

**Tanzania (2008) HIV/AIDS among
Youth 15 – 24 in Tanzania
Second Round**

T h e P S I D a s h b o a r d

**Dar es Salaam, Tanzania
September, 2008**

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2008

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Summary

Background & Research Objectives: This is the second TRaC study in Tanzania that tracks indicators related to the health of 15-24 year-olds with respect to HIV. This survey also includes segmentation analysis, which identifies the drivers / inhibitors of behavior by dividing the at-risk population into those that perform the desired behaviors, and those who do not, in order to focus on those factors that make these two groups different. It also includes an exposure evaluation, which is meant to assess the impact of PSI/Tanzania – behavior change communications (BCC) activities in relation to HIV prevention.

Description of Intervention: PSI/Tanzania is working to prevent HIV disease through the social marketing of *Salama Regular*, *Salama Studs*, *Salama 3 Bomba*, *Familia* and *Care* female condoms.

Methodology: The sample size for the survey was 2,010 males & females aged 15-24. A nationally representative sample was attained and distributed across regions through a multistage cluster random sampling. A total of 63 wards (clusters) were randomly selected using probability proportional to size sampling. In each selected ward, the data collectors would visit the ward center and used the ward village roster to randomly select villages to conduct interviews. Within the selected villages, the data collector would spin a bottle to determine the direction to conduct the first interview. Once the direction is determined data collectors would walk towards the edge of the village and start from the edge walking to the center of the village.

If a household member qualified for an interview, and is present, the interview was conducted. If the qualifying member of household was not present at the time, the data collector would note the location of the household and make three call backs. A systematic skip pattern of three households was used to select the next household. The data collector would then proceed to the next closest household, provided it has not been visited by another data collector. If a visited household does not qualify for either interview, the data collector will mark its door with an 'X'. If an interview is completed, the door will be marked with an '√'. If the respondent is missing and the house is to be revisited, it will be marked with an 'O'.

Data was collected through face-to-face interviews, using PDAs to eliminate data collector's errors, lengthy data-entry, and data cleaning, and ultimately ensuring a high-quality dataset. Data collectors received two weeks of training on research ethics, methodology, sample selection and the use of PDAs. The survey instrument was a Kiswahili questionnaire, which was pre-tested with 200 respondents. The data was analyzed in SPSS 16.

Main Findings

The monitoring table highlights that:

- For youth (both males and females) the average age at first sexual encounter has decreased from 16 years in (2007) to 15 years in (2008).
- Condom use during first encounter with any partner among youth 15 – 24 who ever had sex has significantly increased from 38% in (2007) to 42% in (2008).
- Condom use during last encounter with any partner among youth who ever had sex had significantly improved from 65% in (2007) to 72% in (2008).
- The average number of partners among youth who ever had sex has increased from 3.50 in (2007) to 5.78 in (2008), while the average number of sexual partners youth reported to ever had in the past 12 months has also increased from 0.30 in (2007) to 0.49 in (2008).

The results of segmentation analysis indicate that:

- Those who have reported to have used a condom at last sex have higher self efficacy for condom use than those who did not use, and they have more confidence in using a condom than those who could not use a condom.
- Also, those who used a condom at last sex are more likely to have less locus of control than those who did not use a condom.
- Surprisingly, those who did not use a condom reported higher perceived availability of condoms than those who did use a condom.

Exposure evaluation analysis indicates that:

- Exposure to PSI activities did not result in significantly improved health behaviors between baseline and follow-up, although there were some differences in behavior at follow-up between those who were and those who were not exposed to PSI activities.
- Exposure to PSI activities did have an impact on some determinants of behavior. For example, exposure to PSI activities was correlated with a greater perceived availability of condoms and increased emotional social support and social support related to condom use. Exposure was also associated with reported decreased perceived social norms related to pressures to have sex.

Programmatic Recommendations:

- To successfully promote condom use, it is recommended that PSI/Tanzania work on improving self-efficacy for condom use (such as giving young people confidence in their ability to insist on condom use with a partner, carry condoms, ask for condoms in a shop, correctly use a condom).
- To successfully promote partner reduction, PSI/Tanzania should target the less educated, and work on improving self-efficacy for being faithful (giving people confidence in their ability to remain faithful with one partner, sustain long-term relationships, and resist sex with others).
- Continued emphasis should be placed on changing the perception of condoms making sex less pleasant. In this respect, the protective qualities of condoms should be highlighted to clients.

Monitoring Table: 1 Results regarding condom use, partner's reduction, condom purchase and related determinants among youth 15 – 24, Tanzania, 2007 and 2008.

Risk Group: Never married Males and Females 15-24 years

Behaviors: Condom use in non – marital sex, Partner reduction

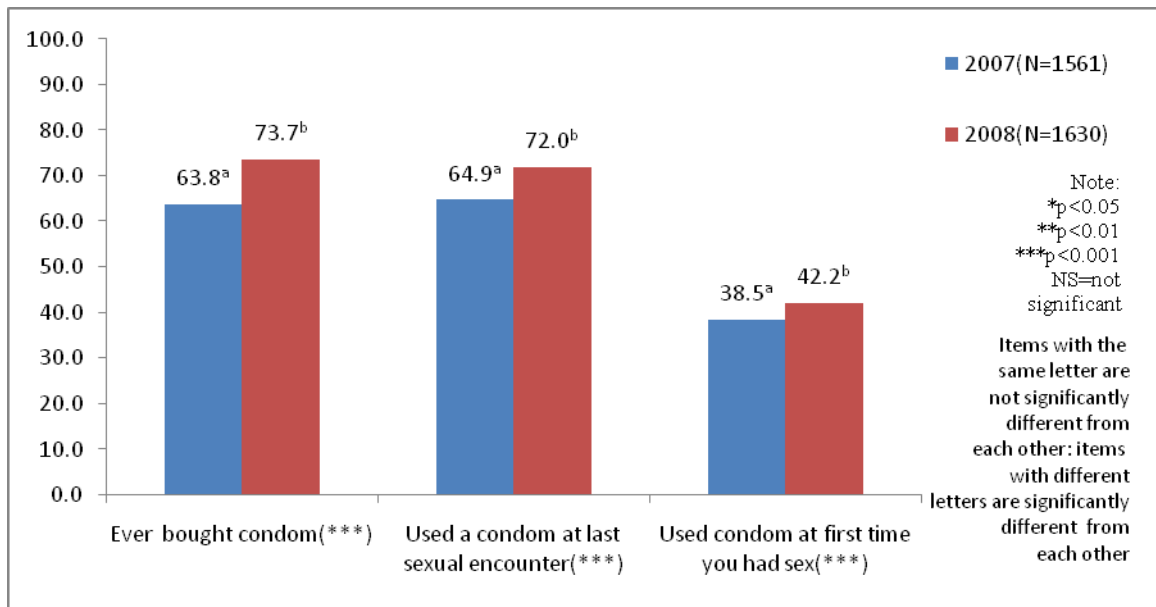
MONITORING TABLE	2007	2008	
INDICATORS	N=1561	N=1630	Sig
Age at first sexual encounter (Among those who ever had sex)	16.0	15.2	***
Ever bought condom (Among those who ever had sex)	63.8%	73.7%	***
Used a condom at last sexual encounter (Among those who ever had sex)	64.9%	72.0%	***
Used condom at first sexual encounter (Among those who ever had sex)	38.5%	42.2%	***
Had one or more partners in the past 12 months (Among those who ever had sex)	30.5%	48.7%	***
	Mean	Mean	
Number of partner ever had in your life (Among those who ever had sex)	3.50	5.78	***
Opportunity			
Availability, condoms (range 1-4; higher score means higher condom availability perception) ¹	1.66	2.85	***
Brand Appeal, <i>Salama</i> (range 1-4; higher score means higher brand appeal <i>Salama</i> condom) ¹	1.86	2.93	***
Brand Attributes, <i>Salama</i> (range 1-4; higher score means higher perception on <i>Salama</i> brand attributes) ¹	1.94	2.88	***
Social Norms, pressure to have sex (range 1-4; higher score means higher pressure to have sex) ¹	3.48	2.02	***
Social Norms, cross-generational and transactional sex (range 1-4; higher score means higher perception on cross-generation & transactional sex) ¹	3.14	2.10	***
Ability			
Self-efficacy for condom use (range 1-4; higher score means higher self-efficacy for condom use) ¹	2.64	2.26	***
Self-efficacy for abstinence (range 1-4; higher score means higher self-efficacy for abstinence) ¹	1.72	2.92	***
Self-efficacy for being faithful (range 1-4; higher score means higher self-efficacy for being faithful) ¹	2.26	2.64	***
Social Support, instrumental (range 1-4; higher score means higher social support, instrumental) ¹	1.59	3.42	***
Social Support, emotional (range 1-4; higher score means higher social support emotional) ¹	1.68	3.07	***
Social Support, condoms (range 1-4; higher score means higher social support condom use) ¹	2.62	2.19	***

¹ Mean score ranges from 1= strongly disagree, 2= disagree 3= agree 4= strongly agree. Scale items included are listed in the Annex.

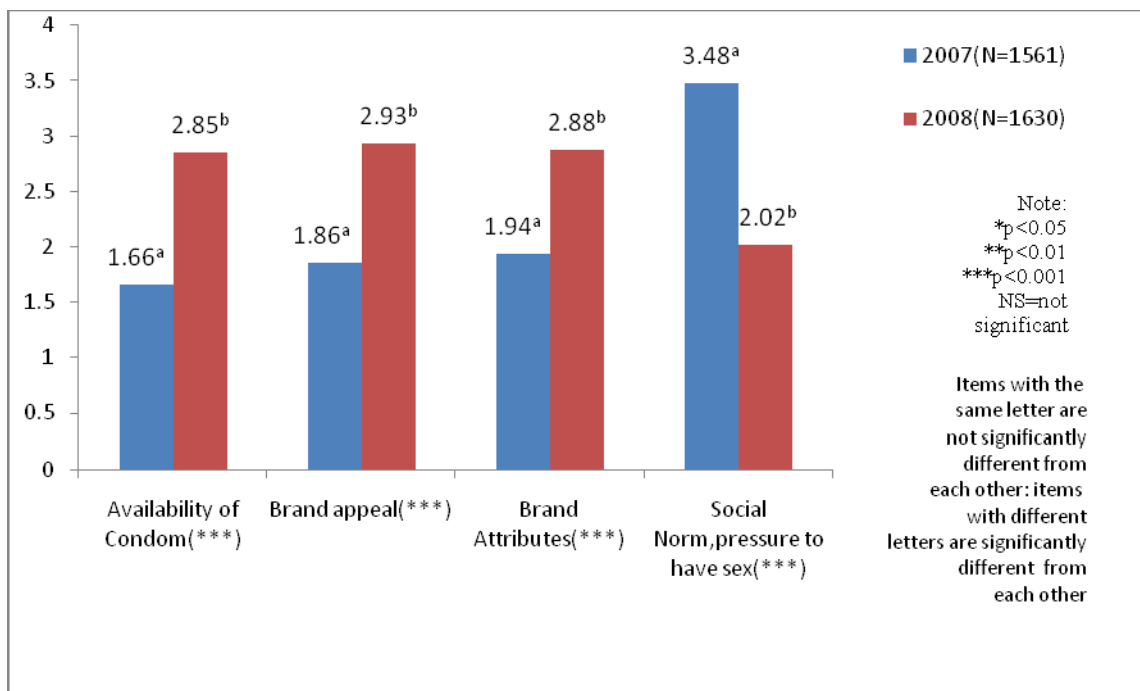
MONITORING TABLE, <i>continued</i>	2007	2008	
INDICATORS	N=1561	N=1630	Sig
Motivation	Mean	Mean	
Attitudes, abstinence (range 1-4; higher score means higher altitude on abstinence) ¹	1.92	3.28	***
Locus of Control (range 1-4; higher score means higher locus of control) ¹	2.52	2.69	***
Beliefs, condom use (range 1-4; higher score means higher beliefs on condom use) ¹	2.96	3.28	***
Beliefs, transmission/ treatment (range 1-4; higher score means higher beliefs)¹			
• You can often tell by looking whether or not someone has HIV/AIDS	3.15	3.57	***
• You cannot get HIV/AIDS if you are faithful to one sexual partner	2.75	3.35	***
• Only immoral people get HIV/AIDS	3.03	3.35	***
• You cannot get HIV/AIDS if you are faithful to one sexual partner	2.03	2.53	***
• Traditional healers can cure HIV/AIDS	3.66	3.56	**
Subjective Norms, abstinence (range 1-4; higher score means higher Subjective norms abstinence) ¹	1.92	3.28	***
Outcome expectations (range 1-4; higher score means higher outcome expectations) ¹	1.27	3.48	***
Threat (range 1-4; higher score means higher threat)¹			
• If I stay faithful to my partner, I am in no danger of getting HIV	2.64	2.76	**
• HIV/AIDS has not really affected the way I behave	1.44	1.74	***
EXPOSURE	%	%	
Ever seen PSI Road show	45%	21%	***
Ever seen PSI Mobile Video Unit (MVU)	35%	13%	***
Population Characteristics:			
Sex (Males aged 15-24)	53%	54%	NS
Mean age (total range 15-24)	20.11	19.91	NS
Secondary education or higher	94%	91%	NS
Marital status (Married youth aged 15-24)	24%	27%	NS
Religion (Christians- Roman catholic)	38%	33%	NS

¹ Mean score ranges from 1= strongly disagree, 2= disagree 3= agree 4= strongly agree. Scale items included are listed in the Annex.

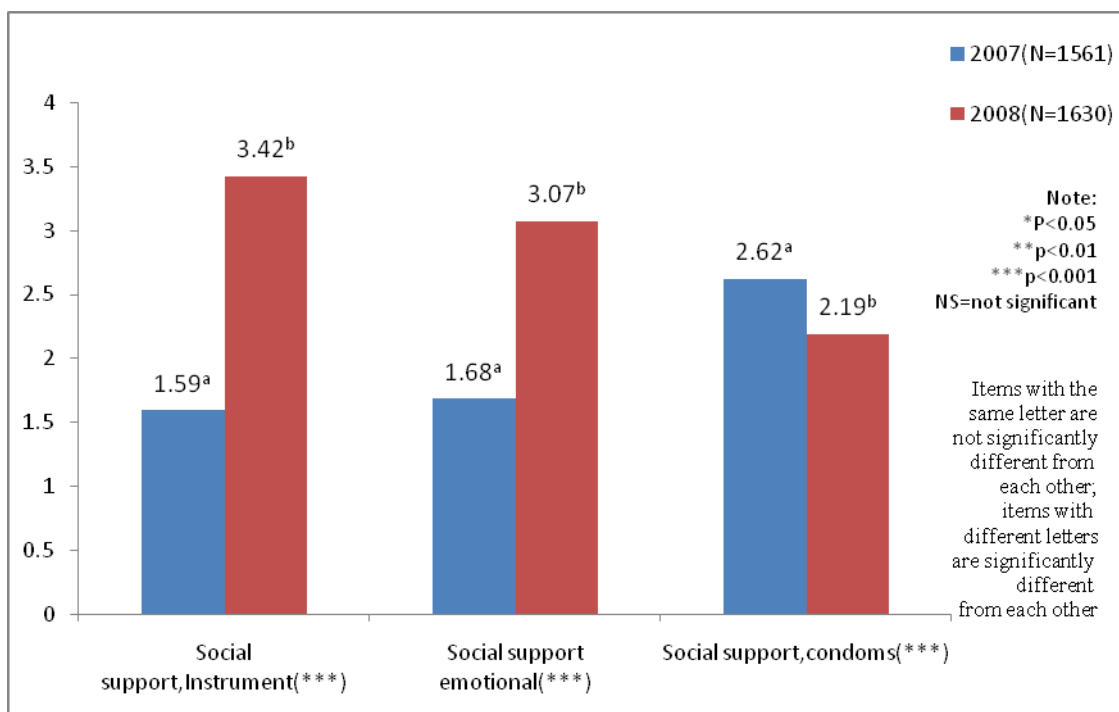
Monitoring Graph 1: Trends over time (%) of condom use with any partners (last and first), condom purchase among youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Monitoring Graph 2: Trends over time in determinants of condom use with any partner among youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Monitoring Graph 3: Trends over time in determinants of condom use with any partner among youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Segmentation Table 1: Number of partners in the last 12 months**Risk Group:** Males and Females, 15-24, who have ever had sex**Behaviors:** Number of partners in last 12 months

	1 or None N=842 (52%)	2 or More N=788 (48%)	ORs	Sig.
Ability	Mean	Mean		
Self-efficacy, abstinence	2.98	2.88	1.21	**
Social Support, emotional	3.00	3.14	0.81	**
Population Characteristics	Mean	Mean		
Sex (Male is Ref vs. Female)	1.41	1.53	0.59	***
Age (15-24)	20.28	19.57	1.14	***
Education (Secondary and above is ref vs. Primary or none)	89%	92%	0.72	*
Marital Status (Married vs. Single)	19%	32%	0.36	***
Socio-economic Status (High quintile Vs Low quintile) (Mean score range 1-5)	3.10	2.90	1.12	***

Mean scores for scales/ items range (1-4): Strongly disagree (1), Disagree somewhat (2), Agree somewhat (3), and strongly agree (4).

* $p < .05$, ** $p < .01$ *** $p < .001$ NS= Not significant

Hosmer & Lemeshow test; 0.869

Chi square= 3.867,

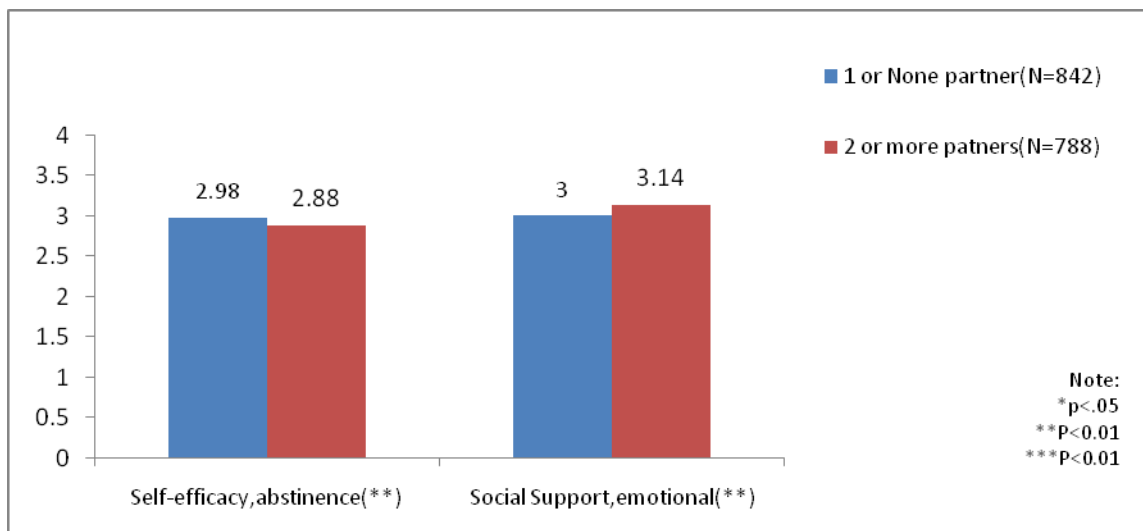
Block significance= <0.000

Nagelkerke R Square; 0.096

Cox & Snell R Square; 0.072

Only significant results are presented.

Segmentation Graph 1: Behavioral Determinants of partner reduction among Youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Segmentation Table: 2 Condom use at last sex with any partner**Risk Group:** Males and Females, 15-24, who have ever had sex**Behaviors:** Used a condom at last sex

	Used condom N=896 (71%)	Did not use N=368 (29%)	ORs	Sig.
Opportunity	Mean	Mean		
Availability, condoms	2.80	2.92	0.84	*
Social Norms, cross-generational and transactional sex	2.08	2.19	0.89	*
Ability	Mean	Mean		
Self-efficacy for condom use	2.68	2.54	1.15	**
Social Support, emotional	3.10	2.89	1.22	**
Motivation	Mean	Mean		
Locus of Control	2.66	2.77	0.82	**
Population Characteristics				
Marital Status (Married vs. Single)	0.20	0.45	0.30	***
Socio-economic Status(low quartile Vs higher quartiles)	2.94	3.11	0.90	*
Religion (Muslim vs. non Muslim)	0.35	0.42	0.75	**
Media Access (scale of 0-100)	48%	46%	1.35	*

Mean scores for scales/ items range (1-4): Strongly disagree (1), Disagree somewhat (2), Agree somewhat (3), and strongly agree (4).
 * $p < .05$, ** $p < .01$ *** $p < .001$ NS= Not significant

Hosmer & Lemeshow test; 0.215

Chi square=10.775,

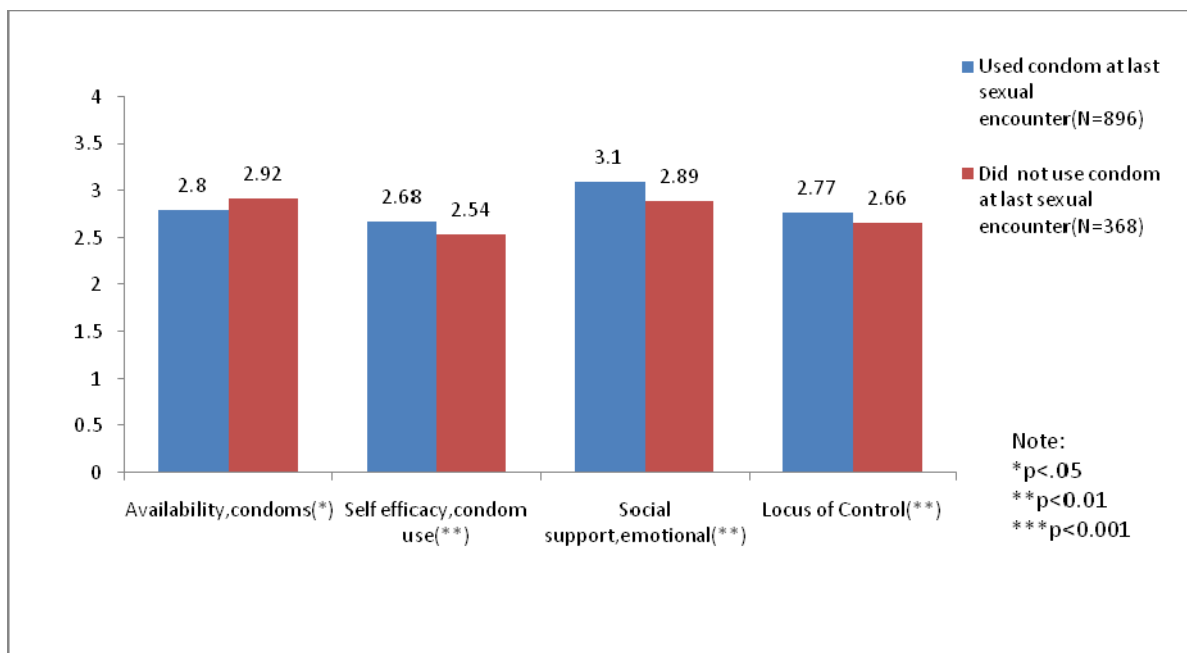
Block significance= <0.000

Nagelkerke R Square; 0.117

Cox & Snell R Square; 0.082

Only significant results are presented.

Segmentation Graph 2: Behavioral Determinants of condom use among youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Exposure Table: 1 Association between exposure¹ to the PSI-sponsored intervention, condom purchase, condom use, partners reduction and related determinants among youth 15 - 24, Tanzania, 2007 and 2008.

Risk Group: Youth aged 15- 24 who have ever had sex

Behavior: Condom Use and Condom Purchases

Behavior	Baseline (2007) N=941	Follow-up not exposed (2008) N=1519	Follow-up exposed (2008) N=491	Sig.
	%	%	%	
Condom use at last sex	65.0 ^a	70.8 ^b	71.3 ^b	*
Ever bought condom	60.4 ^a	72.0 ^b	74.2 ^b	***
Condom use at first sex	34.4 ^a	42.4 ^b	41.1 ^b	*
	Mean	Mean	Mean	
Number of partners in the past 12 months	0.22 ^a	0.49 ^b	0.41 ^c	***
Opportunity	Mean	Mean	Mean	
<i>Availability, condoms</i>	1.92 ^a	2.12 ^b	2.27 ^c	***
<i>Brand Attributes, Salama</i>	2.18 ^a	2.09 ^b	2.16 ^a	*
<i>Social Norms, cross-generational and transactional sex</i>	3.09 ^a	2.09 ^b	2.07 ^b	***
<i>Social Norms, pressure to have sex</i>	3.39 ^a	2.05 ^b	1.91 ^c	***
Ability	Mean	Mean	Mean	
Self-efficacy for condom use	2.34 ^a	2.71 ^b	2.42 ^a	***
Self-efficacy, abstinence	1.76 ^a	2.06 ^b	2.07 ^b	***
Social Support, instrumental	1.67 ^a	1.51 ^b	1.72 ^a	***
<i>Social Support emotion</i>	1.72 ^a	1.89 ^b	2.01 ^c	***
<i>Social Support, condoms</i>	1.77 ^a	1.73 ^a	1.95 ^b	***
Motivation	Mean	Mean	Mean	
Beliefs, condom use	2.94 ^a	3.32 ^b	3.16 ^c	***
<i>Attitudes, abstinence</i>	1.73 ^a	1.60 ^b	2.07 ^c	***
Locus of control	2.44 ^a	2.69 ^b	2.65 ^b	***
<i>Outcome expectations</i>	1.32 ^a	1.48 ^b	1.60 ^c	***
Threat	Mean	Mean	Mean	
• Possibility of getting HIV does not disturb me	2.38 ^a	2.86 ^b	2.49 ^a	***
• People like me are not at risk of getting HIV	2.29 ^a	2.58 ^b	2.42 ^c	***
• If I stay faithful to my partner, I am in no danger of getting HIV	1.44 ^a	1.73 ^b	1.83 ^c	***

¹ Exposure was measured as follows: (1) the reference group consisting of respondents of the baseline study; (2) the “not-exposed” group includes respondents who reported no contacts with PSI/MVU shows and ROAD shows during the follow-up study; (3) the “Exposed” group are those who have ever seen the PSI/MVU and/or ROAD show.

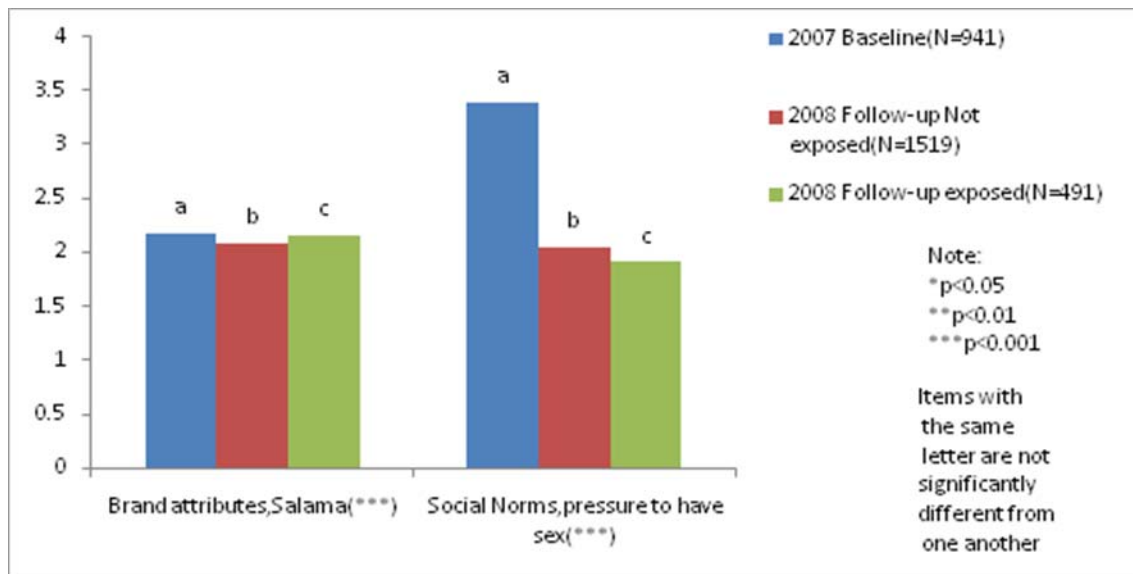
Mean scores for scales/ items range (1-4): Strongly disagree (1), Disagree somewhat (2), Agree somewhat (3), and strongly agree (4).

a,b,c: Proportions and means with different superscripts are significantly different at $p < 0.05$ or better; proportions and means with the same superscript are not significantly different.

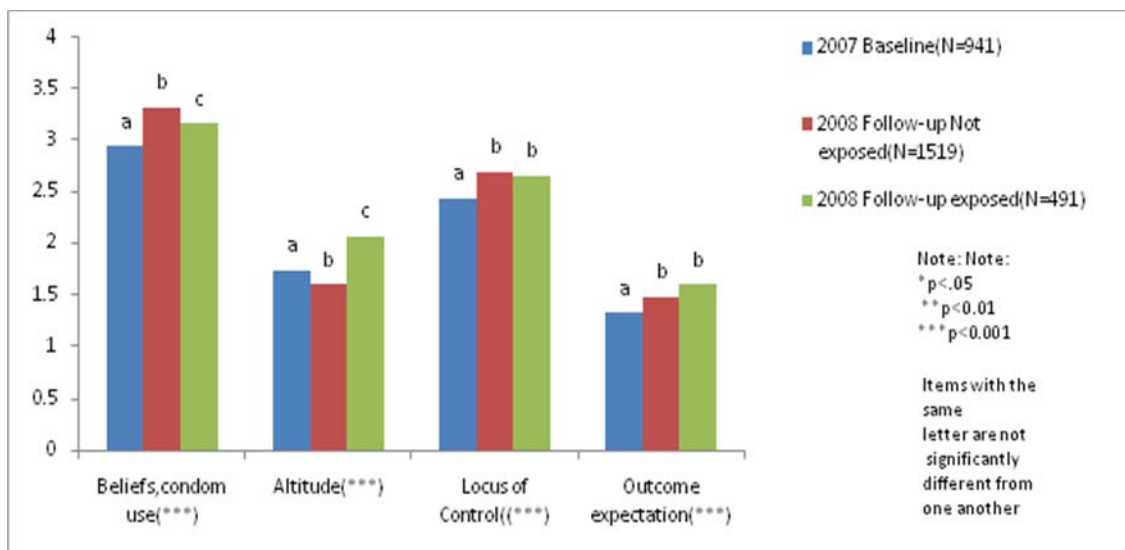
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: Results of UNIANOVA analysis are shown, with controls including socio-demographic variables age, education, marital status, religion and media access.

Evaluation Graph 1: Impact of PSI sponsored Interventions on Determinants Related to Condom use among Youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Evaluation Graph 2: Impact of PSI sponsored Interventions on Determinants Related to Condom use among Youth 15 – 24 who ever had sex in Tanzania, 2007 and 2008



Summary table of program effect

The summary table combines the results from the monitoring and evaluation tables to aid in the interpretation of possible program effect. The monitoring column shows the direction of the indicator as observed on the monitoring table. The evaluation column shows the difference between follow-up not exposed and follow-up high exposure categories, as shown in the Evaluation table.

BEHAVIOR/OAM	Change over time(Monitoring)	Association with program Exposure(Evaluation)	Programmatic Effect
	Trend	Trend	
Indicators			
Ever bought condom	+	-	No Impact
Used a condom at last sexual encounter	+	-	No Impact
Used condom at first time you had sex	+	-	No Impact
Opportunity			
Availability, condoms	+	+	Positive
Brand Appeal, <i>Salama</i>	+	-	No Impact
Brand Attributes, <i>Salama</i>	+	-	No Impact
Social Norms, pressure to have sex	+	+	Positive
Social Norms, cross-generational and transactional sex	+	-	No impact
Ability			
Self-efficacy for condom use	-	-	No impact
Self-efficacy for abstinence	+	-	No Impact
Social Support, instrumental	+	-	No Impact
Social Support, emotional	+	+	Positive
Social Support, condoms	-	+	Positive
Motivation			
Locus of Control	-	-	No impact
Beliefs, condom use	-	-	No Impact
Attitudes, abstinence	+	+	Positive
Outcome expectations	+	+	Positive

Reliability Analysis

Behavior Change Determinants	Study	
	Cronbach's Alpha	Items
OPPORTUNITY		
Availability, condoms	0.90	<ol style="list-style-type: none"> 1. I know where to get Salama condoms 2. I can get Salama condoms within 10 minutes walk 3. Salama condoms are always available at my regular shop 4. Salama condoms are as available as salt 5. Salama condoms are easily available.
Brand Appeal, <i>Salama</i>	0.89	<ol style="list-style-type: none"> 1. Salama is the best condom brand 2. I trust Salama condoms 3. I like Salama advertising and packaging 4. Salama condoms are for young people like me 5. Salama condoms help make exciting.
Brand Attributes, <i>Salama</i>	0.90	<ol style="list-style-type: none"> 1. Salama is the highest quality condom 2. The instructions for Salama condoms are easy to understand 3. It is easy to remove Salama condoms from the packet 4. I like the taste of Salama condoms 5. I like the smell of Salama condoms
Social Norms, pressure to have sex	0.77	<ol style="list-style-type: none"> 1. Boys pressure each other to have sex 2. A boy needs to have sex to be considered a 'real man' 3. Having sex early will help prepare you for marriage 4. Girls pressure each other to have sex 5. Girls are usually pressured by boys to have sex 6. It is never acceptable for a man to force a woman to have sex
Social Norms, cross-generational and transactional sex	0.90	<ol style="list-style-type: none"> 1. It is common for young girls to have sexual experiences with older males 2. It is common for teachers/professors to have sex with their students 3. It is common for older men to have sex with younger girls 4. It is common for girls to accept gifts, money or favors' in exchange for sex.
ABILITY		
Self-efficacy for faithfulness	0.89	<ol style="list-style-type: none"> 1. I would find it difficult to be faithful to my partner if other boys/girls wanted to have sex with me 2. It is impossible to be faithful to one person for your entire life 3. I would find it difficult to have a long-term relationship, because I would want to have sex with other people
Self-efficacy for abstinence	0.85	<ol style="list-style-type: none"> 1. I sometimes find it difficult to refuse sex, even when I don't want to have it 2. Even if my friends were pressuring me to have sex, I could easily say abstain 3. I can refuse to have sex with my boy/girlfriend, even if he/she threatens to leave me 4. I can easily resist pressure to have sex from my boy/girlfriend, even if I cared about him/her 5. I can always refuse sex with a partner when there is no condom available
Social Support, Instrumental	0.86	<ol style="list-style-type: none"> 1. I get condoms from my friends 2. I give condoms to friends 3. I could get condoms from my parents 4. If I was too embarrassed to buy a condom in a shop, my friends would buy it for me 5. If a friend was too embarrassed to buy a condom in a shop, I would buy it for him or her

Social Support, emotional	0.81	<ol style="list-style-type: none"> 1.If I have problems in my relationship with boy/girlfriend, I can go to my religious leader for advice and support 2.If I have problems in my relationship with my boy/girlfriend I can go to my best friend for advice and support 3.If I have problems in my relationship with my boy/girlfriend I can go to my brother/sister for advice and support 4.If a friend had many sexual partners, I would warn him or her about the risks
Social Support, condoms	0.70	<ol style="list-style-type: none"> 1. My parents support condom use 2. My religious leaders disapprove of condom use 3. Teachers approve of condom use 4. My local health worker encourages condom use
Self-efficacy for condom use	0.89	<ol style="list-style-type: none"> 1. I can always insist condom use with my sexual partner 2. I can always carry a condom with me, in case I need it 3. I can confidently ask for a condom in a shop 4. I can stop before sex to use a condom, even if I am aroused
MOTIVATION		
Beliefs, condom use	0.79	<ol style="list-style-type: none"> 1. Free condoms are of poorer quality than those you pay for. 2. I think condoms that are more expensive than Salama are of higher quality than Salama 3. Condoms break often 4. Condoms are porous 5. Condoms are harmful 6. Condoms are impregnated with HIV 7. Condoms get stuck in the vagina
Attitudes, abstinence	0.86	<ol style="list-style-type: none"> 1.I believe young people of my age should wait until they're older to have sex 2.It is cool to wait until marriage to have sex 3.I believe people should wait until marriage to have sex
Locus of Control	0.76	<ol style="list-style-type: none"> 1. It is up to the will of God whether or not I get HIV. 2. Whether or not I get HIV is a matter of fate or luck 3. My partner controls whether or not we use a condom 4. I can get HIV/AIDS even if I do my best to prevent it 5. I can do nothing to prevent HIV.
Beliefs, transmission and treatment	0.71	<ol style="list-style-type: none"> 1. Condoms are not necessary with a trusted partner 2. You can often tell by looking whether or not someone has HIV/AIDS 3. Mosquito bites often spread HIV 4. Only immoral people get HIV/AIDS 5. Highly religious people will not get HIV 6. You cannot get HIV/AIDS if you are faithful to one sexual partner 7. Traditional healers can cure HIV/AIDS 8. ARVs can cure HIV/AIDS
Outcome expectations	0.80	<ol style="list-style-type: none"> 1. Having sex without a condom will increase my chances of getting HIV 2. Condom use is an effective way to prevent HIV/AIDS 3. Being faithful to one partner is the most practical way to prevent HIV 4. Abstinence is the most practical way to prevent HIV 5. Condom use is the most practical way to prevent HIV/AIDS