SOCIAL MARKETING RESEARCH SERIES

Belize (2007): HIV/AIDS TRaC Study Evaluating Condom Use among MSM in Belize District, Corozal, and Orange Walk
First Round

The PSI Dashboard

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PSI Research and Metrics
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Table of Contents

Executive Summary **1**

Acknowledgements *1*

Background and Research Objectives *1*

Description of Intervention *1*

Methodology *1*

Results and Programmatic Recommendations *2*

Monitoring Table **3**

Monitoring Analysis **4**

Segmentation Table **5**

Programmatic Recommendations **6**

Appendix 1: Population Characteristics **10**

Appendix 2: Methodology **11**

Appendix 3: Performance Framework for Social Marketing **13**

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Executive Summary

Acknowledgements We would like to thank the donors, KfW, CARICOM and Options for their funding support for this report. We also want to acknowledge CID Gallup for their collection of data and fieldwork, as well as data processing. We thank Kim Longfield of PSI/Washington Research and Metrics for her technical assistance on this report, as well as Jorge Rivas Sierra and Giovanni Melendez (both of PSI/Guatemala), and Clare Barrington (PSI Research Consultant). Justin Buszin (PSI Research Consultant) is the author of this report.

Background and Research Objectives This Social Marketing Research Series (SMRS) report presents findings of the first wave of the TRaC survey for Belize MSM (men who have sex with men). TRaC surveys provide actionable evidence for social marketing decision making as well as helping to measure the impact of various project interventions and activities. The survey, which was disseminated in 2007, serves as a tool to inform programming by routinely collecting data from cross-sections of populations at risk for HIV and other adverse health outcomes. This survey aimed to 1) monitor the levels and trends evident in key behavior, risk, OAM (opportunity, ability, and motivation) constructs, and exposure to PASMO's activities among MSM over time, and 2) enable segmentation analysis to determine which OAM and population characteristics have the greatest influence on MSM's decisions to use condoms.

Description of Intervention The Pan-American Social Marketing Organization (PASMO) is a non-profit non-governmental organization (NGO) that specializes in social marketing of AIDS prevention and family planning products and services. PASMO has been operating in Belize since 1999. PASMO is implementing program targeting MSM in Belize district, Cayo, Stann Creek, Corozal, and Orange Walk, Belize. The purpose of the program is to promote safer sexual behavior through interpersonal communications (discussion groups and outreach) and mass media activities while using a high coverage social marketing (SM) strategy to increase access to and availability of condoms, measured through improvements in perceived product availability and brand appeal. The program aims to not only increase condom use among MSM, but to also increase their ability and motivation to adopt key safer behaviors.

Methodology This baseline study consisted of a representative sample of the target population living in priority program areas drawn in 2007. An RDS methodology (respondent driven sampling) was employed. In total 225 MSM were required. Due to the difficulty of applying RDS or time location to recruit this population, only 80 MSM were interviewed.

Interviewers struggled to acquire the necessary sample size because this appears to be an especially hidden population, with few in-group networks and no specific places where they congregate. The study sample was distributed proportionally across the five study cities according to population size The questionnaire included modules in the following areas: population characteristics, OAM determinants of behavior including output level logframe indicators, behavior as specified by purpose-level logframe indicators, and exposure to PASMO interventions. The PASMO questionnaire was pre-tested in Belize City, using about 25 cognitive interviews with members of the target group who did not participate in the larger study. Odds ratio of involvement in the behavior of interest are reported for each significant explanatory variable. Analysis of variance (ANOVA) is employed to estimate the adjusted means or proportions of each explanatory variable by the behavior of interest. Each explanatory variable is assessed in ANOVA with the behavior of interest serving as the group variable and other significant explanatory variables serving as covariates.

Results and Programmatic Recommendations Condom use at last sex with any type of partner is quite high, usually over 85%. Consistent condom use, defined as always using a condom with a partner in the last thirty days, is lower by around 10%. Consistent condom use in the last thirty days with any male partner is only 64%. Use of water-based lubricants is low and only a third of MSM sought medical treatment the last time they had an STI. Although few sought medical treatment, 94% know a place where they can get an HIV test. Multiple partnership is common; 95% of MSM had more than one partner in the last 12 months, and the mean number of occasional partners in the last 12 months was 3.83. Just over half of the MSM who had participated in a PASMO activity used a condom at last sex. A third of MSM used *Vive*, the PASMO-branded and marketed condom at last sex, and a quarter of MSM cited *Vive* as their favorite condom brand. Due to the very low sample size, only one determinant was found to significantly differentiate condom users from MSM who did not use a condom at last sex. Those who were condom users were found to express a much higher internal locus of control compared to condom non-users. Specifically, MSM who said condom use was up to them or proposed using a condom during their last sexual episode were 4 times more likely to use a condom at last sex compared to those who did not use a condom at last sex.

Monitoring Table

Trends in behaviors and OAM determinants of condom use among MSM in Belize District, Corozal and Orange Walk. Belize, 2008

Risk: MSM aged 18-40 who have had anal sex with another man in the last 30 days

Behavior: Condom use at last sex with any male partner

INDICATORS	2007 (N=80)
BEHAVIOR/USE	%
^Condom use at last sex with regular partner[1]	85.7
^Condom use at last sex with occasional partner[2]	94.4
^Condom use at last sex with any male partner	83.8
^Consistent condom use in last 30 days with regular partner[1]	74.4
^Consistent condom use in last 30 days with occasional partner[2]	84.6
^Consistent condom use in last 30 days with any male partner	63.6
Had received condoms in last 12 months	65.0
^Used water-based lubricant last time had sex	40.0
^Sought medical treatment for last STI episode[3]	33.3
^Had more than one partner in the last 12 months	95.0
Knows a place to get an HIV test	93.8
^Had an HIV test and received the results in the last 12 months[4]	96.5
^Had an HIV test, received the results, and received post-test counseling in the last 12 months	74.5
^Participated in PASMO activities and used condom at last sex	53.3
^Participated in at least one PASMO IPC activity	40.0
^Mean number of occasional partners in last 12 months	3.83
OPPORTUNITY	%
Brand Appeal	
^ VIVE as favorite condom brand	23.8
Used VIVE at last sex	33.8
MOTIVATION	Mean
¬Locus of Control – Condoms	3.43
Attitudes	%
^It's important to know your HIV status	100
^It's necessary to seek medical treatment for STIs	100

^ Donor indicator

¬ Significant from logistic regression analysis (low cases do not guarantee a full statistical significance)

[1] Between those who had an regular partner in last 30 days (n=49)

[2] Between those who had an occasional partner in last 30 days (n=71)

[3] Between those who had an STI in the last 12 months (n=12)

[4] Between those who have had an HIV test in the last 12 months (n=57)

Monitoring Analysis: Trends in behaviors and OAM determinants of condom use among MSM in Belize District, Corozal and Orange Walk, Belize, 2008

The preceding monitoring dashboard table presents trends in behavior and factors that are significantly associated with consistent condom use with occasional partners in the segmentation analysis, as well as logframe indicators of interest to donors and for PSI internal monitoring. The table was prepared in accordance with PSI's behavior change framework, PERForM (see appendix). Although the monitoring table is meant to present frequencies for opportunity, ability, and motivation (OAM), no opportunities factors were found to be significant in the segmentation analysis, and donors did not express interest in seeing these tabulations.

Behavior

Condom use at last sex with occasional partners is high at 94% but lower at 85.7% for regular partners. Consistent condom use is lower at 85% and 74%, respectively. Access to condoms may be an issue as only 65% of MSM had received condoms in the last 12 months. Use of water-based lubricant is low at 40% and only a third of those who had an STI in the last 12 months sought treatment. Concurrency may be an issue because 95% of MSM reported having more than one partner in the last 12 months, and the mean number of occasional partners in the last 12 months is 3.83. Although most MSM do not seek treatment for STIs, 94% know where to get an HIV test. Just over half of the sample had participated in a PASMO activity and used a condom at last sex.

Ability

Just over a third of MSM used *Vive* condoms, the PASMO-marketed brand, during their last sexual episode. Just under a quarter of the sample proclaimed that *Vive* is their favorite condom brand.

Motivation

MSM have a high internal locus of control when it comes to condom use. This four-point scale was created from individual questions that addressed whether MSM agreed or disagreed that condom use was up to them, the last time they had sex they proposed using a condom, and they are the ones to propose using a condom with different types of partners. One this scale, where 4 is strongly agree and 1 is strongly disagree, the mean was 3.43, which is quite high. And while we found that many MSM are not seeking medical treatment for STIs, everyone agreed that it is necessary to seek medical treatment for STIs and know one's HIV status.

Segmentation Table

Determinants of condom use among MSM in Belize District, Corozal and Orange Walk, Belize 2008
Risk: MSM aged 18-40 who have had anal sex with another man in the last 30 days
Behavior: Condom use at last sex with any male partner

INDICATORS	Used Condom (N=67) 84%	Did not Use Condom (N=13) 16%	OR	Sig.
MOTIVATION	Mean	Mean	OR	
Locus of Control				
Locus of Control – Condoms Scale[5]	3.5	2.8	4.02	**

*:p<.05; **:p<.01; ***:p<.000;

OR and Significance were calculated by binomial logistic regression analysis, few cases not allow to run a complete logistic regression model.

Scale values range from 1 to 4: "1=totally disagree, 2=disagree, 3=agree, 4=totally agree"

Locus of Control –Condom Scale:
P49A: Condom use is up to me
P49B: The last time I had sex, I proposed condom use
P49C: I'm the one who proposes condom use to my regular partner
P49D: I'm the one who proposes condom use to my occasional partners

Segmentation Analysis: Determinants of condom use among MSM in Belize District, Corozal and Orange Walk, Belize 2008

The segmentation table measures the independent variables that differentiate those who used a condom at last sex with any male partner (users) with those who did not (non-users). In this sample, 84% fell in the user category. Due to the very low sample size, there were few non-users (N-16) and only one significant determinant of condom use at last sex. This determinant was a locus of control scale, which was comprised of individual items previously mentioned. Condom users were much more likely to agree with this statement compared to non-users. In fact, they were 4 times more likely.

[5] Hosmer-Lemeshow goodness-of-fit: χ^2 (df=4) = 2.926, p<0.570
Omnibus goodness-of-fit: χ^2 (df=1) = 8.657, p<0.003
Cox & Snell R^2=0.104

Programmatic Recommendations

The results suggest several things for future programming. First, locus of control needs to be part of mass media messaging. MSM who feel more in control of their destiny and are more willing to suggest using a condom are much more likely to use a condom. Second, the monitoring table suggests that messages that focus on using condoms with all partners, not just occasional partners, would benefit MSM. Concurrency appears to be an issue so messages that address associations between HIV status and concurrency may be beneficial. MSM also need to feel safe to seek medical treatment for STIs. While there is no direct evidence in this report, it may be that discrimination against MSM explains why everyone in the sample agreed that it is necessary to seek medical treatment for STIs and yet only a third of those who had one in the last year actually sought medical treatment. Finally, messages about access and awareness of IPC activities should be promoted, as only 40% of MSM had participated in one such activity in the last year.

Meanwhile, interviewers for the next survey round should continue to use RDS sampling, but the seeds and timing need to be better calculated. Recruiting should involve more people to create robust results. In the meantime, trust between PASMO and this special hidden population needs to be established now so that RDS sampling can be more useful in future rounds.

Population Characteristics-Belize MSM

POPULATION CHARACTERISTICS	2007 (N=80) (Percentages)
Age	
18-25	52.5
26-50	47.5
Level of education	
No school	3.8
No School	8.8
Incomplete elementary	17.5
Complete elementary	10.0
Incomplete high school	37.5
Complete High School	11.3
Incomplete University	11.3
Complete University	
Sexual Orientation	
Gay / Homosexual	53.8
Bisexual	38.8
Heterosexual	3.8
Travesti / Transgender	3.8
Has been paid to have sex	
No	71.3
Yes	28.8
Monthly Income	
Less BZD 300	23.8
BZD 301-600	10.0
BZD 601-900	25.0
BZD 901-1200	28.8
BZD 1201-1500	6.3
BZD more 1501	6.3
Religiosity	
Not religious at all	26.3
Somewhat religious	61.3
Very religious	12.5
Circumcised	
No	75.0
Yes	25.0
Mean Number of Economic Dependents	.81

Methodology

Sampling and participants: This study design called for a respondent-driven sampling (RDS) approach. RDS works by selecting seeds, or initial interviewees, and asking them to recruit people they know who fit the study criteria to participate in the survey. It allows for the recruitment of hard-to-reach samples and works like a snowball sample, but uses a system of dual incentives (for study participation and recruitment) and limits the number of recruits any one individual can bring into the study. As a result, the strategy maximizes the number of men contacted through informal networks and is used to approximate a probability sample. Using RDS enabled researchers to access a broader range of MSM, not only those who are present in hotspots or particular venues.

Study participants were distributed proportionally across the three study districts (Belize District, Corozal and Orange Walk) according to population size. Data were aggregated to create dashboard tables. Information from the National Statistical Institute were used to estimate geographic area sizes and create the sampling frame.

In total 225 MSM were required. Due to the difficulty of applying RDS or time location to recruit this population, only 80 MSM were interviewed. Interviewers struggled to acquire the necessary sample size because this appears to be an especially hidden population, with few in-group networks and no specific places where they congregate.

Survey Instrument(s): A structured questionnaire was used to collect data on concepts in PERForM that are relevant for identifying determinants of behavior, monitoring logframe indicators and assessing program impact. This questionnaire included modules in the following areas: population characteristics, OAM determinants of behavior including output level logframe indicators, behavior as specified by purpose level logframe indicators, and exposure PASMO interventions. This questionnaire was eight pages long.

A new questionnaire had been developed for this study based on PSI's standard HIV/AIDS questionnaire and PASMO questionnaires used throughout Central America for other groups at high risk for HIV/AIDS (MSM, FSW, and youth). The determinants measured in this model questionnaire are based on the PSI Behavior Change Framework and a literature review of

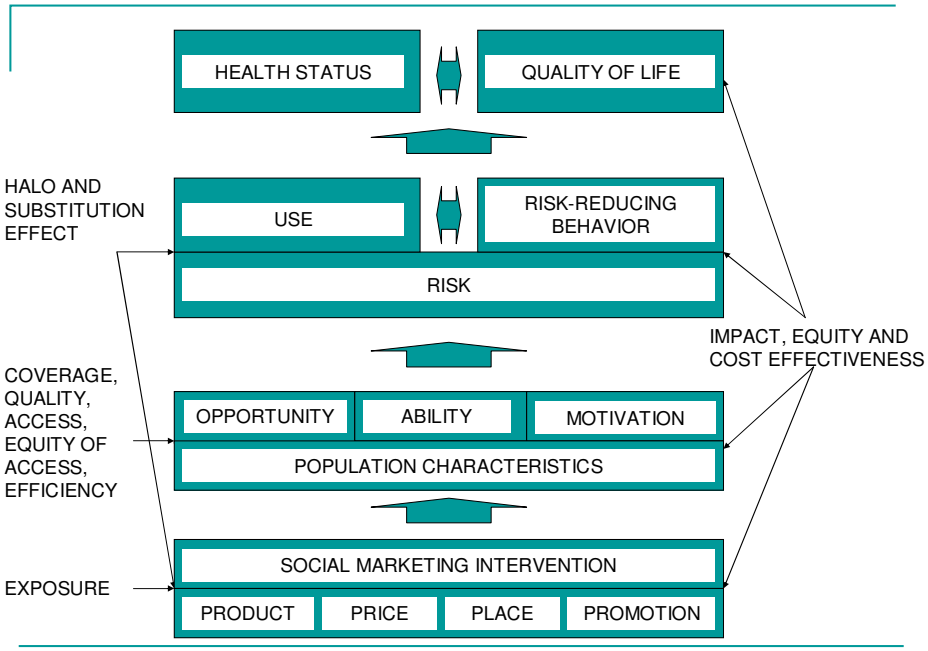
quantitative and/or qualitative studies. Input from country program researchers and programmers was used to modify scaled questions and other context specific questions. If additional determinants not currently covered in the model questionnaire were discovered during formative research or suggested by program or research staff, multi-item scales were developed to measure these items.

The PASMO questionnaire was pre-tested in Belize City, using about 25 cognitive interviews with members of the target group who will not participate in the larger study. The pre-test was used to gather information on the following points: ease or difficulty of statement, comprehension, confidence in response, level of discomfort and social desirability. The PASMO questionnaire was revised based on findings from the pre-testing activities described above. Modifications to question structure and language were made accordingly.

Analytic Technique: A segmentation table was produced based on multiple logistic regression analyses. Explanatory variables (i.e., OAM perceptions, demographic characteristics) which significantly contribute to the explanation of the variance in the behavior of interest (i.e., condom use at last sex) were identified. Odds ratio of involvement in the behavior of interest were reported for each significant explanatory variable. Analysis of variance (ANOVA) was employed to estimate the adjusted means or proportions of each explanatory variable by the behavior of interest. Each explanatory variable was assessed in ANOVA with the behavior of interest serving as the group variable and other significant explanatory variables serving as covariates.

The monitoring table tracked trends in behavior, OAM indicators, and project exposure. It portrayed frequencies of indicators for 2007 figures for the baseline TRaC in 2007 will be simple percentages. All analysis was performed using SPSS software.

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.