavior: Stigma and knowledge of HIV status

INDICATORS	Behavers N= (579)	Non-Behavers N=(1618)	Odds Ratios	Sign
(scales 1 to 5 ; 1 strongly disagree, 5 strongly agree)				
Have no fear of casual transmission	47%	36%	1.49	**
	Mean	**Mean**		
Shame and blame- community	3.82	3.81	-	ns
Shame and Blame – Individual	3.35	3.52	1.56	**
Enacted Stigma (Discrimination)# (1,0 categorical responses)	29%	26%	0.78	*
Population Characteristics				NS
Age	Young people are more likely to test for HIV compared to older people.		0.74	**
Sex (females)	Females are more likely to uptake HIV testing and counseling compared to their male counterparts		1.20	*
Education				NS
Marital Status				NS
Place of residence (Rural vs. urban)	People residing in rural areas are less likely to report uptake of testing and counseling services compared to those in the urban		0.61	**
Socioeconomic status (low vs. non-low)	Individuals in high socioeconomic bracket are more likely to uptake testing and counseling services compared to those in low socio-economic status		0.74	**

Notes:
NS = Not significant, * = $p<0.05$, ** = $p<0.01$, *** = $p<0.001$
- Adjusted for all population characteristics

Segmentation Analysis (3 of 3)

Tables 10: present 'segmentation analyses for knowledge of HIV status. The segmentation is carried out as follows: at risk population (all adults, 15 years and above) is divided into a group of 'behavers' (those who report knowing HIV status) and 'non-behavers' (those who never tested for HIV). The behavers and non-behavers are then characterized in terms of dimensions of stigma (behavioral determinants, using the PSI Behavior Change Framework; finally, the behavers and non-behavers are also described in terms of a set of demographics.

Again, two types of data are reported in these columns. The percentages reporting knowledge of HIV status and those who do not. The other values (between 1 and 5) represent the mean score of responses to a scaled question in which 1 = disagree strongly, and 5 = agree strongly. Values of 2.5 and above correspond to agreement (higher values signify stronger agreement) while values of below 2.5 correspond to disagreement (lower values signify stronger disagreement).

Three dimensions were seen to be statistically significant determinants of knowledge of HIV status – lack of fear of casual transmission, shame and blame at individual level and enacted stigma.

Respondents who reported higher levels of lack of fear of casual transmission were more likely to report ever testing for HIV Similarly, respondents with lower levels of shame and blame were more likely to test for HIV. Furthermore, those with higher levels of awareness of acts of discrimination were more likely to report ever testing for HIV.

Recommendations

The trends in behavior change, the effect of exposure to PSI communication campaigns, and segmentation analysis provide evidence that programmers should consider in planning future activities. Differences between users and non-users, consistent users and inconsistent users, etc. should be examined and knowledge of the target beneficiaries deepened through follow-up qualitative research at the community level. Qualitative follow up is also important to help develop scales items that are used to measure current and upcoming determinants of behaviors. It has been noted that some scale items need to be broadened so that they are more sensitive. Ensuing are recommendations to consider:

a) Condom use

Overall, the general approach to increasing consistent condom use appears to be effective. Reported consistent condom use is going up, particularly for condom use at last sex with non-regular partners. . The data suggest that:

- Program investments need to shift heavily to enhancing "consistent" condom use and use in regular relationships. At the same time consistent use within non-regular relationships needs to be maintained (80% of respondents report using condoms consistently in non-regular relationships). For consistent condom use in regular relationships the following are some of the suggested focus areas:
    - Social support to use condoms in regular relations also needs to be promoted. The program needs to continue using an integrated communication approach i.e. interpersonal communication initiatives and mass media campaigns to promote condom use in regular relationships and to highlight importance of consistent condom use.
    - Current focused interpersonal communication initiatives to enhance individual ability (self efficacy) to use condoms correctly and consistently need to continue and be expanded.
    - To consider outcome expectations personal beliefs such as 'condoms reduce sexual pleasure for me' and 'sex can be just as enjoyable with condoms as without' need to be changed.
- Considering that knowledge levels are already high the program needs to put less emphasis and investment on changing these levels and instead focus on increasing personal risk perception within the context of different relationship types.
- Breadth of PSI bubbles, particularly self efficacy, and outcome expectations need to be improved and qualitative research needs to be undertaken to respond to this.

Within non-regular relationships, the suggested maintenance and/or improvement of current levels of consistent use need to consider improving scores on self efficacy and social support. Though social support has shifted significantly between the two timeframes it remains lower compared to the rest of the determinants.

In addition, observed changes in consistent use of condoms were related to high exposure. It is recommended that high exposure is maintained with a focus on the afore-mentioned determinants.

For both non-regular and regular relationships the program needs to consider tackling risk perception. These data show that very few individuals perceive themselves to be at high risk of HIV infection in any of these relationships. Activities heightening self risk perception are important to motivate individuals to adopt safer sexual practices.

b) Cross generation sex

A significant percentage (15%) of all young women, ages 15 to 24 age group, are engaging in cross generation sex suggesting that this practice deserves a place in HIV prevention efforts. The segmentation analysis shows that there are a number of behavioral determinants influencing cross generation practice among young women. Future behavior change communication efforts should be designed with these in mind.

- Activities and programs should consider focusing on improving young women's ability to negotiate sexual advances by older men (self efficacy), as well as reducing likes of cross-generation sexual relationships (attitudes). These two factors seem to influence practice of cross generation relationships among all female youths (i.e. sexually active and never had sex young females).
- In addition to these two factors the program should also consider reducing perceived positive benefits associated with cross generation sex (outcome expectations) given the high odds ratios.

c) HIV testing

Over the last year, more people have engaged in VCT. However, behavioural determinants of 'knowledge of status' have not shifted significantly. PSI's communication activities must continue to focus on addressing these determinants. Prioritization should consider levels of determinants in the monitoring table among other factors. It is important to note that behavioural determinants are not likely to shift within a 12 month time span. However, there is a strong link between exposure to PSI's campaigns and uptake of VCT services.

The findings also showed that individuals with stigmatizing attitudes are less likely to uptake VCT services (The findings could also be interpreted to mean that those who know their HIV status are more likely to be less stigmatizing). However, it is absolutely essential that stigma and discrimination be addressed to enhance uptake of these services.

d) Stigma and discrimination

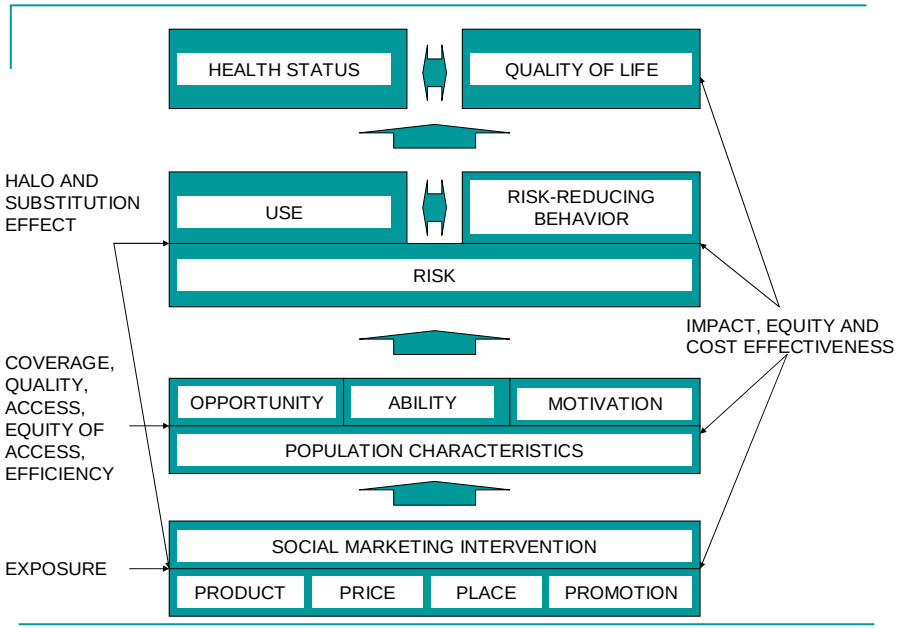
The data shows very high levels of stigma and discrimination. Program intervention is urgently needed to reduce fear of casual transmission, to reduce shame and blame of people with HIV and AIDS. The program needs to create an environment supportive of people with HIV and AIDS. This can be achieved by disseminating correct information about HIV and AIDS since most of the items for fear of casual transmission of the HIV virus are really about misconceptions that people have.

Appendix A: Population Characteristics

The following table summarizes the characteristics (gender, age, marital status, education, and place of residence) of the sample in the 2006 survey.

BACKGROUND CHARACTERISTICS		Percent (N=2215)
Gender		
	Female	48.2
	Male	51.8
Age		
	15 - 19	25.0
	20 - 24	16.7
	25 - 29	27.2
	30 - 34	12.9
	35 - 39	8.6
	40 - 44	5.7
	45 - 49	3.8
Education Level Attained		
	Primary	22.2
	Secondary	65.6
	University or higher	10.4
	None	1.9
Marital Status		
	Married	34.0
	Never married	51.0
	Widowed	6.6
	Divorced	7.3
	Separated	1.1
Place of Residence		
	Rural	50.4
	Urban	49.6

Performance Framework for Social Marketing



This study design is guided by PSI's PERForM framework. PERForM describes the social marketing research process, identifies key concepts important for designing and evaluating social marketing interventions and mirrors the four levels and concepts in the logical framework.

The top level consists of the goal of social marketing for any health promotion intervention, namely improved health status and/or for interventions relating to coping with sickness or disability, quality of life.

The second level consists of the objectives of social marketing stated as product or service use on the left side and/or other risk-reducing behaviours that do not involve the use of a product or service on the right side. The adoption or maintenance of these behaviours in the presence of a given risk or need for health services is causally antecedent to improving or maintaining health and or quality of life.

The third level consists of the determinants of PSI Behaviour Change framework summarised in terms of opportunity, ability and motivation that may differ by population characteristics such as age and sex. The fourth level consists of the characteristics of the social marketing intervention.