Evaluation of the MStyle Program for Men Who Have Sex with Men in Cambodia

Final Report

HIV Innovate and Evaluate Project

Contract AID-442-C-13-000001

13 JUNE 2016

This study is made possible by the generous support of the American People through the United States Agency for International Development (USAID.) The contents of this study are the sole responsibility of the HIV Innovate and Evaluate Project and do not necessarily reflect the views of USAID or the United States Government.

USAID FROM THE AMERICAN PEOPLE

PEPFAR

HIV INNOVATE AND EVALUATE PROJECT

Table of Contents

List of Tables

List of Figures

Acknowledgements

We would like to express our deep appreciation to Dr. Ly Penh Sun, Director of the National Center for HIV/AIDS Dermatology and STDs for his leadership of this evaluative study. From this national center, Dr. Lan Vanseng, Deputy Director and Dr. Seng Sopheap, Chief of Technical Bureau, and Dr. Tep Samnang, Chief of Behavioral Change Communication Unit, provided invaluable inputs for the study formulation, especially to ensure that the results are relevant to the national program.

This study was made possible by the generous support of the American People through the United States Agency for International Development (USAID).

We extend sincere gratitude to Mr. Choub Sok Chamreun, Dr. Yi Siyan, Dr. Ngin Chanrith, Mr. Tuot Sovannary, Ms. Chhim Kolab and Mr. So Kimhai from KHANA, and Dr. Amy Weissman, Ms. Seng Sopheap, Mr. Phal Sophat, Mr. Chhim Srean and Mr. Heng Saly from FHI 360 for their technical inputs, support, and information sharing in the development of the protocol.

We also would like to express our sincere thanks to Mr. Mao Kim Run, Mr. Kem Vichet, Mr. Lim Naykhim and Sim Vandeth from Men's Health Cambodia (MHC), and Mr. Mr. Dork Pagna, Mr. Kheng Vanneth, Mr. Sok Sokhin, Mr. Seu Sieng, Mr. Lao Kakda, Mr. Tha Socheat, Mr. Sav Thim, Mr. Kim Senghot, Mr. Song Pheara, Mr. Deun Bunneouurn, Mr. Ho Samphy, Mr. Chhim Sakkada and Mr. Kha Bunya from Men's Health Social Service organization (MHSS) for their warm collaboration and participation in the process of protocol and questionnaire development. Successful data collection could not have happened without the collaboration and support from management and outreach staff of these organizations.

Our field researchers are at the heart of the study's success. We would like to express our appreciation to them for their work.

Executive Summary

Background

Defined as males who have sex with other males, regardless of sexually identity, motivation for engaging in sex or identification with any or no particular community, “men who have sex with men” (MSM) are one of the key populations most at risk for HIV (KP) in Cambodia. In 2014, the HIV prevalence rate among MSM was estimated to be 2.3%-- significantly higher than that of the general adult population (0.6%). Under the leadership of Cambodia’s National Center for HIV/AIDS, Dermatology and STI’s (NCHADS), the Boosted Continuum of Prevention to Care and Treatment (Boosted CoPCT) standard operating procedure (SOP) guides HIV prevention, care and treatment for KP in Cambodia, including MSM.

The provision of core services to all KP sub-groups through the SOP has been done via outreach, referral, and direct service delivery. The Boosted CoPCT core service package includes behavioral change communication, condoms, STI screening, and HIV testing. Initially under the PRASIT project and since 2013 under the USAID HIV Flagship Project, the MStyle program has focused on: 1) improving HIV case detection through strategic behavior communication (SBC), the MStyle Club, community-based HIV testing and counselling (CBHTC), and sexually transmitted infection screening; 2) avoiding new infections and reducing HIV risk through provision of condoms and lubricants and targeted education messages; and 3) strengthening referrals and linkages through referrals to health and social services and supporting an enabling environment.

Under the USAID HIV Flagship Project, the MStyle program has been implemented by the NGOs Men's Health Cambodia (MHC) in Siem Reap and Men's Health Social Service (MHSS) in Phnom Penh.

The program-level effectiveness of MStyle under the USAID HIV Flagship Project has not been evaluated, nor have the acceptability of the intervention and levels of uptake of facility-based services for MSM been systematically measured. This outcome evaluation was designed to guide future activities under this project and to inform the national HIV program efforts for MSM in Cambodia.

Methods

The overall evaluation objectives were to provide robust evidence regarding the effects among MSM of the MStyle branded program on HIV testing, STI screening, and lubricant and consistent condom use; and the perceptions among MSM of the MStyle branded program with regard to the branding approach, SBC materials, and services provided. This evaluation measured the effects of exposure to the MStyle branded program on HIV testing, STI screening, and consistent condom use. The evaluation investigated the effects of exposure to different core package elements of the program on these outcomes.

The evaluation also examined client satisfaction with different key activities of the MStyle service package and the program overall, examining the level of attractiveness of MStyle branded program and core package of prevention services among MSM, the appeal of SBC materials and social media of the program among MSM, the level of satisfaction with HTC services, STI screening, lubricant and condom products among MSM, and the reach of the program.

An observational cross-sectional comparative research design was employed for this evaluation of MSM who have been residing, working, and/or making appointments/gathering for sexual activities in Siem Reap and Phnom Penh. Within-group comparison analyses were carried out and other extraneous variables were controlled for by binary logistic regression models.

The sample was chosen by respondent driven sampling (RDS), which was appropriate in this context where there was no sampling frame, where the population size is not known, and for this relatively small, hidden and stigmatized population.

Findings

General

Overall, the MStyle program demonstrated significant impact on the outcomes of HIV testing generally, on HIV finger prick testing, and on STI screening among MSM.

Of the 561 MSM respondents, 48% currently resided, worked, or made appointments for sexual activities within the MStyle branded program areas in Siem Reap or Phnom Penh, and there was a 55%:45% split between respondents in Phnom Penh and Siem Reap. Based on the program exposure index, 32% of MSM respondents were classified as having a high exposure to the program (HEMSM), 17% having a low exposure to the program (LEMSM) and 51% having no exposure to the program.

MSM in this survey were mostly young (58% aged between 18 and 24 years) and single/never married (66%). The most common primary occupations were general worker (14%), student (11%), cafe/beer gardens/restaurant worker (11%), NGO/company staff (10%), and factory worker (10%). Only 3% of MSM in the sample had a primary occupation as a street- or venue-based sex worker, 6% reported buying sex from a male partner in the last 3 months, and 27% of MSM reported having sold sex to a male client at least once in the past three months. Approximately 58% of MSM were at medium or high risk for HIV based on the risk index (see section 13). More than half (55%) reported feeling stigma, or being looked down upon by others because of their sexual identity.

Program Reach and Exposure

Moderate penetration of the program among MSM within the geographic area of the program was demonstrated by 63% of MSM within the program catchment area having any exposure to the program. A plurality (41%) of all MSM reported that outreach activities were the best communication channel to provide information on sexual health and HIV, while 19% preferred TV, and 16% preferred Facebook. The most common major sources of information about STIs and HIV were outreach workers (34%), friends and colleagues (18%), TV (17%), and Facebook (11%).

Outreach and SBC Materials

Within the program's catchment area, 33% of MSM reported ever having been approached by a MStyle outreach worker, and 18% had been approached in the past three months, with most of these interactions in small-group sessions (54%) and in private homes (34%). While most respondents (57-81%) reported not recalling exposure to SBC materials, the vast majority of those that did recall these materials found them to be attractive.

MStyle Club

Less than half (45%) of all MSM had heard about the MStyle Club and only 26% of MSM within the program's catchment area had visited it. Most MSM that had visited the club found its location to be convenient (83%), the facilities "good" (84%), the activities "attractive" (80%), and the services to be "good" (87%).

Social Media and Communication Technologies

Social media and communication technologies were greatly underutilized. Most MSM had never heard about the MStyle website "My Community" (83%) or the MStyle Khmer Facebook page (80%). Small proportions of MSM had ever visited these communication channels (5% and 9%, respectively). Only 1 MSM had ever downloaded a referral slip from the MStyle website.

MStyle Guide and Referrals

Only 13% of MSM within the program catchment area reported ever receiving a copy of the MStyle Guide for health services and among those that had received a copy of it, only 26% had ever used it to find services. There was, however, a strong impact demonstrated of receipt of the Guide on STI screening in the past 12 months (Odds Ratio= 3.094, $p<0.05$). Only about one quarter of MSM (26%) reported ever having received a referral slip from a MStyle outreach worker. Having received a referral, however, showed a strong positive impact on uptake of STI screening in the past 12 months (Odds Ratio= 4.042, $p<0.05$), and HIV testing (Odds Ratio=50.4, $p<0.003$).

Use of Condoms and Lubricant

Overall, 70% of MSM reported using a condom at their last unpaid sex with a male partner, 89% of MSM reported using a condom the last time they bought sex from a male partner, and 80% of MSM reported using a condom the last time they sold sex to a male partner, with no differences noted based on program exposure. MSM with program exposure were more likely to have talked with male partners about using lubricant and/or condoms, and to have consistently used condoms/and or lubricant with male partners than MSM with no program exposure. The logistic regression analysis showed no impact of exposure to the program on consistent condom use with male partners.

STI and HIV Risk and Screening

A majority of MSM (56%) reported behaviors that put them at risk for contracting an STI. HEMSM were much more likely to have been screened for STIs in the past 12 months had than LEMSM (70% versus 38%, respectively; $p=0.000$). High exposure to the program more than doubled the likelihood of being screened for STIs (Odds Ratio= 2.433, $p<0.01$).

Similarly, 56% of MSM thought they had behaviors that put them at risk for HIV, with unprotected anal sex (36%), multiple sexual partners (21%), having oral sex (13%), and condom breakage (10%) being the most common risks cited. HEMSM also were more likely to have been screened for HIV in the past 12 months had than LEMSM (79% versus 53%, respectively; $p=0.000$). High exposure to the program increased more than 15 times the likelihood of being fingerprick tested for HIV via finger prick in the past 12 months (Odds Ratio= 15.28, $p<0.001$), or any type of HIV test in the past 12 months (Odds Ratio=2.718, $p<0.01$).

Overall, perceptions about finger prick HIV testing among MSM were favorable, though only 54% of HEMSM and 15% of LEMSM reported being finger prick HIV tested in the past 12 months, compared to only 5% of unexposed MSM ($p=0.000$). Of those that had been tested using the HIV fingerprick test, significant majorities reported receiving pre-test counselling (92%), being satisfied with the test (79%), and believed the test result was reliable (83%).

Discrimination and Stigma

There was no evidence that the program had any impact on stigma or discrimination, with no effects on stigma or discrimination seen for MSM located within the program catchment area.

Conclusion

This analysis revealed that exposure to the MStyle program had powerful positive impacts on HIV testing and STI screening. The program reached the majority of MSM within its catchment area as well as a notable proportion of MSM outside its catchment area. No impact was detected with regard to the program's influence on stigma and discrimination or on consistent condom use.

While direct comparisons cannot be made because of differences in populations and methods, there are differences between the data from this evaluation and previous data, for example, in terms of MSM reached, provision of referrals, condom use and HIV testing rates, largely showing a lowering of program performance.

The analysis revealed that MSM that participated in the program viewed it in an overwhelmingly positive light. MSM thought that the program and services were attractive, and were largely satisfied with HTC services, STI screening, and had high utilization of lubricant and condoms. The MStyle Club was used by only half of MSM within the program catchment area. Service referrals had measurable positive impacts on STI screening (but not HIV testing), though the provision of referrals was low. While exposure to the program's SBC materials was suboptimal, the vast majority of MSM that were exposed to them thought highly of them. Social media (web page and Facebook page) were significantly underutilized, with a minority of MSM knowing about them, and only small minorities of MSM using them.

Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Therapy
AusAID	Australian Agency for International Development
CoE	Center of Excellence
Boosted CoPCT	Boosted Continuum of Prevention to Care and Treatment
CSPro	Census and Survey Processing System
EW	Entertainment Workers
Flagship	USAID HIV Flagship Project
GIS	Geographic Information System
GFATM	Global Fund for AIDS, TB and Malaria
HIV	Human Immunodeficiency Virus
HTC	HIV Testing and Counselling
MHC	Men's Health Cambodia
MSM	Men who have Sex with Men
MHSS	Men's Health Social Service
NCHADS	National Center for HIV/AIDS, Dermatology and STI's
NECHR	National Ethic Committee for Health Research
OD	Operational District
PRASIT	Project for HIV and AIDS Strategic Technical Assistance
Pre-ART	Prior to Anti-Retroviral Therapy
PWID	People Who Inject Drug
RDS	Respondent Driven Sampling
RDSAT	Respondent Driven Sampling Analysis Tools
SBC	Strategic Behavior Change
SIT	Save Incapacity Teenagers
STATA	Statistics and Data (Statistical software package)
SOP	Standard Operating Procedure
SRH	Sexual and Reproductive Health
STI	Sexually Transmitted Infection
TB	Tuberculosis
TG	Transgender
UNAIDS	Joint United Nations Programme on HIV/AIDS
URC	University Research Co., LLC
USAID	United States Agency for International Development
VCCT	Voluntary and Confidential Counselling and Testing
WHO	World Health Organization

1. Introduction: HIV Epidemic among MSM

Global Context

Globally, 36.9 million people were estimated to be living with HIV in 2014. New HIV infections were estimated at 2 million worldwide, revealing a 35% decline from 2000 (UNAIDS, 2015). The global HIV prevalence among the general population aged 15-49 years was estimated at 0.8% in 2013. Despite the overall epidemic leveling off, the HIV epidemic is still at unacceptable levels, particularly among key populations at highest risk for HIV (KP). For example, the global HIV prevalence was estimated at 12% for female sex workers, 19% for transgender women (TG), 14-18% for men who have sex with men (MSM), and 28% for people who inject drugs (PWID) (UNAIDS, 2010). This implies that efforts to reduce transmission among these key population have not yet been sufficient.

Under the UNAIDS action framework, the term "men who have sex with men" (MSM) is used to describe those males who have sex with other males, regardless of whether or not they also have sex with women or have a personal or social identity associated with that behavior (UNAIDS, 2009). In many countries, MSM have been disproportionately affected by HIV. For example, a meta-analysis based on data from 2007 to 2011 revealed a high burden of HIV in MSM, with pooled HIV prevalence rate from 3.0% in the Middle East and North Africa region to 25.4% in the Caribbean. In South and Southeast Asia, the HIV prevalence rate for MSM was 14.7% (Beyrer et al., 2012) compared to 0.3% for adults aged 15-49 years (UNAIDS, 2010). Among the reasons that MSM are thought to have a higher prevalence of HIV compared to other adults are the greater efficiency of HIV transmission through unprotected anal sex and the relatively higher number of sexual partners among MSM (WHO, 2014).

A 2012 study of 5,779 MSM in 165 countries illustrated that MSM from lower middle income countries had low access to condoms (32%), lubricants (14%), HIV testing (25%), and HIV treatment (28%). Homophobia and the experience of stigma from providers were significantly associated with the reduced access to these services. Additionally, homophobia, stigma (including by health workers) and other forms of legal and social discrimination against MSM may limit their use of what services do exist (Beyrer et al., 2012)

Cambodia Context

Similar to the definition used by the UNAIDS, the term "men who have sex with men" in Cambodia is used to define males who have sex with other males, regardless of sexually identity, motivation for engaging in sex or identification with any or no particular community (NCHADS, 2013b).

MSM has been identified as one of the key populations most at risk for HIV in Cambodia, along with TG, PWID, and entertainment workers (EW) (NCHADS, 2013b).[1] A result from the 2014 national HIV sentinel surveillance revealed that the HIV prevalence among MSM was 2.3% (NCHADS, 2015a), compared to the prevalence among adult general population of 0.7% (Chhea & Saphonn, 2011). An earlier study estimated the HIV prevalence rate in Siem Reap to be 5.9% and the prevalence rate in Phnom Penh to be 3.0% (NCHADS, 2015b).

The estimated population of MSM has increased over the last decade. The first size estimation of MSM carried out by FHI 360 claimed at least 1,500 MSM in Phnom Penh, and 78% of them aged 15-29 years. The 2008 population size estimation of MSM in Cambodia conducted by FHI 360 in 6 cities including Phnom Penh was about 18,500 from which about 8,300 was in Phnom Penh. A large proportion of these MSM engaged in commercial sex work, including buying and selling sex in the past month (32% and 38% respectively) (FHI

[1] MSM are categorized separately from transgender women. Though transgender women also have sex with men, they are biologically male at birth but have a gender identity and expression that does not conform to the norms and expectations traditionally associated with men.

360, 2008). The most recent national size estimation and behavioral survey MSM in Cambodia revealed that the whole MSM population was about 30,891. The estimated size of MSM in Phnom Penh was only about 6,823. This study indicated that 67% of MSM had an HIV test in the past 6 months, and nearly half reported STI screening in the past 6 months (49%). Thus, a significant proportion of MSM did not have an HIV test twice per year as recommended by NCHADS, and more than half did not have the recommended STI screening (NCHADS, 2013b).

Behavioral sentinel surveillance from 2007 and 2013 indicated an increase in the proportion of MSM that reported consistent condom use with male clients in the last month, 36% in 2007 (NCHADS, 2007) to 77% in 2013 (NCHADS, 2013a). This improvement in safer sex behavior is encouraging, but still reflects the fact that about one quarter of MSM involved in sex work did not use condoms consistently with male clients.

The Boosted Continuum of Prevention to Care and Treatment (Boosted CoPCT) standard operating procedure (SOP) was developed in 2013 and has become a guide for the coordination of HIV prevention, care and treatment for key populations in Cambodia, including MSM. It aims to support the elimination of new HIV infections in Cambodia by 2020 (Cambodia 3.0), by reducing the HIV/STI transmission and increasing the level of testing so that early treatment can be facilitated. The provision of a core package of services to all sub-groups of key populations through this guide has been done via outreach, referral, and direct service delivery. The Boosted CoPCT core service package includes behavioral change communication, condoms, STI screening, and HIV testing. Besides the core service package, additional services have been provided to the key population as well, based on the individual's risk behaviors. The expanded core service package includes: sterile needle and syringe program, methadone maintenance therapy, pre-ART and ART services, reproductive health services, and psychosocial support (NCHADS, 2013b).

2. Program Background

Introduced in October 2008 under the PRASIT project, MStyle was devised by FHI 360 as a branded program designed "to reduce HIV vulnerability amongst MSM through a targeted behavior change approach and to create an enabling environment for effective prevention and care to take place." PRASIT was a five-year project (2008-2012), with core funding provided through the US Agency for International Development (USAID), and supplementary funding provided through the Global Fund for AIDS, TB and Malaria (GFATM) and the Australian Agency for International Development (AusAID). Under PRASIT, MStyle activities targeted both MSM and TG in Phnom Penh, Kandal, and Banteay Meanchey and both groups were offered the same opportunity to access services (PRASIT, 2010). The key activities of PRASIT project included:

- The delivery of a core package of services, consisting of three components: promoting and providing targeted education, condom and lubricant as well as systematic health service referrals for HIV and STI screening, delivered via individual and group-level outreach conducted at MSM 'hotspots';
- MStyle clubs, offering access to reliable and relevant sexual and reproductive health (SRH) information as well as information on non-health services, including social safety net protection, occupational training and drug use treatment support. MStyle clubs also offered MSM and TG a safe space to relax and socialize; and
- MStyle website, offering information, education and support.

The Summary Sheet of MStyle (2012) claimed, "the branded approach creates loyalty, connections for referrals and recognition of trust-worthy information, delivered through trained peers. The flexibility of a branded program allowed other components or approaches to be added at marginal cost, rather than developing a whole new program." It also reported that the coverage of this branded program from October

2011 through August 2012 was 94%, reaching 9,830 of the estimated 10,468 MSM in the target areas. 6,132 MSM (62%) reportedly accessed STI services, 6,324 MSM (64%) accessed VCCT, and 1,674 accessed HIV rapid test from (April 2011 – March 2012) but only 16 MSM were found HIV positive (PRASIT, 2012).

The results of the MStyle program review in 2010 under the PRASIT project (2008-2010) claimed that the branded program was very successful, particularly the MStyle club, which was seen as appealing to MSM. Most MSM (93%) had heard of MStyle (PRASIT, 2012). Seventy-one percent of MSM in hotspots reported that they relied on the program for information about HIV and STIs. Other significant findings from this review include:

- 89% of MSM from hotspots received HIV/health education/materials;
- 84% of MSM received referral slips for VCCT or STI services during last meeting with peer outreach worker;
- 95% of MSM of those exposed to MStyle were aware that they should have an HIV test every 6 months compared to 16% for non-exposure group;
- 66% of MSM exposed to MStyle reported always using a condom when having sex with male partners, compared to 54% for non-exposed MSM; and
- 84% of MSM exposed to MStyle reported always using lubricant, compared to 64% for non-exposed MSM.

The USAID HIV Flagship Project succeeded the PRASIT program as a five-year project (2012 - 2017) with a goal to enhance the impact, reduce costs and improve the effectiveness of the national HIV response through technical innovation and improvements in quality and capacity to deliver sustainable HIV services. The project was funded by USAID and focused on technical assistance and piloting innovations in HIV prevention, care, support, and treatment. The MStyle concept note on Boosted CoPCT for MSM was endorsed by NCHADS in late 2013 and drove the formulation of the MStyle service package guideline for MSM.

MStyle has become a national approach to working with MSM in the country, providing a core HIV prevention package. The USAID HIV Flagship Project has initiated innovative approaches targeting key populations, including entertainment workers, MSM, TG, and PWID at Centers of Excellence (CoE) (Flagship, 2015a). CoE were hosted within high HIV-burden ODs in order to build the capacity of staff at public health facilities to develop and test high impact and cost-effective technical innovations. The CoE for MStyle was located in Phnom Penh, in Chaktomuk OD, and in Siem Reap province, in Siem Reap OD. The core service package activities from PRASIT program were brought forward into the USAID HIV Flagship Project, and new innovations for the MStyle program were also integrated.

The MStyle Service Package Guideline for MSM (2014) emphasized that the MStyle program was designed to align with the Cambodia 3.0 strategic framework and standard operating procedures, including Boosted CoPCT for key populations and the Boosted Linked Response for Prevention, Care, and Treatment of HIV and SRH issues, linked to Treatment as Prevention (Flagship, 2014). The MStyle Service Package Guideline aimed to support the prevention of HIV transmission and provision of HIV care and treatment to HIV positive MSM in Cambodia. This guideline has been used to support the implementation of Boosted CoPCT, as outlined in the concept note on Boosted CoPCT for MSM.

3. Program Description

3.1. MStyle Branded Service Package

MStyle, a legacy of the Project for HIV and AIDS Strategic Technical Assistance (PRASIT) between 2008 and 2012, was re-introduced into the USAID HIV Flagship Project (Flagship) for the period of 2012 to 2017. The core service package is organized around three main objectives, with activities as described below:

A. *Improving case detection:*
   - *Strategic behavior communication (SBC):* SBC tools are developed and printed every quarter. OW are trained on the use of and methods of delivering those messages in hotspots, entertainment establishments, private homes, public parks and MStyle club.
   - *MStyle club* opens in flexible hours and with a number of activities relevant to MSM. The activities include SBC education sessions, linkage for health and non-health services, edutainment events, on-site HIV and STI screening (using finger prick testing), and other promotional events.
   - *Community-based HIV testing and counselling (CBHTC):* Based on the national guidelines on HTC, trained OW offer HIV screening tests and syphilis screening tests via rapid finger prick. MSM whose HV test result is reactive are referred to a follow-up test at a health facility.
   - *Technology-based platforms (mHealth)* consist of three main channels, MStyle website, MStyle Facebook page and Voice4U. These channels provide MSM with information on HIV and sexual and reproductive health (SRH) and guide them on how to access to HIV and STI testing services. MSM are also provided with a pathway to discuss their personal problems via a hotline counselling. The hotline counselling providers are trained to provide spiritual support to MSM by a Flagship technical team.

B. Avoiding new infections and reducing HIV risk
   - *Condom and lubricant promotion:* MHSS and MHC enable MSM to access to condoms and lubricants through outreach teams and MStyle club for free at the very first contact (sample condom and lubricant) and then MSM are advised to access condoms through condom vending machines, street-based outlets and peer-based sellers at reasonably low price.

C. *Strengthening referrals and linkages:*
   - *Referrals to services:* The NGOs provide referral support to MSM who are in need of health services. The support primarily focuses on HIV and STI confirmatory test and other diagnosis for comorbidity infections (i.e., TB and HIV). Support is provided to HIV positive cases to successfully enroll in Pre/ART services. Other associated services are also provided to MSM, for instance, needle and syringe programs, methadone maintenance therapy (MMT), vocational training, legal support and psychological service. Every month, MHSS and MHC report on the service utilization to relevant stakeholders, based on the referral slip collected from all service providers.
   - *Enabling environment:* MHSS and MHC initiate activities corresponding to all forms of violence against MSM at the national and sub-national levels. The activities include meeting with local authorities, police, service providers, legal service providers and other stakeholders to share progress updates and challenges of the program. In addition, building capacities of service providers, police and local authorities on MSM

issues and health care are also vital for the NGOs to ensure that MSM-friendly services are appropriately provided to MSM at all levels.

3.2. Non-Branded Service Package

The non-branded service package is implemented by NGOs supported by the Global Fund for HIV/AIDS TB and Malaria (GFATM) providing services to MSM. OW and staff are tasked to provide core services such as HIV education session, free condom distribution or demonstration, HIV and syphilis testing through finger prick and referral to health services. Due to limited funding, the number of staff and OW is suboptimal leading to relatively low outreach contacts and DIC visits. The strategies and activities are described below.

A. Strategy 1: Identify pockets of populations with high and overlapping risk and vulnerability who are not yet in contact for the interventions.
    1. *Risk assessment:* Every six months, OW approach MSM and TG for the HIV and STI risk assessment using a questionnaire. If the result appears that an MSM/TG is at high risk of contracting HIV, she/he will be counselled to get HIV and syphilis testing at the community or referred to a health facility.
    2. *Identifying hard-to-reach key populations:* MSM and TG, who are in the contact lists of OW but are not often met/reached for education and HIV/STI testing, will be further contacted through MSM's network by OWs. If met, OW provide more options for education sessions and testing services to those hard-to-reach MSM and TG.

B. Strategy 2: Reach and provide services to MSM and TG
    1. *Assigning UIC code for MSM and TG:* In order for the NGOs to issue a UIC card to individual MSM and TG, OW register each MSM and TG with UIC codes. With the use of UIC cards, MSM and TG would be able to maximize the health service utilization without fear of discrimination because each UIC card does not disclose the name of the card holder at any health facilities. UIC cards also enable the monitoring of services utilized of MSM and TG.
    2. *Education sessions:* OW conduct routine HIV prevention education sessions within their respective areas in one-to-one or group sessions.
    3. *Promoting condom knowledge and practices:* OW provide a sample pack of condoms and lubricants, and communicate the correct practice of condom use.
    4. *Increasing gender-sensitive approach:* Gender-sensitivity is introduced and incorporated in other activities, e.g., meetings and trainings, and NGO work plans. To spread the concept among the target groups, OW often mainstream the concept among MSM and TG in order to revitalize the confidence of MSM and TG in accepting routine HIV testing.
    5. *Bi-monthly meetings with MSM and TG:* Issues affecting the program are brought to a regular discussion forum bi-monthly. Through this mechanism, challenges and suggestions to the problems raised by MSM and TG are forwarded to higher-level meetings.
    6. *Building HTC skills of lay counsellors:* The NGOs, in partnership with Flagship and the national HTC focal points, provide HTC training to selected OW in order to officially qualify them to be lay counselors. Being qualified and equipped with skills by the national program, OW are strongly advised to secure the test result of the reactive cases and communicate follow-up tests as soon as possible.

C. Strategy 3: Intensify interventions and services for maximum impact
    1. *HIV and STI testing and service linkage:* All trained OW/lay counsellors initiate finger prick testing and comply with the testing standard in accordance to the national guidelines for HIV testing and counselling.
    2. *Maintaining DIC for MSM and TG:* The NGOs enable MSM and TG to access services relevant to MSM and TG at the DIC. At the DIC, staff and OW provide HIV and health education sessions, provide free HIV and syphilis finger prick tests, distribute free condoms and lubricants, secure a private space for relaxation, offer individual consultation with a trained counsellor, and provide information on possible referral to health and non-health services.

D. Strategy 4: Retain MSM and TG in services for maximum impact and improved health outcomes
    1. *Advocating for ID poor:* The NGOs, through ongoing meetings with health facility/Health Equity Fund (HEF) Operators, to ensure that eligibility criteria of the scheme include MSM and TG who live under the poverty line and need such support.
    2. *Enabling environment for MSM and TG:* The NGOs facilitate meetings, campaigns and events which raise awareness on stigma and discrimination affecting MSM and TG. Where possible, MSM and TG are supported to lead in event organization and engage in the policy dialogues with policy makers at the sub-national, national and international levels.

3.3. Comparing MStyle Branded Program to Non-Branded Program

Under non-branded programs, 13,357 MSM and TG were targeted by the non-branded programs and by four NGOs (KHEMARA, SIT, MHC & MHSS) in 14 provinces and municipalities whereas the MStyle-branded program covered 1,475 MSM in the two selected sites in Phnom Penh and Siem Reap province (Please see table 2). In general, both programs deliver a range of activities to their respective target groups through mainly outreach and club or DIC contacts. The routine schedule and scope of work of staff and OW aim to ensure appropriate delivery of HIV prevention messages, increase in condom and lubricant use, and broad access to rapid tests for syphilis and HIV in as many settings as possible. Although the key activities share a common goal required by the national program, the actual operation varies. Key differences identified:

- *IEC materials (SBC)*: SBC tools and messages of the two programs are of different standards. OW under Flagship are trained on the use of updated printed tools every quarter through routine revision of key messages. OW under non-branded programs often use older SBC tools for their outreach activities.
- *Technology-based innovations:* the mHealth approach provides additional platforms for the target group to engage with OW and staff for information related to MStyle branded program.
- *Skilled lay counsellors:* Although NGOs outside Flagship receive technical assistance from Flagship on HIV testing and counselling (HTC), not all OW under non-branded programs are trained due to budget limitations. The frequency of training is once per year, whereas lay counsellors under Flagship get trained at least twice per year.
- *Active case management:* Having a case manager in the program strengthens attempts to minimize loss-to-follow-up cases. By contrast, staff in the non-branded program are expected to play this additional role.
- *Other differences:* MStyle-branded program provided peer sales of condoms and lubricants, STI screening at the club, and integrating other innovative approaches.

Table 1 Services provided either directly and indirectly to beneficiaries

Services provided to the beneficiaries	Implementation Periods					
	2012-2013		2013-2014		2014-2015	
	BP[2]	NBP[3]	BP	NBP	BP	NBP
I. Service delivery from NGOs to beneficiaries						
1.1. Improving case detection						
Education (HIV and others related health contents)	■	■	■	■	■	■
Risk screening: paper-based						■
Risk screening: tablet-based					■	■
STI screening or syndromic management at the club	■		■		■	
Finger prick testing and counselling: HIV/syphilis			■	■	■	■
1.2. Avoiding new infections and reducing HIV risk						
Condom and lubricant availability: free (only demo)	■	■	■	■	■	■
Condom and lubricant availability: sale	■		■		■	
1.3. Strengthening referrals and linkages						
1.3.1. Referral to health services						
a. Referral support to confirmation (HIV/syphilis): referral support to STI services (STDs other than HIV/syphilis)			■	■	■	■
b. Referral support to treatment						
Syphilis: If negative result, appointment for next test in a 3-month period. If positive result, follow-up treatment.	■	■	■	■	■	■
HIV: Support enrollment at pre-ART for HIV positive cases	■	■	■	■	■	■
UIC implementation			■		■	■
1.3.2. Referral to other relevant services such as:						
legal support	■	■	■	■	■	■
gender-based violence	■		■	■	■	■
1.4. Care and treatment support						
Following-up visit during 12 months (i.e. treatment adherence, OIs)	■	■	■	■	■	■
II. Non-service delivery: program components						
2.1. Improving case detection						
Training and routine coaching: SBC/education and finger prick testing	■	■	■	■	■	■
Outsourcing STI screening services for the club					■	
2.2. Avoiding new infections and reducing HIV risk						
Condom and lubricant social marketing: maintaining a functional peer sale structure, street vendors, and vending machines in hotspots	■		■		■	
Non-condom and lubricant social marketing: maintaining correct messages, demonstration, and free distribution (only demo)	■	■	■	■	■	■
2.3. Strengthening referrals and linkages						
2.3.1. Referral to health services						
Maintaining health linkage services: meeting, capacity building and joint monitoring visit with service providers	■	■	■	■	■	■
Integrating other innovative approaches: Panhpa (sex brokers), peer driven interventions/risk tracing snowball, mHealth (Website, Facebook and Voice4U, active case management, partner tracing and community mobilization, coordination and leadership (i.e. networking, training)			■		■	
2.3.2. Referral to non-health services						
Reducing stigma and discrimination: meeting, event, campaigns and capacity building	■	■	■	■	■	■
2.4. Care and treatment support						
Linking the HIV positive to community and home based care service	■	■	■	■	■	■
Ensuring quality of treatment in all ARV sites through meeting	■	■	■	■	■	■
Reducing stigma and discrimination at hospital and community settings: meeting	■	■	■	■	■	■
Advocating for ID poor						■

[2] Branded Program

[3] Non-Branded Program

3.4. Program Coverage

Table 2 describes the coverage areas of the MStyle and the non-branded program for MSM and TG. The MStyle NGOs were Men's Health Social Service (MHSS) and Men's Health Cambodia (MHC). MHSS implements the MStyle branded program in Phnom Penh and in eight Sangkats within Chaktomuk Operational District[4] whereas MHC implement this branded program in Siem Reap Operational District of Siem Reap province. The non-branded program funded by GFATM targeted MSM in Phnom Penh and Siem Reap (MHC, 2015; MHSS, 2015; Flagship, 2015c).

Table 2 NGOs implementing both MStyle branded program and non-branded program

No.	Province	NGO	Non-branded program MSM and TG	MStyle branded program MSM
1.	Banteay Meanchey	MHSS	x	
2.	Battambang	MHSS	x	
3.	Kompong Cham	MHC	x	
4.	Kompong Chhnang	MHSS	x	
5.	Kompong Speu	MHSS	x	
6.	Kompong Thom	MHSS	x	
7.	Kandal	MHC, SIT	x	
8.	Koh Kong	MHC	x	
9.	Krong Pailin	MHSS	x	
10.	Krong Preah Sihanouk	KHEMARA	x	
11.	Phnom Penh	KHEMARA, MHC, MHSS, SIT	x	x (Only 8 Sangkats under MHSS)
12.	Prey Veng	MHSS	x	
13.	Pursat	MHSS	x	
14.	Siem Reap	MHC	x	x

Source: KHANA – Flagship and GF

4. Rationale of the Evaluation

The MStyle program has been implemented since 2014 under the USAID HIV Flagship Project to improve access to HIV/AIDS prevention and care services for MSM. The previous MStyle program under the PARASIT project (2008-2010) had been evaluated in 2010, but the program-level effectiveness of MStyle under the USAID HIV Flagship Project has not been evaluated, nor have the acceptability of the intervention and levels of uptake of facility-based services for MSM been systematically measured. Thus, this evaluation was needed to guide future activities under this project and to inform the national HIV program efforts for MSM.

5. Evaluation Questions

[4] *MHSS coverage area in Phnom Penh: Boeng Keng Kang Muoy, Boeng Keng Kang Bei, Tuol Tumpung Pir, Boeng Trabek, Phsar Kandal Pir, Phsar Thmei Bei, Chey Chumneah and Chakto Mukh.*

The primary question for this evaluation was “what were the effects of MSMs’ exposure to the MStyle program on the uptake of HIV testing, STI screening, consistent condom and lubricant use, and stigma and discrimination?” An accurate understanding of program outcomes will help inform planning and policy options regarding the improvement and replication of the MStyle branded program and package of prevention services in the country, facilitating the reinforcement of strong points and redress of shortcomings.

The secondary question was “what was the level of satisfaction with the MStyle program among MSM?” Sub-questions revolved around the perceptions of MSM regarding core package of services and branded program. The following sub-questions guided this evaluation:

1) To what extent were MStyle branded program and core package of prevention services attractive to MSM?
2) To what extent did they like the strategic behavioral communication materials and social media of the program?
3) To what extent were they satisfied with HTC services, STI screening, lubricant and condom products?
4) To what extent did the program reach unreached MSM?

6. Objectives of the Evaluation

The overall and specific objectives are described below.

- Overall objectives

The overall aim of this evaluation was to provide robust evidence regarding:

1) The effects among MSM of the MStyle branded program on HIV testing, STI screening, and lubricant and consistent condom use; and

2) The perceptions among MSM of the MStyle branded program with regard to the branding approach, SBC materials, and services provided.

- Specific objectives

1) This evaluation measured the effects of exposure to the MStyle branded program on HIV testing, STI screening, and consistent condom use. The evaluation investigated the effects of exposure to different core package services of the program on these outcomes.

2) The evaluation also examined client satisfaction with different key activities of the MStyle service package and the program overall, examining the level of attractiveness of MStyle branded program and core package of prevention services among MSM, the appeal of SBC materials and social media of the program among MSM, the level of satisfaction with HTC services, STI screening, lubricant and condom products among MSM, and the ability of the program to reach unreached MSM.

7. Evaluation Design

Given the absence of baseline data for the MStyle program implemented through the COE in the coverage of Chaktomuk OD and the MStyle program implemented in Siem Reap province in the coverage of Siem Reap

OD, an observational cross-sectional comparative research design was employed for this evaluation in order that comparison of the effects of the MStyle program between sites and within sites could be made.

MStyle has become a national program and has been implemented in other parts of the country. Only some services are different among MStyle programs implemented outside the Centers of Excellence (e.g. under the financial support of GFATM).

The MStyle program review in 2010 revealed that most MSM interviewed had heard of MStyle, but only 43% had participated in some activities of the program (PRASIT, 2010). This suggested some variations in program exposure. The level of exposure to the MStyle program might have had different effects on the outcomes of interest. For example, the probability of getting HIV test, STI screening, use of condoms and lubricant might be higher among those MSM had been exposed to many program activities than those exposed to fewer activities. This level of exposure was operationalized. To this end, within-group comparison analyses were carried out and other extraneous variables were controlled for by multivariate analysis techniques and techniques of econometric evaluation.

8. Method of Evaluation

In order to address the evaluation questions and provide insights regarding the processes through which the outcomes of intervention were achieved, the study utilized a cross-sectional survey with MSM who have been residing, working, and/or making appointments/gathering for sexual activities in Phnom Penh including in the coverage of Chaktomuk OD where the USAID HIV Flagship project has been implemented through funding from USAID, and in Siem Reap including in the coverage of Siem Reap OD.

9. Sampling Procedures

9.1. Study Population

In 2015, the estimated population of MSM was 3,685 in Phnom Penh and 742 in Siem Reap (Yi, 2015). Based on results of GIS mapping (2013), the number of MSM in Phnom Penh was estimated to be 2,358 (775 in Chaktomuk OD) and 175 in Siem Reap OD. The MStyle project document (2015) indicated that the target MSM for MStyle program under the coverage of Chaktomuk OD was about 847, and about 370 were under the coverage of Siem Reap OD in Siem Reap province (Flagship, 2013b). These figures were estimates; there was no definite size of the population. Without a defined population, the sampling frame for sample selection using conventional sampling strategies was not possible. Thus, the sample was chosen by respondent driven sampling strategy which is illustrated below.

9.2. Sample Size

Given this type of study design, sample size determination was required to meet design criteria, particularly for the implementation of the regression model. The following formula was used to determine the appropriate sample size for statistical modeling.

$$n = (1 - R_M^2)\,(z_{1-\alpha} - z_\beta)^2/\{M^2\,P(1-P)(1-R_T^2)\}=237$$

- R_M^2: R-squared statistic for the repression model

- P: Proportion of MSM assigned to intervention group. It is set to .5 for the maximum sample size.
- R_T^2: Squared correlation between T & S, where T is assignment status, and S: score variable (exposure index). It is derived from the parametric Regression-Discontinuity model: $Y_i = \alpha + \beta_0 T_i + \beta_1 g(S_i) + \varepsilon_i$; the individual MSM: i, Y_i : outcome variable, S_i : score variable, g(S): function of S_i . R_T^2 is commonly set at 2/3.
- α (type I error): It is the probability that we conclude that the program had an effect when in fact it did not. It is commonly set at 0.05 (95% confidence level).
- β (type II error): It is the probability that we conclude that the program had no effect when in fact it did.
- Power (1- β): It is the probability of correctly concluding that the program had an effect. It is commonly set at 0.8. Actually, the larger the power, the more stable estimates of group parameters, but the sample size increased.
- $z_\propto$ & $z_{1-\beta}$ are normal percentiles.
- M: is the desired minimum detectable (standardized) effect size (MDES). It is most frequently used between .2 and .5

For given α=0.05, 1- β=0.8, P=0.5, R_T^2=2/3, M=0.35, and R_M^2=0.2, therefore, the sample size for this evaluation was about 485 MSM. Using a non-response rate 5 percent, the total sample size was 510. This sample size was divided into 255 for Phnom Penh including Chaktomuk OD, 255 for Siem Reap including Siem Reap OD. This allocation was to ensure that there would be enough sample size for the potential application of econometric modeling.

Table 3 Sample size

No.	Study size	Number of MSM	
		Sample size planned	Actual sample
1	Phnom Penh	255	306
2	Siem Reap	255	255
	Total	**510**	**561**

9.3. Sampling Strategy

To better reach MSM from different backgrounds, respondent driven sampling (RDS) was the most appropriate strategy to select the sample for this study. This sampling strategy was also appropriate in the context where there was no sampling frame, and where the definite number of population had not been known, as was the case here.

The recruitment chain for this study, therefore, was started with initial seeds of 4 MSM: 2 from Phnom Penh and 2 MSM from Siem Reap. The initial seeds from each site were selected by field researchers based on networks built in previous studies. In Phnom Penh, the first initial seed was recruited from the coverage of Chaktomuk OD where the MStyle branded program implemented; whereas the second initial seed was selected from outside the branded program area. In Siem Reap, the two initial seeds were selected from the coverage of Siem Reap OD where the branded program has been implemented as well but later than the Phnom Penh. Then each of these seeds was given two coupons to recruit two MSM, then each of the two MSM continued recruiting two more MSM. Most of the recruited candidates in turn became seeds after

participating in the study. The new seeds were given two coupons to refer their peers. Overall 81% of target sample were recruited from the fourth wave and ended in 16th wave. The actual recruitment results and chains are illustrated in Table 4 below.

Table 4 Results of recruitment and chains

No.	Study location	Target sample	Initial seed	Actual result	Wave #	Ineligible
1	Phnom Penh	255	1st	137	16	3
			2nd	169	14	4
2	Siem Reap	255	1st	142	12	4
			2nd	113	11	2
3	Total	510	4	561		13

9.4. Inclusion Criteria

Each recruited MSM was assessed for eligibility by the field research team. This included a valid referral coupon from a previous participant (except for seeds). Importantly, the assessment was to ensure that the survey participants met eligibility criteria and obtained consent. Eligible participants received an explanation of the study's purpose and the nature of the questions to be asked. The field research team reviewed the consent form with the participant. If the participant acknowledged full understanding of participation in the study and agreed to participate, enrollment occurred. The inclusion criteria for participants in this evaluation included:

- Khmer speaking
- Age 18 years or above
- Biological male
- Self-identified as MSM or express feelings of being sexually attracted to males and ever had sex with men
- Living, working, or gathering/making appointments for sexual activities in Phnom Penh including the coverage of Chaktomuk OD and in Siem Reap province including Siem Reap OD

10. Evaluation Team

The evaluation was carried out by a team possessing academic backgrounds in health and social science, capacities, skills and experience in research and impact evaluation design, management, and analysis. The team consisted of the following people:

- Dr. Christian Pitter, MD MPH, Chief of Party, USAID HIV Innovate and Evaluate Project, University Research Co. LLC
- KHUN Sithon, Ph.D. (Demography), M.A. (Population & Reproductive Health Research), B.A. (Sociology), Director of Research
- Ms. Hul Sivantha, B.A. (English Literature) , Master of Development Management, Master of Health Social Sciences, Senior Research Officer
- Ms. Orm Socheata, B.A. (Psychology), Research Officer
- Mr. Mao Sothearith, B.A. (Computer Science), Data Analyst

Data collection was carried out by a pool of field researchers possessing bachelor degrees in social sciences who were equipped with knowledge, skills, and extensive experience in structured interviewing and data collection techniques with KP. They had previously engaged in research and evaluation with USAID HIV Innovate & Evaluate Project in addition to their previous fieldwork experience with other organizations.

These field researchers were a central part to this evaluation. Data collection was conducted by Mr. Mut Ouch, Mr. Son Lim, Mr. Kong Veha, Mr. Eang Sambat, Mr. Chun Sokhan, Mr. Mao Sochetra, Mr. Chea Sokhun, Mr. Neat Darith, Mr. Chim Sarin, Mr. Loeurng Samoeurn, Mr. Mao Sosengphyrun, and Mr. Iv Khambrasith. Data processing and in-door quality control were carried out by Mr. Ouch Chanrith, Miss. Hor Danet, and Mrs. Khen Sophal.

11. Data Collection

11.1. Fieldwork Management

Data collection team was divided into two group – one group in Phnom Penh and another group in Siem Reap. Each group consisted of six male field researchers facilitated by a field research coordinator from the same gender. Fieldwork for data collection took place between 18 January and 13 Feb 2016, about 27 days.

After being recruited by the seeds, the participants were contacted by field researchers to make appointments for the interviews. The interviews were done either at the place of living and anyplace where agreed by the participants as easy and convenient for the conversation. However, safety for field researchers had been considered. To minimize risks, two field researchers were required to go for the interview with each participants. Field researchers informed the field team coordinator about locations of the appointments and schedule of daily interviews.

The research officer monitored data collection activities on daily basis. A facilitation model was used rather than supervision approach in order to build a strong research team with a common goal of providing good quality of data. A fieldwork operation manual for data collection had been designed, and this guided processes of data collection.

11.2. Instruments

A questionnaire was developed, and field tested to ensure the functionality and accuracy among the target population. Improvement was made based on feedback from the pilot test. Additional tools were designed to support the management of RDS data collection and the process. These tools included:

a) Screening questionnaire for MSM: used to select MSM to take part in the study based on the inclusion criteria,
b) Consent form: explained the purpose, requirements, risks, and benefits of the study and asked the participant to acknowledge informed consent,
c) Check list form: recorded progress of participants from the first contact for interview until primary incentive payment,
d) Field incident form: reported unexpected occurrences in the field,
e) Coupon tracking form: monitored the flow of participants, distribution of coupons and completion of study requirements by participants,
f) Non-eligibility form: summarized why participants were ineligible at screening,
g) Refusal form: summarized why participants refused to participate at screening,
h) Financial reporting form: tracked the payment of primary and secondary incentives,
i) Inclusion criteria card and coupon: facilitated recruits' selection of their peers to participate in the study, and

j) Heart ranking tool: facilitated respondents' replies to scalar questions.

11.3. Incentives

Participants (including seeds) were offered an incentive for completing the interview (primary incentive) and another incentive (secondary incentive) for recruiting their peers to participate in the study. Participants recruited up to two peers. Recruiters were provided an incentive as long as the recruit could identify the recruiter as a recruiter, fulfilled the eligibility criteria, and successfully enrolled in the study.

Based on findings from previous studies, the primary incentive of US$5.00 ($2.50 for transport and $2.50 for communication) and secondary incentive of US$2.50 for each recruit had been considered as appropriate. These incentives were set low enough to be non-coercive but high enough to cover the costs of participation plus transportation.

Primary incentive: the following conditions were required in order that a participant could claim the primary incentive:

- ✓ Had a coupon (except for seeds) or could identify the name of the recruiter;
- ✓ Fulfilled the study eligibility criteria;
- ✓ Provided informed consent; and
- ✓ Completed the interview process.

Secondary incentive: a participant received an incentive for each individual (no more than two) she recruited. The recruit must fulfill the eligibility criteria and study requirements. A participant who distributed a coupon to her peers were contacted again (second contact) by the field research team to get incentive and asked to find their recruits and encouraged them to enter the study. The second contact for secondary incentive was a good opportunity for field researchers to ask participant about the peers who refused to receive a coupon, and for exploring the reasons of refusals.

12. Data Management

12.1. Data entry

CSPro, the public domain software package developed by US Census Bureau, was used to design the database based on the structure of the questionnaire. This computer application allowed for efficient skip patterns and reduced the time needed for data entry and cleaning.

Data processing was started by end of the first week of data collection. The field research team sent the completed forms and questionnaires on a weekly basis to the central office in Phnom Penh. Questionnaires and forms were entered as soon as possible after editing so that potential errors could be corrected. Paper documents were stored in a systematic order to be easily accessible for the data processing team.

12.2. Data cleaning

To produce high-quality statistics based on a high level of data quality, it was vital to remove any errors through the procedure of data cleaning. A comprehensive process of data cleaning was applied. After data entry was completed, the data processing team carried out preliminary data cleaning by running simple frequency analyses

to detect the extreme values and inconsistencies in filtered questions. Two techniques of data cleaning were used in this process: data editing during the data collection phase and statistical data editing.

Questionnaire editing in the field was done to address completeness errors. Detected errors were corrected immediately in the field, as this could be very difficult if it had to be done afterwards when the fieldwork has been completed. Data editing was done in the field by the field researchers, field research facilitators, and research officer in order to ensure that the completed questionnaires were clean and ready to send to the data processing team to be processed for data entry. In cases where serious errors had been found, the respondents were contacted again by field researcher while in the field in order to complete the missing or erroneous data. The quality controllers determined whether the questionnaires were completed enough to be processed after receiving the completed questionnaires from the field researchers.

Statistical data editing, the process of detecting errors in survey data and correcting those detected errors, were employed, providing a solution to some of the data problems left unsolved by questionnaire editing. This process addressed the following types of data errors:

- Domain errors: each question had a domain (or range) of valid answers. An answer outside this domain was considered an error.
- Consistency errors: consistency errors occurred when the answers to two or more questions contradicted each other. Each questionnaire may have an answer in its valid domain, but the combination of answers may be impossible or unacceptable. For example, respondent has never used clinical services, and that respondent answered that he/she satisfied the services. The combination of these answers for the same person is probably an error.
- Routing errors (skip pattern errors): the questionnaire may contain routing instructions. A routing error occurs when an interviewer or respondent fails to follow a routing instruction, and a wrong path is taken through the questionnaire. As a result, the wrong questions are answered, leaving applicable questions unanswered and inapplicable items with entries.

12.3. Weighting adjustments

After data editing, the clean dataset required further preparation prior to data analysis. The selection of respondents with probability directly proportional to network size required weighting adjustment procedure in order correct for unequal selection probabilities. Thus, based on the determined sample size and sample design, weighting adjustments were constructed and applied in the analysis. The logic of using weighting adjustments was to reducing biases in the estimates due to sampling.

Since all participants did not have the same probability of selection, the RDS population proportion estimates (PPEs) were applied. This procedure weighted each sample element by the inverse of its probability of selection so units with a small chance of being selected had more weight. In other words, groups with larger average network sizes were assigned lower weights, while groups with the smaller average network sizes were assigned higher weights. The RDSAT application was employed to compute RDS weights for econometric modeling.

13. Measurement of Variables

Geographic area was coded 1 for MSM who were living, working, or ever made appointments for sexual activities under the coverage of Siem Reap OD in Siem Reap province and Chaktomuk OD in Phnom Penh

where MStyle branded program implemented (within program catchment area), and 0 for otherwise (outside program catchment area).

Program exposure: eleven questions related to program activities were used to construct proxy variable for program exposure: (1) *do you know about MStyle program? (2) In the past 3 months, have you ever been approached by outreach workers of MStyle program? (3) Have you ever visited MStyle club? (4) Have you ever visited MStyle website (My Community)? (5) Have you ever been visited MStyle Khmer Facebook? (6) Have you ever called Voice4U? (7) Have you ever received a copy of the MStyle guide? (8) In the past 12 months, have you ever received referral slips from MStyle outreach worker for health or social services? (9) Have you ever been referred by MStyle program to psychosocial support services? (10) Have you ever been trained in legal literacy by the MStyle program? (11) And have you ever been invited to attend anti-stigma campaigns by MStyle peer/ outreach worker?* These indicators were aggregated into a single measure, 'index', based on linear combinations. Principle component analysis (PCA) was run on these whole set variables for program exposure, using STATA. Participants were ranked by program exposure score from PCA and classified in terciles, with the first 2 parts (lowest to medium scores) categorized as 'some exposure' and the last part with high score grouped as 'high exposure'. Participants without exposure to any of the above activities/services were classified as 'no exposure''. Thus this program exposure variable was coded 0 for no exposure, 1 for low exposure, and 2 for high exposure.

Risk index was measured by the following indicators: *MSM who have ever sold sex to male clients in the past 3 months, ever bought sex from male clients in the past 3 months, ever had unpaid sex with male partners in the past 3 months, did not use condom in the last sex with male partner, ever used illicit drugs in the past 3 months, ever injected illicit drugs in the past 3 months, had sex during /after using illicit drugs, and ever injected hormone in the past 3 months.* PCA was used to construct composite scores for this index. The process of this index construction was the same as program exposure, but the risk scores here were in terciles – dividing the scores into 3 equal parts: the first part contains low score (low risk), second part for medium score (medium risk), and last part for high score (high risk).

Discrimination index was measured by the responses to the following questions: *Have you been verbally abused by your sexual partner in the past 12 months? Have you been physically abused by sexual partners in the past 12 months? Have you been verbally abused by police in the past 12 months? Have you been physically abused by police in the past 12 months? Have you been arrested by police in the past 12 months?* The same process of principle component analysis was adapted here as well to construct composite index. Due to fewer number of variables, the index scores were classified into 2 equal parts: the first part contains participants with low discrimination index score (low discrimination) and second for high discrimination index score (high discrimination).

Stigma was coded 1 for those MSM who felt that they have been looked down on by other people because of their sexual identity, and 0 for otherwise.

Unreached MSM is measured by a combination analysis of any MSM with all the following characteristics: *Never been contacted by an NGO outreach worker for sexual or HIV education program; Never participated in any NGO activity for sexual and HIV education; Never received any information about sexual and HIV from an NGO; and Never used any sexual health or HIV services from NGO.*

14.Data Analysis

The MStyle branded program was not exclusively different from the non-branded program implemented elsewhere in the country. A number of key services were the same between the two programs. Additionally, participants from outside the catchment area of the branded program might have been exposed to the

social media implemented by the branded program as well. Through RDS, some participants were recruited from outside branded program catchment area. The intensity of program exposure varied among participants as well regardless of location. Thus, having only geographic area variables was not sufficient to compare differences in outcome variables between participants who were in the branded program catchment area and those who were not. Program exposure index was constructed based a set of variables using principle component analysis (PCA) in STATA in order to measure the effect of program exposure on outcomes, with participants being classified as unexposed, low exposure and high exposure, based on the composite scores regarding their exposure to selected intervention activities. Details are described in section 13.

A combination analysis technique was used to construct the unreached variable. Discrimination index and risk index were developed using principle component analysis in STATA.

Descriptive statistics were mainly used for the analysis to address the secondary question and sub-questions of the evaluation, providing an overall understanding regarding participants' characteristics (sociodemographic variables, and sexual behavior) and program related variables and outcome variables. Comparisons were made among these variables between participants with no exposure, some exposure, and high exposure, and participants from the branded program catchment area and non-branded program catchment area. Statistical tests were applied across these comparisons.

Binary logistic regression in STATA 14® was applied in the analysis in order to address the central evaluation question regarding the effect of MStyle program exposure on outcome variables. Program exposure index, classifying no exposure, some exposure, and high exposure, was examined to identify the potential program effects. Exposure to key program activities were investigated as well in order measure their effects on program outcome variables.

15. Quality Assurance

Quality assurance was carried out in order to ensure that no data were missing and data were precise and accurate. Monitoring during the study helped in reducing the problem of missing data. Monitoring for quality assurance was implemented. The monitoring was not to identify the mistakes of the team's performance, but instead to check for errors in collected data and make corrections immediately. The evaluation team was established in a way to minimize the potential errors from fieldwork and tried to reduce bias in the field and made necessary correction immediately in the field.

In addition to the quality control mechanism among the field researchers and quality controllers, the research project staff played active roles in field monitoring in order to support the field research team in data collection and ensure the quality of fieldwork. Senior research staff provide direct backstopping to the field research teams.

Data errors were usually due to incorrect data collected in the field and keystroke errors occur during data entry. Data errors were monitored by professional field researchers during a face-to-face interview and by field facilitators once the interview was complete. Keystroke errors were mitigated through double entry, well-trained data entry staff and data checking. The double-entry was carried out to check for consistency and accuracy in data entry, and perform consistency analysis. Corrections were made based on the results from double entry analysis. Furthermore, CSPro helped to ensure correct skipping patterns during data entry by flagging missing and out-of-range values.

16. Ethical Considerations

The protocol, questionnaire and informed consent form were reviewed and approved by the Cambodian National Ethic Committee for Health Research (NECHR) 25 December 2015 prior to starting of the study.

The information sheet and consent form were translated from English to Khmer by research project staff who had good knowledge of the study area. Field researchers gave a copy of the informed consent form to every participant to read preceding the interview at all sites and asked participants if they had any questions. In cases of low-literacy, the information sheet and consent forms were read aloud by the field researchers to the participant during the consent process so that the participant could provide their consent with their signature.

The interviews were organized in a safe, private, and accessible location. Interviews were taken approximately one hour. The questionnaire was administered face-to-face with no other person in the setting than the field researcher and the study participant. The research team safeguarded these protections for participants:

- Participation was completely voluntary;
- Subjects were free to withdraw at any time;
- Informed consent was signed in a private setting;
- Confidentiality will be guaranteed on all documents and tools used;
- No names will be used in written documentation of the study; and
- Field researchers were trained in discussing sensitive issues and protecting respondents' confidentiality and human rights.

17. Challenges and Limitations

Recruiting MSM using RDS strategy was more challenging than using a location based sampling strategy. Most MSM were working, and appointments for the interview happened around lunch time or when they got off from work.

The impact of the branded program could not be measured in contrast to the non-branded program. Participants from outside the branded program catchment area still could access some information and services from the branded program. Similar services and activities were also provided in the non-branded sites. Only exposure MStyle branded activities were considered by the evaluation, thus determining the comparative impact of the branded and non-branded programs is not possible. However, since the level of program exposure varied among the participants, we were able to evaluate the extent to which the program intensity affects the outcomes.

18.Results

18.1. Program and Participant Characteristics

18.1.1. Geographic area and Program Exposure

As depicted in figure 1, of the 561 MSM respondents, 269 (48%) currently resided, worked, or made appointments for sexual activities within the MStyle branded program areas in Phnom Penh and Siem Reap (WMSM), and 292 MSM (52%) were from outside the program catchment area (OMSM). Among MSM in the sample, 55% were located in Phnom Penh and 45% were located in Siem Reap. Based on the program exposure index, 51% of MSM had no exposure to MStyle, while 17% had low exposure to the program (LEMSM), and 32% of MSM were classified as having high exposure (HEMSM).

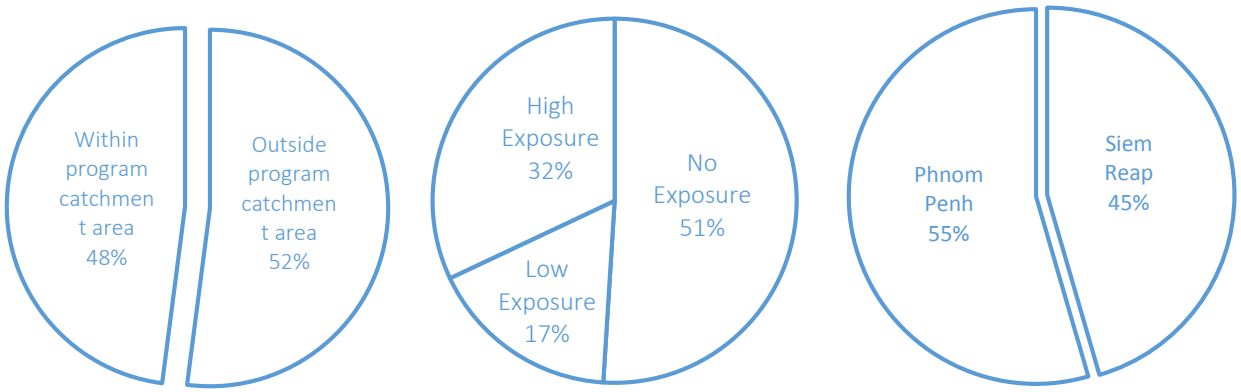

Figure 1 Sample distribution by geographic area and level of program exposure

Figure 2 shows that 64% of MSM located outside the program catchment areas showed no exposure to the program, compared to 37% of MSM within the program catchment areas with no exposure to the program. By contrast, 42% of MSM within the program catchment areas had high program exposure, compared to 23% of MSM located outside the program catchment areas. The difference between groups was statistically significant, $p < 0.001$. These data suggest moderate penetration of the program among MSM within the geographic area of the program, and more limited penetration among MSM outside the branded program's geographic areas.

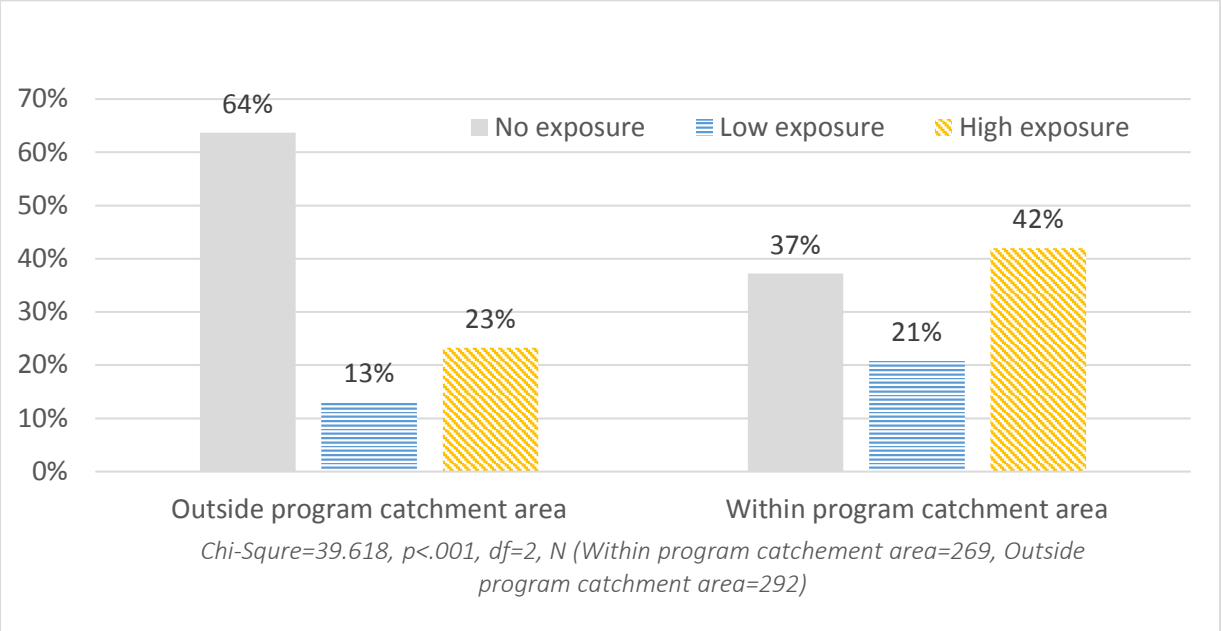

Figure 2 Geographic area by program exposure

Table 5 describes data on MSM's exposure to, and perceptions about, the MStyle program. More than half (58%) of WMSM knew of the program compared to 28% of OMSM (p=0.000). Among the 238 respondents that knew about the MStyle program, most had learned about the program from friends (61%) or from NGO outreach workers/volunteers (28%), with much smaller proportions reporting learning about the program from magazines, special events, or other media.

There were no statistically significant differences between WMSM and OMSM with regard to how well they knew the MStyle program, with the proportions of MSM stating they knew the program “well” being 19% and 21%, respectively. Interestingly, only 29% of HEMSM reported that they knew the program well. Approximately 93% of MSM that reported some knowledge about the program found MStyle to be "attractive" or "very attractive", with HEMSM being much more likely to hold this opinion than LEMSM (96% versus 67%, respectively; $p = 0.000$). The majority of MSM that reported some knowledge about the program said the MStyle logo was "attractive" or "very attractive" (approximately 79%), with no statistically significant difference between MSM highly exposed or little exposed to the program.

Table 5 Perceptions regarding MStyle Program

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Do you know about MStyle program?				
No	71.6%	42.4%	57.6%	
Yes	28.4%	57.6%	42.4%	48.862
Total	100%	100%	100%	p=.000
	292	*269*	*561*	
IF Yes, how did you learn about MStyle program?				
NGO outreach workers/volunteers	25.3%	29.7%	28.2%	
Friends	66.3%	57.4%	60.5%	
Magazine	1.2%	2.6%	2.1%	3.229
Special events of MStyle	2.4%	3.2%	2.9%	p=.863
Tuk tuk ads	.0%	.6%	.4%	
MStyle Facebook	.0%	.6%	.4%	
Other Facebooks	1.2%	.6%	.8%	
Other	3.6%	5.2%	4.6%	
Total	100%	100%	100%	
	83	*155*	*238*	
IF Yes, how much do you know about MStyle program?				
Do not know well	53.0%	46.5%	48.7%	
Know some	27.7%	32.3%	30.7%	0.948
Know well	19.3%	21.3%	20.6%	p=.622
Total	100%	100%	100%	
	83	*155*	*238*	
If “know well” or “know some”, what do you think about the attractiveness of the MStyle program?				
Not attractive	0.0%	1.2%	0.8%	
Neutral	7.7%	4.8%	5.7%	0.935
Attractive	48.7%	47.0%	47.5%	p=.817
Very attractive	43.6%	47.0%	45.9%	
Total	100%	100%	100%	
	39	*83*	*122*	
If “know well” or “know some”, have you ever seen logo of MStyle?				
No	5.1%	6.0%	5.7%	
Yes	94.9%	94.0%	94.3%	0.039
Total	100%	100%	100%	p=.843
	39	*83*	*122*	
If “know well” or “know some”, is the MStyle logo attractive to you?				
Not attractive at all	2.6%	0.0%	.8%	
Not attractive	0.0%	2.4%	1.6%	4.443
Neutral	12.8%	21.7%	18.9%	p=.349
Attractive	48.7%	44.6%	45.9%	
Very attractive	35.9%	31.3%	32.8%	
Total	100%	100%	100%	
	39	*83*	*122*	

18.1.2. Sociodemographic Characteristics

More than half (58%) of MSM in the sample were aged 18-24 years (median age was 24 years), 66% were single, 20% were married or cohabiting with a regular partner, 54% had an education level of high school or above, and 66% had monthly incomes of less than US$200 (median income was US$160).

MSM within the program catchment areas tended to be slightly younger, with only 17% aged ≥30 years, compared to 29% of MSM outside the program catchment areas (p = 0.002). MSM outside the program catchment areas also had lower incomes, with 31% having monthly incomes < $100, compared to only 13% of MSM within the program catchment areas (p = 0.000). HEMSM tended to have lower incomes, with 28% having monthly incomes < $100, compared to only 18% of unexposed MSM (p = 0.007). No differences were noted by geographic area with regard to educational attainment.

Table 6 Sociodemographic by Geographic area and exposure index

Characteristics of Respondents	Geographic area			Program exposure (based on index score)				
	Outside program catchment area	Within program catchment area	Chi-Square Test	No Exposure	Low Exposure	High Exposure	Chi-Square Test	Overall
Age								
18-24	54.8%	60.6%		55.6%	53.2%	63.0%		57.6%
25-29	16.1%	22.3%	12.3	18.9%	18.1%	19.9%	6.288	19.1%
30 and above	29.1%	17.1%	p=.002	25.5%	28.7%	17.1%	P=.179	23.4%
Total	100%	100%		100%	100%	100%		100%
	292	*269*		*286*	*94*	*181*		*561*
Marital status								
Single (never been married)	63.0%	69.1%		63.6%	63.8%	70.7%		66.0%
Married	12.7%	14.1%	5.47	10.8%	17.0%	15.5%	17.078	13.4%
Cohabitating (with regular partner)	7.9%	5.2%	p=.360	8.7%	6.4%	3.3%	P=.073	6.6%
Cohabitating (non-regular partner)	9.2%	7.4%		10.8%	4.3%	6.6%		8.4%
Widowed	2.4%	1.5%		2.4%	3.2%	0.6%		2.0%
Divorced/separated	4.8%	2.6%		3.5%	5.3%	3.3%		3.7%
Total	100%	100%		100%	100%	100%		100%
	292	*269*		*286*	*94*	*181*		*561*
Educational level								
Primary education	16.8%	14.5%		17.5%	14.9%	13.3%	7.182	15.7%
Secondary school	27.4%	33.5%	2.53	32.2%	35.1%	24.9%	p=.127	30.3%
High school and above	55.8%	52.0%	p=.281	50.3%	50.0%	61.9%		54.0%
Total	100%	100%		100%	100%	100%		100%
	292	*269*		*286*	*94*	*181*		*561*
Income								
Under $100	30.8%	13.4%		17.5%	25.5%	28.7%		22.5%
$100 - $200	38.0%	49.8%	24.8	50.7%	35.1%	37.0%	17.662	43.7%
$201 - $300	18.5%	22.3%	p=.000	19.2%	27.7%	18.2%	p=.007	20.3%
Above $300	12.7%	14.5%		12.6%	11.7%	16.0%		13.5%
Total	100%	100%		100%	100%	100%		100%
	292	*269*		*286*	*94*	*181*		*561*

Table 7 shows a wide spectrum of occupations among MSM, the most common main occupations for MSM being general worker (14%), student (11%), cafe/beer garden/restaurant worker (11%), NGO/company staff (10%), and factory worker (10%). Interestingly, 16% of MSM in the sample with no exposure to the program were factory workers, a much higher proportion than for MSM with low exposure (4%) or high exposure (2%).

Table 7 Main occupation by Geographic area and exposure index

Occupation	Geographic area			Program exposure (based on index score)				
	Outside program catchment area	Within program catchment area	Chi-Square Test	No Exposure	Low Exposure	High Exposure	Chi-Square Test	Overall
Unemployed	8.6%	0.4%		2.4%	4.3%	8.3%		4.6%
Student	20.2%	1.1%		11.9%	8.5%	11.0%		11.1%
Karaoke worker	1.0%	1.5%		1.0%	3.2%	0.6%		1.2%
Bar/club worker	2.1%	2.6%	190.019	1.7%	1.1%	3.9%	105.005	2.3%
Massage/Sauna parlor	0.0%	8.6%	p=.0137	2.1%	4.3%	7.2%	p=.000	4.1%
Café/Restaurant/Beer garden worker	6.5%	15.6%		9.4%	12.8%	12.2%		10.9%
Hair beauty/hair dresser/beauty salon for wedding	3.8%	9.3%		4.5%	7.4%	8.8%		6.4%
Businessman	0.7%	0.4%		0.7%	1.1%	0%		0.5%
Farmer/Fisherman	0.3%	1.9%		0.3%	0%	2.8%		1.1%
General worker	9.6%	19.3%		16.8%	18.1%	8.3%		14.3%
Government civil servant	0.7%	1.1%		0.7%	1.1%	1.1%		0.9%
Moto Dup/Tuk Tuk driver	3.8%	4.1%		4.9%	4.3%	2.2%		3.9%
NGO staff/Company staff	8.6%	11.5%		11.2%	5.3%	10.5%		10.0%
Security Guard	0.7%	3.0%		2.1%	2.1%	1.1%		1.8%
Military/Police	1.0%	0%		1.0%	0%	0%		0.5%
Porter/Cart puller	0.3%	0%		0%	0%	0.6%		0.2%
Street-based sex worker	3.1%	2.2%		3.5%	3.2%	1.1%		2.7%
Venue-based sex worker	0.3%	0%		0%	0%	0.6%		0.2%
Street vendor	2.7%	1.1%		1.7%	2.1%	2.2%		2.0%
Seller in the market	3.8%	2.2%		2.8%	5.3%	2.2%		3.0%
Seller at home	2.7%	3.7%		1.7%	4.3%	5.0%		3.2%
Factory worker	17.5%	1.5%		16.4%	4.3%	2.2%		9.8%
Performer at entertainment establishment	0.3%	7.1%		0.7%	5.3%	7.2%		3.6%
Other	1.7%	1.9%		2.1%	2.1%	1.1%		1.8%
Total	100% *292*	100% *269*		100% *286*	100% *94*	100% *181*		100% *561*

18.1.3. Risk, Discrimination, Stigma, and Unreached

Table 8 shows that, based on the risk index, overall, about one third (32%) of MSM were considered to be at high risk for HIV, and 42% of MSM were low risk, with no significant differences between MSM within and outside the program's catchment area, or with regard to program exposure.[5]

A much larger proportion of MSM had a low discrimination index measure (72%) than had a high discrimination index (28%). A larger proportion of HEMSM (38%) reported experiencing a high level of discrimination, compared to LEMSM (27%) or unexposed MSM (21%) (p=0.000). A slight majority of MSM (55%) reported feeling stigma, or being looked down upon by others because of their sexual identity. No statistically significant differences between MSM within and outside the program's catchment area were seen with regard to stigma.

WMSM were significantly more likely to be reached by an NGO (79%) than were OMSM (56%), p=0.000.

Table 8 Risk, discrimination and stigma by geographic area

Variable	Geographic area			Program exposure (based on index score)				
	Outside program catchment area	Within program catchment area	Chi-Square Test	No Exposure	Low Exposure	High Exposure	Chi-Square Test	Overall
Risk index								
Low risk	41.1%	42.4%		41.3%	43.6%	41.4%	0.648	41.7%
Medium risk	28.8%	24.5%	1.379	28.0%	25.5%	25.4%	p=.958	26.7%
High risk	30.1%	33.1%	p=.501	30.8%	30.9%	33.1%		31.6%
Total	100% *292*	100% *269*		100% *286*	100% *94*	100% *181*		100% *561*
Discrimination index								
Low discrimination	75.3%	68.8%	3.01	78.7%	73.4%	61.3%	16.695	72.2%
High discrimination	24.7%	31.2%	p=.082	21.3%	26.6%	38.7%	p=.000	27.8%
Total	100% *292*	100% *269*		100% *286*	100% *94*	100% *181*		100% *561*
Stigma: feeling looked down on by other people because of identity								
No	42.5%	46.8%		46.2%	40.4%	44.2%	0.954	44.6%
Yes	57.5%	53.2%	1.085	53.8%	59.6%	55.8%	p=.621	55.4%
Total	100% *292*	100% *269*	p=.297	100% *286*	100% *94*	100% *181*		100% *561*
Unreached MSM								
Reached	56.2%	79.2%		43.7%	79.8%	97.8%	155.220	67.2%
Unreached	43.8%	20.8%	33.656	56.3%	20.2%	2.2%	p=.000	32.8%
Total	100% *292*	100% *269*	p=.000	100% *286*	100% *94*	100% *181*		100% *561*

[5] The operationalization of risk, discrimination, stigma, and unreached MSM were provided in Section 13.

Table 9 shows that 27% of all MSM reported selling sex to male clients in the past three months, with no significant differences in this measure based on the level of program exposure. Only 6% of all MSM reported buying sex in the past three months, again with no significant differences in this measure based on the level of program exposure.

Table 9 Sexual activities by program exposure

Variable	Program exposure				Chi-Square Test
	No Exposure	Low Exposure	High Exposure	Overall	
Selling sex to male client in the past 3 months					
Did not sell sex	74.1%	73.4%	71.3%	73.1%	0.465
Sold sex	25.9%	26.6%	28.7%	26.9%	p=.792
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Usually selling sex to clients at					
Venue basis	83.2%	85.1%	84.0%	83.8%	0.194
Freelance basis	16.8%	14.9%	16.0%	16.2%	p=.908
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Buying sex from male partners in the past 3 months					
Did not buy sex	94.8%	95.7%	91.2%	93.8%	3.209
Bought sex	5.2%	4.3%	8.8%	6.2%	p=.201
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Usually buying sex at					
Venue basis	96.9%	96.8%	95.6%	96.4%	0.568
Freelance basis	3.1%	3.2%	4.4%	3.6%	p=.753
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Unpaid sex with male partners in the past 3 months					
Never had unpaid sex	22.7%	20.2%	18.8%	21.0%	1.083
Ever had unpaid sex	77.3%	79.8%	81.2%	79.0%	p=.582
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Usually finding unpaid sex partners at					
Venue basis	53.8%	47.9%	49.2%	51.3%	1.512
Freelance basis	46.2%	52.1%	50.8%	48.7%	p=.469
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	

18.2. Strategic Behavioral Communication

Table 10 shows that overall, only about 25% of MSM in the sample reported ever being approached by program outreach workers. Among these, 33% of WMSM and only 17% of OMSM reported this, p=0.000. Only 12% of MSM reported being approached by program outreach workers in the last three months.

Among those MSM that met with program OW in the past three months, the most common meeting places were private homes (34%), public park/street (21%), entertainment establishments (17%), and MStyle club (17%). The majority of these meetings were small-group sessions (59%).

Overwhelming majorities of MSM that met with an outreach worker in one-on-one or small-group sessions reported that the sessions were interesting (98%), that they learned helpful information (97%), that the outreach worker was knowledgeable (90%), and that the outreach worker was friendly (97%). Ninety-four percent (94%) of MSM approached in the last three months by an outreach worker thought the MStyle outreach was "valuable" or "very valuable."

Forty-one percent (41%) of all MSM stated that that outreach activities were the best communication channel to provide information regarding sexual, HIV, and reproductive health matters, followed by TV (19%), and Facebook (16%). Notably, WMSM demonstrated a greater preference for outreach work than OMSM (49% versus 34%, respectively) and a lower preference for Facebook (11% versus 20%, respectively) and TV (12% versus 26%, respectively). The differences between groups were statistically significant, p=0.000. Very small proportions of MSM thought the best communication channels were Messenger, Line, websites, or newspapers, with preferences for each of these accounting for less than 1% of respondents.

NGO outreach workers/volunteers were the major source of information about HIV/AIDS and STI services (34%), followed by friends/colleagues (18%), and TV (17%). WMSM had higher reliance than OMSM on outreach (45% versus 24%) and radio (14% versus 6%). OMSM had higher reliance than WMSM on Facebook (15% versus 7%). The differences between groups was statistically significant, p=0.000.

Table 10 Strategic Behavioral Communication

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Have you ever been approached by a MStyle outreach worker?				
No	82.9%	67.3%	75.4%	
Yes	17.1%	32.7%	24.6%	18.348
Total	100%	100%	100%	p=.000
	292	*269*	*561*	
In the past 3 months, have you ever been approached by a MStyle outreach worker?				
No	93%	82%	88%	
Yes	7%	18%	12%	18.88
Total	100%	100%	100%	p=.000
	292	*269*	*561*	

Table 10 Strategic Behavioral Communication (CONTINUED)

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
IF ever been approached by outreach worker in the past 3 months, where did you last meet with MStyle outreach worker?				
Private home	30.0%	35.4%	33.8%	
Entertainment establishment	10.0%	20.8%	17.6%	5.697
Public park/street	35.0%	14.6%	20.6%	p=.337
Barber shop	5.0%	4.2%	4.4%	
MStyle Club	10.0%	20.8%	17.6%	
Other	10.0%	4.2%	5.9%	
Total	100%	100%	100%	
	20	*48*	*68*	
IF Yes, for the last time, did you meet with MStyle outreach workers in a one-on-one or a small group session?				
One-on-one meeting	30.0%	45.8%	41.2%	
Small group session	70.0%	54.2%	58.8%	1.461
Total	100%	100%	100%	p=.227
	20	*48*	*68*	
What is the best communication channel to provide information regarding sexual, HIV, and reproductive health information?				
Facebook	19.5%	11.2%	15.5%	
Messenger	.0%	.4%	.2%	
Line	1.0%	.4%	.7%	
Website	.7%	2.6%	1.6%	60.302
Outreach activities	33.6%	49.4%	41.2%	p=.000
TV	26.4%	11.5%	19.3%	
Radio	10.3%	5.2%	7.8%	
Newspaper	.7%	.0%	.4%	
Magazines	2.4%	3.3%	2.9%	
Received information from RHAC NGO	1.7%	9.3%	5.3%	
Others	3.8%	6.7%	5.2%	
Total	100%	100%	100%	
	292	*269*	*561*	
What is your major source of information for HIV/AIDS and STI services?				
NGO outreach workers/volunteers	23.6%	44.6%	33.7%	
Friends/colleague	19.5%	15.2%	17.5%	
Magazine	3.1%	1.5%	2.3%	
Newspaper	.3%	.4%	.4%	50.917
Special events	.0%	2.2%	1.1%	p=.000
Education material of MStyle	.0%	.4%	.2%	
Sexual partner	.0%	1.5%	.7%	
Other Websites	1.0%	1.5%	1.2%	
Other Facebook (non-MStyle)	14.7%	7.1%	11.1%	
TV	18.8%	14.5%	16.8%	
Radio	13.7%	5.9%	10.0%	
Other	5.1%	5.2%	5.2%	
Total	100%	100%	100%	
	292	*269*	*561*	

Regarding the SBC materials used in the MStyle program, exposure and attitudes towards seven of these were surveyed. Majorities of respondents (57-81%) reported never having seen these materials, but among those that reported having seen them, strong majorities (79-89%) reported finding the content "attractive" or "very attractive." See table 11.

Table 11 Strategic Behavioral Communication Material

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Among those who had been approached by MStyle outreach worker,				
Exposure to Bora's story				
No	64.0%	61.4%	62.3%	
Yes	36.0%	38.6%	37.7%	0.094
Total	100%	100%	100%	p=.759
	50	*88*	*138*	
Attractiveness Bora's story				
Neutral	.0%	17.6%	11.5%	
Attractive	55.6%	47.1%	50.0%	3.603
Very attractive	44.4%	35.3%	38.5%	p=.165
Total	100%	100%	100%	
	18	*34*	*52*	
Exposure to Ratanak				
No	86.0%	76.1%	79.7%	
Yes	14.0%	23.9%	20.3%	1.918
Total	100.%	100.%	100.%	p=.166
	50	*88*	*138*	
Attractiveness Ratanak				
Neutral	28.6%	19.0%	21.4%	
Attractive	42.9%	42.9%	42.9%	0.356
Very attractive	28.6%	38.1%	35.7%	p=.837
Total	100%	100%	100%	
	7	*21*	*28*	
Exposure to Theara				
No	86.0%	78.4%	81.2%	
Yes	14.0%	21.6%	18.8%	1.202
Total	100%	100%	100%	p=.273
	50	*88*	*138*	
Attractiveness Theara				
Neutral	14.3%	21.1%	19.2%	
Attractive	71.4%	47.4%	53.8%	1.240
Very attractive	14.3%	31.6%	26.9%	p=.538
Total	100%	100%	100%	
	7	*19*	*26*	
Exposure to Value of life				
No	64.0%	60.2%	61.6%	
Yes	36.0%	39.8%	38.4%	0.192
Total	100%	100%	100%	p=.661
	50	*88*	*138*	
Attractiveness Value of life				
Not attractive	.0%	2.9%	1.9%	
Neutral	11.1%	11.4%	11.3%	
Attractive	38.9%	28.6%	32.1%	1.021
Very attractive	50.0%	57.1%	54.7%	p=.796
Total	100%	100%	100%	
	18	*35*	*53*	

Table 11 Strategic Behavioral Communication Material (CONTINUED)

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Among those who had been approached by MStyle outreach worker,				
Exposure to Secret bag				
No	72.0%	59.1%	63.8%	
Yes	28.0%	40.9%	36.2%	2.300
Total	100%	100%	100%	p=.129
	50	*88*	*138*	
Attractiveness Secret bag				
Not attractive	.0%	2.8%	2.0%	
Neutral	.0%	13.9%	10.0%	2.662
Attractive	28.6%	25.0%	26.0%	p=.447
Very attractive	71.4%	58.3%	62.0%	
Total	100%	100%	100%	
	14	*36*	*50*	
Exposure to Choice is yours				
No	60.0%	55.7%	57.2%	
Yes	40.0%	44.3%	42.8%	0.243
Total	100%	100%	100%	p=.622
	50	*88*	*138*	
Attractiveness to Choice is yours				
Not attractive	.0%	2.6%	1.7%	
Neutral	15.0%	12.8%	13.6%	0.670
Attractive	35.0%	30.8%	32.2%	p=.880
Very attractive	50.0%	53.8%	52.5%	
Total	100%	100%	100%	
	20	*39*	*59*	
Exposure to Road of life				
No	78.0%	64.8%	69.6%	2.635
Yes	22.0%	35.2%	30.4%	P=.105
Total	100%	100%	100%	
	50	*88*	*138*	
Attractiveness Road of life				
Not attractive	.0%	3.2%	2.4%	0.890
Neutral	9.1%	9.7%	9.5%	P=.828
Attractive	45.5%	32.3%	35.7%	
Very attractive	45.5%	54.8%	52.4%	
Total	100%	100%	100%	
	11	*31*	*42*	

18.3. MStyle Club

As shown in table 12, among all respondents, less than half (45%) reported ever having heard about the MStyle Club. A larger proportion (51%) of WMSM knew about the MStyle Club than OMSM (39%), p=0.003. Of those that had heard about it, only 43% had ever visited the MStyle Club. A much larger proportion of WMSM (51%) had ever visited the MStyle club than OMSM (34%), p=0.006. Most (57%) MSM that had ever visited the club usually did so once per month or less frequently, with only 28% reporting having visited

three or more times per month. The average number of visits per month was 2.7 (SD=4.27), ranging from none to 25 visits.

Strong majorities of MSM that had visited the MStyle club stated that the location of the club was convenient (83%), the facilities were good (84%), the activities were attractive (80%), and the services provided by the club were good (87%).

Table 12 MStyle Club

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Ever heard about MStyle program's club				
No	61.3%	48.7%	55.3%	8.994
Yes	38.7%	51.3%	44.7%	p=.003
Total	100% *292*	100% *269*	100% *561*	
Ever visited MStyle program's club				
No	87%	74%	81%	15.242
Yes	13%	26%	19%	p=.000
Total	100% *292*	100% *269*	100% *561*	
Among those who had ever visited:				
Frequency of MStyle program's Club visit				
Less than once a month	10.5%	25.7%	20.4%	7.357
Once a month	44.7%	32.9%	37.0%	p=.061
Twice a month	7.9%	18.6%	14.8%	
Three times and more a month	36.8%	22.9%	27.8%	
Total	100% *38*	100% *70*	100% *108*	
The location of MStyle program's Club				
Not convenient	15.8%	17.1%	16.7%	0.032
Convenient	84.2%	82.9%	83.3%	p=.857
Total	100% *38*	100% *70*	100% *108*	
The facilities in the MStyle program's Club				
Not good	13.2%	17.1%	15.7%	0.295
Good	86.8%	82.9%	84.3%	p=.587
Total	100% *38*	100% *70*	100% *108*	
The activities in MStyle program's Club				
Not attractive	26.3%	17.1%	20.4%	
Attractive	73.7%	82.9%	79.6%	1.278
Total	100% *38*	100% *70*	100% *108*	p=.258
The services (overall) provided by the MStyle program's Club				
Not good	18.4%	10.0%	13.0%	1.548
Good	81.6%	90.0%	87.0%	p=.213
Total	100% *38*	100% *70*	100% *108*	

18.4. Social Media and Communication Technologies

Table 13 describes social media and communication technology use among MSM. The vast majority of MSM (83%) reported never having heard about the MStyle website "My Community", though WMSM were much more likely to have heard about it (21%) than OMSM (14%). The differences between groups was statistically significant, p=0.034. The vast majority of all MSM (96%) had never visited the website, though the small minority of MSM that did visit the website overwhelmingly thought it was attractive (94%). Among 25 MSM that ever visited MStyle website, only 4% reported ever having downloaded a referral slip from the website.

Similarly, most MSM (80%) reported never having heard about the MStyle Khmer Facebook page, though WMSM were more likely to have heard about it (25%) than OMSM (16%). The differences between groups was statistically significant, p=0.013. Among MSM that had heard of the MStyle Khmer Facebook page, most (69%) had never visited it, though the minority that did visit the page largely thought it was attractive (86%). Only 7% of MSM (9% of HEMSM and 0% of LEMSM) reported ever having called Voice4U.

Table 13 Social Media and Communication Technologies

Variable	Geographic area			
	Outside program catchment area	Within program catchment area	Overall	Chi-Square Test
Have you ever heard about MStyle Website (My Community)?				
No	86.0%	79.2%	82.7%	
Yes	14.0%	20.8%	17.3%	4.496
Total	100%	100%	100%	p=.034
	292	*269*	*561*	
Have you ever heard about MStyle Khmer Facebook?				
No	83.6%	75.1%	79.5%	6.162
Yes	16.4%	24.9%	20.5%	p=.013
Total	100%	100%	100%	
	292	*269*	*561*	
Have you ever ticked “Like” for the MStyle Khmer Facebook Page?				
No	93.5%	89%	91%	
Yes	6.5%	11%	9%	3.269
Total	100%	100%	100%	p=.071
	292	*269*	*561*	
Have you ever visited MStyle Website (My Community)?				
No	97%	94%	95.5%	
Yes	3%	6%	4.5%	2.701
Total	100%	100%	100%	p=.100
	292	*269*	*561*	
Have you ever visited MStyle Khmer Facebook?				
No	92.5%	89%	91%	
Yes	7.5%	11%	9%	2.179
Total	100%	100%	100%	p=.140
	292	*269*	*561*	
Have you ever called to Voice4U?				
No	99%	97%	98%	
Yes	1%	3%	2%	1.106
Total	100%	100%	100%	p=.293
	292	*269*	*561*	
Have you ever downloaded referral slips from MStyle website?				
No	100%	99.6%	99.8%	
Yes	0.0%	0.4%	0.2%	1.087
Total	100%	100%	100%	p=.297
	292	*269*	*561*	

18.5. Condoms and Lubricant

Table 14 shows information on condom and lubricant utilization among MSM. Among MSM that reported selling sex, 80% reported using a condom the last time they sold sex in the past three months, although there was no statistically significant difference based on program exposure. Most MSM (70%) reported using a condom during their last unpaid sex with a male partner, and 89% of MSM that bought sex in the last 3 months reported using a condom during their encounter, again with no statistically significant difference based on program exposure. Majorities of MSM (63-73%) reported having talked with a male partner about using a condom and/or lubricant, with HEMSM (77-82%) more likely to have had these discussions than LEMSM (60-72%) or unexposed MSM (54-67%). These differences were statistically significant, $p \leq 0.001$.

HEMSM were more likely to report consistent condom use (42%) than LEMSM (25%) or unexposed MSM (25%), p=0.000, and consistent condom plus lubricant use (32% vs 20% vs 15%, respectively), p=0.001. HEMSM were also more likely than LEMSM or unexposed MSM to have used condom plus lubricant (81% vs 75% vs 64%, respectively) the last time they had sex with a man.

The analysis also found that a larger proportion of HEMSM (73%) had last obtained a condom that was free than LEMSM or unexposed MSM (59 and 47%, respectively), p=0.000. The majority of MSM (70%) reported that condoms were available "whenever they needed it," with no statistically significant difference between HEMSM and LEMSM.

The majority of HEMSM obtained their most recent condom from a store/gas station/vendor/pharmacy (24%), non-MStyle outreach worker (16%), MStyle outreach worker (16%), or the MStyle club (10%). The majority of unexposed MSM obtained their most recent condom from a store/gas station/vendor/pharmacy (40%) or a sexual partner/sweetheart (20%).

Table 14 Condoms and Lubricant

Variable	Program exposure (based on index score)				Chi-Square Test
	No Exposure	Low Exposure	High Exposure	Overall	
Condom use at last selling sex with male partner in the past 3 months					
No	25.7%	19.2%	11.3%	19.6%	4.040
Yes	74.3%	80.8%	88.7%	80.4%	p=.133
Total	100% *74*	100% *26*	100% *53*	100% *153*	
Condom use at last buying sex with male partner in the past 3 months					
No	4.5%	0%	22.2%	10.9%	4.034
Yes	95.5%	100%	77.8%	89.1%	p=.133
Total	100% *22*	100% *6*	100% *18*	100% *46*	
Condom use at last unpaid sex with male partners					
No	30.8%	33.8%	27.4%	30.1%	1.103
Yes	69.2%	66.3%	72.6%	69.9%	p=.576
Total	100% *234*	100% *80*	100% *157*	100% *471*	

Table 14 Condoms and Lubricant (CONTINUED)

Variable	Program exposure (based on index score)				Chi-Square Test
	No Exposure	Low Exposure	High Exposure	Overall	
Have you ever talked with your male partners about using lubricant?					
No	46.2%	33.0%	22.1%	36.2%	28.278
Yes	53.8%	67.0%	77.9%	63.8%	p=.000
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Have you ever talked with your male partners about using condom?					
No	33.2%	27.7%	17.7%	27.3%	13.500
Yes	66.8%	72.3%	82.3%	72.7%	p=.001
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Have you ever talked with your male partners about using condom plus lubricant?					
No	45.8%	40.4%	22.7%	37.4%	25.801
Yes	54.2%	59.6%	77.3%	62.6%	p=.000
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Consistent condom use with male partner					
Not consistent	74.8%	75.5%	58%	69.5%	16.716
Consistent	25.2%	24.5%	42%	30.5%	p=.000
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
The last time you had sex with a man was a condom used?					
No	29.7%	26.6%	21.0%	26.4%	4.348
Yes	70.3%	73.4%	79.01%	73.6%	p=.114
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
IF Yes, the last time you had sex with a man was a condom plus lubricant used?					
No	35.96%	25.4%	19.3%	28.4%	11.922
Yes	64.04%	74.6%	80.7%	71.6%	p=.003
Total	100%	100%	100%	100%	
	203	*71*	*145*	*419*	
Consistent use of condom plus lubricant with male partner					
Not consistent	84.6%	79.8%	68.0%	78.4%	18.309
Consistent	15.4%	20.2%	32.0%	21.6%	p=.000
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	

Table 14 Condoms and Lubricant (CONTINUED)

Variable	Program exposure (based on index score)					
	No Exposure	Low Exposure	High Exposure	Overall	Chi-Square Test	
The last time you obtained condom did you buy it or get it free?						
Bought	53.3%	41.5%	26.7%	42.5%	31.574	p=.000
Free	46.7%	58.5%	73.3%	57.5%		
Total	100%	100%	100%	100%		
	276	*94*	*180*	*550*		
The last time you obtained lubricant did you buy it or get it free?						
Bought	47.7%	34.4%	27.4%	38.2%	18.699	p=.000
Free	52.3%	65.6%	72.6%	61.8%		
Total	100%	100%	100%	100%		
	241	*93*	*179*	*513*		
Is a condom available whenever you need it?						
No	30.2%	27.7%	29.3%	29.5%	0.767	p=.943
Yes	69.4%	72.3%	70.2%	70.2%		
Not applicable	0.4%	0.0%	0.6%	0.4%		
Total	100%	100%	100%	100%		
	278	*94*	*181*	*553*		
Is lubricant available whenever you need it?						
No	44.6%	52.1%	42.5%	45.2%	33.332	p=.000
Yes	42.4%	46.8%	56.4%	47.7%		
Not applicable	12.9%	1.1%	1.1%	7.1%		
Total	100%	100%	100%	100%		
	278	*94*	*181*	*553*		
In your opinion, are there any risks if you carry condoms/lubricant?						
No	68.2%	71.3%	78.5%	72.0%	5.833	p=.054
Yes	31.8%	28.7%	21.5%	28.0%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
The last time you obtained a condom, where did you get it?						
MStyle outreach worker	0%	0%	16.0%	5.2%	172.71	p=.000
MStyle club	0%	0%	9.9%	3.2%		
Condom vending machines	0%	0%	0.6%	0.2%		
NGO/outreach worker/ DIC (not MStyle)	5.6%	10.6%	16.0%	9.8%		
Store/gas station/ vendor/ pharmacy/etc.	39.5%	36.2%	23.8%	33.9%		
Guesthouse/brothel/massage parlor/karaoke/ spas/saunas/beer	7.3%	6.4%	6.1%	6.8%		
Client	2.4%	4.3%	1.1%	2.3%		
Sexual partner/ sweetheart	19.6%	26.6%	11.0%	18.0%		
Friend	9.4%	14.9%	14.4%	11.9%		
Never obtained	15.7%	1.1%	1.1%	8.6%		
Other	0.3%	0.0%	0.0%	0.2%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		

18.6. Referral to Services

An important part of the MStyle program was referrals for health and other services. The analysis found that the vast majority (90%) of all MSM reported never receiving a copy of the MStyle Guide, a key referral tool of the program. See table 15. Of the MSM who had received a guide, nearly three quarters (74%) had never used it to find health or social services.

Among MSM with any exposure to the program, only 21% reported receiving a copy of the MStyle Guide. Only 48% of MSM with any exposure to the program reported ever receiving a referral slip from OW, and only 35% reported receiving a referral slip from OW in the last 12 months.

Table 15 Referral to Services by Program Exposure

Variable		Geographic Area				Any Exposure to Program
		Outside program catchment area	Within program catchment area	Overall	Chi-Square Test	
Have you ever received a copy of the MStyle Guide?						
	No	92.1%	87.4%	89.8%		79.3%
	Yes	7.9%	12.6%	10.2%	3.479	20.7%
	Total	100%	100%	100%	p=.062	100%
		292	*269*	*561*		*275*
If you have received a copy of the Guide, have you ever used it to find health or social services that you were interested in?						
	No	73.9%	73.5%	73.7%		73.7%
	Yes	26.1%	26.5%	26.3%	0.001	26.3%
	Total	100%	100%	100%	p=.974	100%
		23	*34*	*57*		*57*
Have you ever received referral slips from MStyle outreach worker for health or social services?						
	No	81.2%	65.4%	73.6%		51.6%
	Yes	18.8%	34.6%	26.4%	17.853	48.4%
	Total	100%	100%	100%	p=.000	100%
		292	*269*	*561*		*275*
In the past 12 months, have you ever received referral slips from MStyle outreach worker for health or social services?						
	No	89%	76%	83%	16.256	65.1%
	Yes	11%	24%	17%	p=.000	34.9%
	Total	100%	100%	100%		100%
		292	*269*	*561*		*275*
The last time you met with outreach workers of MStyle, did they give you referral slips for these services? *(Multiple choice responses re-scaled to 100%)*						
	STI testing	43.9%	51.4%	47.7%	p=.073	48.1%
	Community-based finger prick HTC	37.9%	35.3%	36.6%	p=.014	36.6%
	STI treatment	7.6%	5.9%	6.7%	p=.239	6.1%
	HIV confirmatory test	9.1%	5.9%	7.5%	p= .122	7.6%
	TB diagnostic	1.5%	1.5%	1.5%	p=.705	1.5%
	Total	100%	100%	100%		100%
		55	*93*	*148*		*133*

Table 15 Referral to Services by Program Exposure (CONTINUED)

Variable		Geographic Area				Any Exposure to Program
		Outside program catchment area	Within program catchment area	Overall	Chi-Square Test	
Did you use the referral slip provided by MStyle outreach worker for these services? *(Multiple choice responses re-scaled to 100%)*						
	STI testing	46.6%	49.2%	47.9%	p=.251	47.9%
	STI treatment	6.9%	4.9%	5.9%	p= .456	5.9%
	Community-based finger prick HTC	36.2%	39.3%	37.8%	p=.537	37.8%
	TB diagnostic	1.7%	1.6%	1.7%	p= .859	1.7%
	HIV confirmatory test	8.6%	4.9%	6.7%	p=.26	6.7%
	Total	100% *32*	100% *41*	100% *73*		100% *71*

18.7. STI Risk Behavior and Screening History

Table 16 this shows that the majority of MSM (56%) considered themselves to have behaviors that put them at risk for contracting an STI. The most common reported risk factors cited by MSM were sometimes having unprotected anal sex (36%), having multiple sexual partners (17%), having had oral sex (18%) and sometimes taking alcohol before sex (9%).

A much larger proportion of HEMSM (71%) reported being screened for STIs in the past 12 months than LEMSM or unexposed MSM (50% and 37%, respectively). This difference was statistically significant, p=0.000. Overall, only a small proportion of MSM (5%) reported being treated for an STI in the past 12 months. The vast majority (91%) of MSM reported being satisfied with the facility to which they were referred for STI services.

Table 16 STI Risk Behavior and Screening History by Program Exposure

Variable		Program exposure (based on index score)				Chi-Square Test
		No Exposure	Low Exposure	High Exposure	Overall	
Do you think you have behaviors that put you at risk for contracting STI?						
	No	44.4%	41.5%	45.9%	44.4%	0.478, p=.787
	Yes	55.6%	58.5%	54.1%	55.6%	
	Total	100% *286*	100% *94*	100% *181*	100% *561*	

Table 16 STI Risk Behavior and Screening History by Program Exposure (CONTINUED)

Variable	Program exposure (based on index score)				Chi-Square Test
	No Exposure	Low Exposure	High Exposure	Overall	
IF yes, what are these behaviors? *(Multiple choice responses re-scaled to 100%)*					
I don't always use condoms with sexual partners	3.8%	7.1%	6.3%	5.1%	1.796, p=.407
I have multiple partners	13.2%	14.3%	20.8%	16.8%	3.210, p=.201
I sometimes take alcohol before sex	11.5%	7.1%	5.1%	8.7%	6.297, p=.043
I sometimes take drugs before sex	0.0%	2.4%	0.0%	0.4%	9.406, p=.009
I sometimes have unprotected anal sex	35.1%	41.6%	34.0%	35.8%	1.056, p=.590
I do not always use lubricant	2.7%	2.4%	0.6%	2.0%	2.275, p=.321
I had condom breakage	7.3%	4.8%	10.7%	7.9%	3.419, p=.181
Oral sex	18.7%	16.7%	17.6%	18.0%	0.593, p=.743
Other	5.7%	3.6%	5.0%	5.1%	0.853, p=.653
Total	100% *159*	100% *55*	100% *98*	100% *312*	
Have you suspected yourself having any STI in the past 12 months?					
No	62.6%	57.4%	56.4%	59.7%	2.032, p=.362
Yes	37.4%	42.6%	43.6%	40.3%	
Total	100% *286*	100% *94*	100% *181*	100% *561*	
Have you had STI screening in the past 12 months?					
No	62.9%	51.1%	29.3%	50.1%	50.265, p=.000
Yes	37.1%	48.9%	70.7%	49.9%	
Total	100% *286*	100% *94*	100% *181*	100% *561*	
Have you had STI treatment in the past 12 months?					
No	97.2%	90.4%	95.0%	95.4%	7.421, p=.024
Yes	2.8%	9.6%	5.0%	4.6%	
Total	100% *286*	100% *94*	100% *181*	100% *561*	
Have you been referred by OWs for STI screening in the past 12 months?					
No	99.4%	86.2%	49.4%	76.2%	112.071, p=.000
Yes	0.6%	13.8%	50.6%	23.8%	
Total	100% *155*	100% *65*	100% *158*	100% *378*	
The last time you were referred by an outreach worker, did you go to the facility for STI service?					
No	20%	0.0%	6.4%	6.5%	4.307, p=.116
Yes	80%	100%	93.6%	93.5%	
Total	100% *10*	100% *19*	100% *109*	100% *138*	
Are you satisfied with the STI service facility that you were referred to by OW in the last time?					
Not satisfied	0.0%	10.5%	9.3%	9.0%	.864, p=.649
Satisfied	100%	89.5%	90.7%	91.0%	
Total	100% *8*	100% *19*	100% *107*	100% *134*	

18.8. HIV Risk Behavior and Testing History

Table 17 shows that the majority of MSM (56%) considered themselves to have behaviors that put them at risk for contracting HIV, with no statistically significant differences between HEMSM and LEMSM. The most commonly reported risk factors cited by MSM were sometimes having unprotected anal sex (36%), having multiple sexual partners (21%), having had oral sex (13%) and having had a condom breakage (10%).

A much larger proportion of HEMSM (79%) reported being screened for HIV in the past 12 months than LEMSM or unexposed MSM (53% and 45%, respectively). This difference was statistically significant, p=0.000. With regard to the quality of HIV testing services, at their last HIV test, 82% of MSM recalled being explained the consequences of a positive or negative HIV test result, and 90% of MSM reported being satisfied with the HIV testing services to which they were referred.

One individual reported being HIV positive, and he reported being enrolled on ART.

A significantly larger proportion of HEMSM (60%) than LEMSM or unexposed MSM (46% and 48%, respectively) reported feeling comfortable asking their partner to get an HIV test (p=0.016). Similarly, a larger proportion of HEMSM (53%) than LEMSM or unexposed MSM (31% and 28%, respectively) reported ever actually having asked their partner to get an HIV test (p=0.000).

Table 17 HIV Risk Behavior and Testing History by Program Exposure

Variable	Program exposure (based on index score)				Chi-Square Test
	No Exposure	Low Exposure	High Exposure	Overall	
Do you think you have behaviors that put you at risk for contracting HIV?					
No	45.1%	42.6%	42.5%	43.9%	0.373, p=.830
Yes	54.9%	57.4%	57.5%	56.1%	
Total	100% 286	100% 94	100% 181	100% 561	
If Yes, what are these behaviors? *(Multiple choice responses re-scaled to 100%)*					
I don't always use condoms with sexual partners	5.1%	5.6%	8.1%	6.1%	1.280, p=.527
I have multiple partners	20.2%	16.9%	23.0%	20.5%	0.979, p=.613
I sometimes take alcohol before sex	7.8%	10.1%	6.2%	7.7%	1.666, p=.435
I sometimes take drugs before sex	0.0%	3.4%	0.6%	0.8%	10.009, p=.007
I sometimes have unprotected anal sex	37.4%	34.8%	32.9%	35.5%	2.652, p=.266
I do not always use lubricant	2.0%	2.2%	0.6%	1.6%	1.606, p=.448
I had condom breakage	9.7%	9.0%	11.8%	10.2%	0.385, p=.825
Having sex in group	2.0%	0.0%	0.0%	1.0%	5.113, p=.078
Oral sex	12.5%	15.7%	11.2%	12.6%	1.632, p=.442
Other	3.5%	2.2%	5.6%	4.0%	1.665, p=.435
Total	100% 157	100% 54	100% 104	100% 315	
Have you had an HIV test in the past 12 months?					
No	55.2%	46.8%	21.5%	43.0%	52.05, p=.000
Yes	44.8%	53.2%	78.5%	57.04%	
Total	100% 286	100% 94	100% 181	100% 561	

Table 17 HIV Risk Behavior and Testing History by Program Exposure (CONTINUED)

Variable	Program exposure (based on index score)				
	No Exposure	Low Exposure	High Exposure	Overall	Chi-Square Test
The last time you had an HIV test did someone explain the consequences of an HIV (negative or positive) test?					
No	27.8%	17.3%	7.8%	18.4%	24.179, p=.000
Yes	72.2%	82.7%	92.2%	81.6%	
Total	100%	100%	100%	100%	
	198	*75*	*167*	*440*	
The last time you had an HIV test did you go to the facility to which you were referred for by an outreach worker?					
No	93.9%	70.7%	33.5%	67.05%	150.15, p=.000
Yes	6.1%	29.3%	66.5%	33.0%	
Total	100%	100%	100%	100%	
	198	*75*	*167*	*440*	
Are you satisfied with facility of HIV service that you were referred for by OW in the last time?					
Not satisfied	0.0%	16.7%	9.7%	10.0%	2.638, p=.267
Satisfied	100%	83.3%	90.3%	90.0%	
Total	100%	100%	100%	100%	
	13	*24*	*113*	*150*	
Based on your last HIV test, what is your current HIV status?					
Negative	99.5%	100%	99.4%	99.5%	2.859, p=.582
Positive	0%	0%	0.6%	0.2%	
I don't know/I don't remember	0.5%	0%	0%	0.2%	
Total	100%	100%	100%	100%	
	198	*75*	*167*	*440*	
IF HIV Positive, have you been enrolled for ART service?					
Yes			100%		
Total			100%		
			1		
IF HIV Positive, did you go to ART service by yourself or you were referred by outreach worker?					
By my self			100%		
Total			100%		
			1		
Do you feel comfortable to ask your sexual partner to get an HIV test?					
Not comfortable	52.1%	54.3%	39.8%	48.5%	8.240, p=.016
Comfortable	47.9%	45.7%	60.2%	51.5%	
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	
Have you ever asked your partner to get HIV test in the past 12 months?					
No	71.7%	69.1%	47.5%	63.5%	29.490, p=.000
Yes	28.3%	30.9%	52.5%	36.5%	
Total	100%	100%	100%	100%	
	286	*94*	*181*	*561*	

18.9. HIV Finger Prick Test

As shown in table 18, a much larger proportion of HEMSM (75%) than LEMSM or unexposed MSM (25% and 9%, respectively) reported ever being finger prick tested for HIV by an outreach worker (p=0.000), and a larger proportion of HEMSM (44%) than LEMSM or unexposed MSM (7% and 4%, respectively) reported being finger prick tested for HIV by an outreach worker in the past 6 months (p=0.000).

The vast majorities of MSM that had gotten a finger prick HIV test in the past 12 months reported receiving counselling before the test (89%), being satisfied with the HIV test (82%), and thought the result was reliable (83%).

Table 18 HIV Finger Prick Test by Program Exposure

Variable	Program exposure (based on index score)				Chi-Square Test	
	No Exposure	Low Exposure	High Exposure	Overall		
Have you ever been tested for HIV by OW using finger prick?						
No	90.9%	75.5%	25.4%	67.2%	219.284	p=.000
Yes	9.1%	24.5%	74.6%	32.8%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
How many time have you been tested for HIV by OW using finger prick in your life?						
Never	90.9%	75.5%	25.4%	67.2%	231.255	p=.000
Once	5.6%	11.7%	21.0%	11.6%		
Twice	1.4%	5.3%	22.1%	8.7%		
Three	1.0%	2.1%	7.7%	3.4%		
Four	1.0%	3.2%	12.2%	5.0%		
Five and above	0.0%	2.1%	11.6%	4.1%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
Have you ever been tested for HIV by OW using finger prick in the past 12 months?						
No	94.8%	85.1%	45.9%	77.4%	155.209	p=.000
Yes	5.2%	14.9%	54.1%	22.6%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
How many time have you been tested for HIV by OW using finger prick in the past 12 months?						
Never	94.8%	85.1%	45.9%	77.4%	162.91	p=.000
Once	4.2%	11.7%	26.5%	12.7%		
Twice	0.7%	1.1%	17.1%	6.1%		
Three and above	0.3%	2.1%	10.5%	3.9%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
Have you ever been tested for HIV by OW using finger prick in the past 6 months?						
No	96.5%	92.6%	55.8%	82.7%	136.063	p=.000
Yes	3.5%	7.4%	44.2%	17.3%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		

Table 18 HIV Finger Prick Test by Program Exposure (CONTINUED)

Variable	Program exposure (based on index score)				Chi-Square Test	
	No Exposure	Low Exposure	High Exposure	Overall		
How many time have you ever been tested for HIV by OW using finger prick in the past 6 months?						
Never	96.5%	92.6%	55.8%	82.7%	136.593	p=.000
Once	3.1%	6.4%	34.8%	13.9%		
Twice and above	0.3%	1.1%	9.4%	3.4%		
Total	100%	100%	100%	100%		
	286	*94*	*181*	*561*		
Did you receive counselling before the HIV finger prick test?						
No	26.9%	13.0%	8.1%	11.4%	7.670	p=.022
Yes	73.1%	87.0%	91.9%	88.6%		
Total	100%	100%	100%	100%		
	26	*23*	*135*	*184*		
Are you satisfied with this HIV finger prick test?						
Not satisfied	7.7%	13.0%	20.7%	17.9%	2.949	p=.229
Satisfied	92.3%	87.0%	79.3%	82.1%		
Total	100%	100%	100%	100%		
	26	*23*	*135*	*184*		
To what extent do you think that the result of this HIV finger prick is reliable?						
Not reliable	11.5%	26.1%	17.0%	17.4%	1.842	p=.398
Reliable	88.5%	73.9%	83.0%	82.6%		
Total	100%	100%	100%	100%		
	26	23	135	184		
Have you ever been referred for confirmatory test at VCCT?						
No		80.0%	16.2%	23.8%	9.879	p=.002
Yes		20.0%	83.8%	76.2%		
Total		100%	100%	100%		
		5	*37*	*42*		
Have you ever been referred for confirmatory test at VCCT in the past 12 months?						
No		80.0%	62.2%	64.3%	0.610	p=.435
Yes		20.0%	37.8%	35.7%		
Total		100%	100%	100%		
		5	*37*	*42*		
Are you satisfied with the service at VCCT?						
Not satisfied		0.0%	9.4%	9.1%	0.103	p=.748
Satisfied		100%	90.6%	90.9%		
Total		100%	100%	100%		
		1	*32*	*33*		

18.10. Program Impact

HIV Testing (any type)

As demonstrated by table 19, the binary logistic regression bears out the observation described previously that MStyle program exposure has a very strong, positive, and statistically significant relationship to HIV testing. Controlling for other potential confounders, being highly exposed to the MStyle program was strongly predictive of having been tested for HIV in the past 12 months (Odds Ratio=2.718, $p<0.01$).

MSM that were unreached were much less likely to be HIV tested in the past 12 months than those that were reached (Odds Ratio=0.332, $p<0.001$). MSM with higher educational attainment were also less likely to have been tested for HIV via finger prick (Odds Ratio=0.346, $p<0.05$). Marital status, age, HIV risk index, stigma, and income had no statistically significant effects on the likelihood of having been for HIV via finger prick in the previous 12 months.

Table 19 *Binary Logistic Regression: Impact of MStyle Program on Any Type of HIV Testing in the Past 12 Months*

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Level of program exposure			
No Exposure (reference)			
Low Exposure	1.454	(0.542)	0.084
High Exposure	2.718**	(0.943)	0.216
Age			
18-24 (reference)			
25-29	1.593	(0.592)	0.096
30 and above	0.659	(0.274)	-0.087
Educational level			
Primary education (reference)			
Secondary school	0.546	(0.200)	-0.125
High school and above	0.653	(0.236)	-0.088
Income			
Under $100 (reference)			
$100 - $200	1.272	(0.401)	0.050
$201 - $300	1.393	(0.567)	0.069
Above $300	1.143	(0.583)	0.028
Marital status			
Single (never been married) (reference)			
Married	1.281	(0.459)	0.052
Cohabitating	0.708	(0.250)	-0.073
Risk index			
Low risk (reference)			
Medium risk	0.840	(0.257)	-0.037
High risk	0.911	(0.266)	-0.019
Unreached (yes=1, no=0)	0.332***	(0.0996)	-0.230
Discrimination index (high=1, low=0)	0.939	(0.268)	-0.013
Stigma (looked down by other because of sexual identity=1, otherwise=0)	0.869	(0.221)	-0.029
Duration living in current location (square root of month)	0.974	(0.0236)	-0.006
Duration working in current workplace (square root of month)	1.045	(0.0424)	0.009
Duration engaged in sexual activities with men (square root of year)	1.209	(0.181)	0.039
N	561		
Wald chi-square	61.27		
Degree of freedom	19		
P value	0.0000		
Pseudo R-square	0.1270		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

As demonstrated in table 20, having met with an OW one-on-one in the previous 3 months (Odds Ratio=6.551, p<0.05) and having received a referral slip in the previous 12 months (Odds Ratio=50.4, p<0.001) had strong positive impacts on the likelihood of being tested for HIV.

Table 20 *Binary Logistic Regression: Impact of Exposure to Different Packages of MStyle Program on Any Type of HIV Test the Past 12 Months*

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Age			
18-24 (reference)			
25-29	1.646	(0.622)	0.0989
30 and above	0.665	(0.288)	-0.0784
Educational level			
Primary education (reference)			
Secondary school	0.547	(0.201)	-0.1191
High school and above	0.721	(0.264)	-0.0650
Income			
Under $100 (reference)			
$100 - $200	1.285	(0.447)	0.0489
$201 - $300	2.153	(0.879)	0.1518
Above $300	1.349	(0.738)	0.0584
Marital status			
Single (never been married) (reference)			
Married	1.360	(0.482)	0.0614
Cohabitating	0.701	(0.249)	-0.0690
Risk index			
Low risk (reference)			
Medium risk	0.969	(0.313)	-0.0062
High risk	1.038	(0.317)	0.0073
Discrimination index (high=1, low=0)	1.014	(0.322)	0.0028
Stigma (looked down by other because of sexual identity=1, otherwise=0)	1.002	(0.273)	0.0004
Duration living in current location (square root of month)	1.003	(0.0248)	0.0006
Duration working in current workplace (square root of month)	1.031	(0.0465)	0.0061
Duration engaged in sexual activities with men (square root of year)	1.228	(0.184)	0.0404
Exposure to other mass media (1=yes, 0=no)	0.560*	(0.151)	-0.1139
Exposure to outreach education printed material (1=high exposure, 0=low exposure)	0.425	(0.247)	-0.1682
Ever met with outreach worker from MStyle branded program in the past 3 months for one-one-one education session (1=yes, 0=no)	6.551*	(5.770)	0.3697
Ever met with outreach worker from MStyle branded program in the past 3 months for small group education session (1=yes, 0=no)	3.843	(3.296)	0.2648
MStyle branded program club visit (1=ever, 0=never)	1.791	(0.894)	0.1146
Other drop-in centers visit (1=ever, 0=never)	1.084	(0.593)	0.0158
MStyle website visit (1=ever, 0=never)	16.87	(27.76)	0.5557
MStyle Khmer Facebook visit (1=ever, 0=never)	0.638	(0.404)	-0.0883
Voice4U call (1=ever called, 0=never called)	0.344	(0.426)	-0.2101
MStyle service directory/guide (1=ever received, 0=never received)	3.095	(2.271)	0.2222
Referral slips for health/social services from MStyle outreach worker in the past 12 months (1=ever received, 0=never received)	50.40***	(42.83)	0.7710
N	561		
Wald chi-square	71.58		
Degree of freedom	27		
P value	0.0000		
Pseudo R-square	0.1860		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

HIV Finger Prick Testing

HIV testing by finger prick is a key component of the MStyle program, and as shown in table 21, MStyle program exposure had a very strong, positive, and statistically significant relationship to HIV finger prick testing. Controlling for other potential confounders, being highly exposed to the MStyle program was strongly predictive of having been tested for HIV via finger prick in the past 12 months (Odds Ratio= 15.28, $p<0.001$).

MSM that were unreached were much less likely to be HIV tested by finger prick in the past 12 months than those that were reached (Odds Ratio=0.0335 $p<0.001$). MSM with higher educational attainment were also less likely to have been tested for HIV via finger prick (Odds Ratio=0.308, $p<0.05$). Marital status, HIV risk index, stigma, and income had no statistically significant effects on the likelihood of having been for HIV via finger prick in the previous 12 months.

Table 21 Binary Logistic Regression: Impact of MStyle Program on HIV Finger Prick Test in the Past 12 Months

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Level of program exposure			
No Exposure (reference)			
Low Exposure	1.928	(1.058)	0.0356
High Exposure	15.28***	(7.058)	0.2896
Age			
18-24 (reference)			
25-29	3.178*	(1.756)	0.1093
30 and above	1.123	(0.658)	0.0097
Educational level			
Primary education (reference)			
Secondary school	0.811	(0.450)	-0.0205
High school and above	0.308*	(0.172)	-0.1047
Income			
Under $100 (reference)			
$100 - $200	1.108	(0.522)	0.0091
$201 - $300	0.844	(0.473)	-0.0146
Above $300	0.998	(0.556)	-0.0001
Marital status			
Single (never been married) (reference)			
Married	0.897	(0.417)	-0.0096
Cohabitating	0.637	(0.314)	-0.0380
Risk index			
Low risk (reference)			
Medium risk	1.137	(0.514)	0.0114
High risk	0.982	(0.364)	-0.0016
Unreached (yes=1, no=0)	0.0335***	(0.0292)	-0.2982
Discrimination index (high=1, low=0)	1.257	(0.459)	0.0201
Stigma (looked down by other because of sexual identity=1, otherwise=0)	0.962	(0.320)	-0.0034
Duration living in current location (square root of month)	1.012	(0.0373)	0.0010
Duration working in current workplace (square root of month)	1.037	(0.0579)	0.0032
Duration engaged in sexual activities with men (square root of year)	0.686	(0.157)	-0.0331
N	561		
Wald chi-square	70.48		
Degree of freedom	19		
P value	0.0000		
Pseudo R-square	0.3832		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

Table 22 shows that, controlling for other factors through logistic regression, MSM that met one-on-one with outreach workers in the last three months were significantly more likely to have gotten a finger prick HIV test in the last 12 months (Odds Ratio=16.02, p<0.01), and that MSM that had ever visited the MStyle club were a great deal more likely to have gotten a finger prick HIV test in the previous 12 months (Odds Ratio=5.634, p<0.001). Exposure to printed program materials, exposure to small-group outreach sessions, and visiting a drop-in center had no statistically significant impacts on utilization of finger prick HIV test in the last 12 months. Having visited the MStyle Khmer Facebook site, the MStyle webpage, or having called Voice4 also showed no impact.

Table 22 Binary Logistic Regression: Impact of Exposure to Different Packages of MStyle Program on HIV Finger Prick Test in the Past 12 Months

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Age			
18-24 (reference)			
25-29	2.267	(1.135)	0.073
30 and above	0.613	(0.372)	-0.031
Educational level			
Primary education (reference)			
Secondary school	0.802	(0.377)	-0.019
High school and above	0.444	(0.216)	-0.062
Income			
Under $100 (reference)			
$100 - $200	0.878	(0.407)	-0.009
$201 - $300	1.685	(0.989)	0.044
Above $300	1.018	(0.617)	0.001
Marital status			
Single (never been married) (reference)			
Married	0.851	(0.424)	-0.009
Cohabitating	0.483	(0.223)	0.044
Risk index			
Low risk (reference)			
Medium risk	1.867	(0.872)	0.049
High risk	1.023	(0.398)	0.002
Discrimination index (high=1, low=0)	2.072	(0.908)	0.054
Stigma (looked down by other because of sexual identity=1, otherwise=0)	1.003	(0.390)	0.000
Duration living in current location (square root of month)	1.050	(0.037)	0.004
Duration working in current workplace (square root of month)	1.033	(0.053)	0.002
Duration engaged in sexual activities with men (square root of year)	0.914	(0.187)	-0.007
Exposure to other mass media (1=yes, 0=no)	0.634	(0.257)	-0.034
Exposure to outreach education printed material (1=high exposure, 0=low exposure)	1.177	(0.756)	0.012
Ever met with outreach worker from MStyle branded program in the past 3 months for one-one-one education session (1=yes, 0=no)	16.02**	(14.31)	0.207
Ever met with outreach worker from MStyle branded program in the past 3 months for small group education session (1=yes, 0=no)	1.978	(1.571)	0.051
MStyle branded program club visit (1=ever, 0=never)	5.634***	(2.634)	0.129
Other drop-in centers visit (1=ever, 0=never)	1.315	(0.716)	0.020
MStyle website visit (1=ever, 0=never)	6.660	(7.064)	0.142
MStyle Khmer Facebook visit (1=ever, 0=never)	2.088	(1.679)	0.055
Voice4U call (1=ever called, 0=never called)	0.122	(0.310)	-0.157
MStyle service directory/guide (1=ever received, 0=never received)	1.726	(1.443)	0.041
Referral slips for health/social services from MStyle outreach worker in the past 12 months (1=ever received, 0=never received)	2.691	(1.461)	0.074
N	561		
Wald chi-square	111.75		
Degree of freedom	27		
P value	0.0000		
Pseudo R-square	0.4143		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

STI Screening

As demonstrated in table 23, HEMSM were also much more likely to have been screened for STIs in the past 12 months (Odds Ratio= 2.829, p<0.01). As with HIV finger prick testing, unreached MSM were also significantly less likely to have been screened for STIs (Odds Ratio=0.0471, p<0.05). Education level, age, income, marital status, HIV risk index, and discrimination index showed no statistically significant associations with having been screened for STIs in the past 12 months.

Table 23 Binary Logistic Regression: Impact of MStyle Program on STI Screening in the Past 12 Months

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Level of program exposure			
No Exposure (reference)			
Low Exposure	2.631**	(0.923)	0.2268
High Exposure	2.829**	(0.942)	0.2439
Age			
18-24 (reference)			
25-29	1.462	(0.562)	0.0831
30 and above	1.505	(0.646)	0.0896
Educational level			
Primary education (reference)			
Secondary school	0.867	(0.306)	-0.0314
High school and above	0.864	(0.287)	-0.0320
Income			
Under $100 (reference)			
$100 - $200	1.338	(0.413)	0.0633
$201 - $300	1.039	(0.410)	0.0082
Above $300	1.089	(0.487)	0.0183
Marital status			
Single (never been married) (reference)			
Married	1.128	(0.375)	0.0263
Cohabitating	1.334	(0.466)	0.0633
Risk index			
Low risk (reference)			
Medium risk	0.996	(0.309)	-0.0009
High risk	1.035	(0.290)	0.0075
Unreached (yes=1, no=0)	0.471*	(0.144)	-0.1646
Discrimination index (high=1, low=0)	0.912	(0.244)	-0.0203
Stigma (looked down by other because of sexual identity=1, otherwise=0)	0.907	(0.230)	-0.0213
Duration living in current location (square root of month)	0.996	(0.0246)	-0.0008
Duration working in current workplace (square root of month)	1.005	(0.0445)	0.0011
Duration engaged in sexual activities with men (square root of year)	0.865	(0.133)	-0.0316

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error; N=561; Wald chi-square=*36.95; *Degree of freedom=19; P value=0.0080; Pseudo R-square=0.0807.*

Table 24 shows that MSM that had received the MStyle guide were much more likely to have been screened for an STI in the past 12 months (Odds Ratio= 3.094, p<0.05) as were MSM that had received a referral slip (Odds Ratio= 4.042, p<0.05). No impacts on STI screening in the past 12 months were seen with regard to visits to the program website, exposure to printed program materials, the Facebook site, the MStyle website, attendance at the MStyle club or drop-in center, or meeting with outreach workers in one-on-one or small-group sessions.

Table 24 Binary Logistic Regression: Impact of Exposure to Different Packages of MStyle Program on STI Screening in the Past 12 Months

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Age			
18-24 (reference)			
25-29	1.283	(0.483)	0.0541
30 and above	1.302	(0.594)	0.0572
Educational level			
Primary education (reference)			
Secondary school	1.010	(0.387)	0.0021
High school and above	1.137	(0.417)	0.0278
Income			
Under $100 (reference)			
$100 - $200	1.330	(0.492)	0.0609
$201 - $300	1.328	(0.571)	0.0607
Above $300	1.072	(0.558)	0.0146
Marital status			
Single (never been married) (reference)			
Married	1.163	(0.374)	0.0328
Cohabitating	1.195	(0.413)	0.0387
Risk index			
Low risk (reference)			
Medium risk	1.098	(0.346)	0.0201
High risk	1.097	(0.332)	0.0199
Discrimination index (high=1, low=0)	0.998	(0.287)	-0.0004
Stigma (looked down by other because of sexual identity=1, otherwise=0)	1.076	(0.282)	0.0159
Duration living in current location (square root of month)	1.017	(0.024)	0.0037
Duration working in current workplace (square root of month)	1.003	(0.055)	0.0007
Duration engaged in sexual activities with men (square root of year)	0.882	(0.141)	-0.0270
Exposure to other mass media (1=yes, 0=no)	1.120	(0.300)	0.0245
Exposure to outreach education printed material (1=high exposure, 0=low exposure)	0.847	(0.402)	-0.0357
Ever met with outreach worker from MStyle branded program in the past 3 months for one-one-one education session (1=yes, 0=no)	0.829	(0.678)	-0.0405
Ever met with outreach worker from MStyle branded program in the past 3 months for small group education session (1=yes, 0=no)	1.303	(0.745)	0.0572
MStyle branded program club visit (1=ever, 0=never)	2.215	(0.911)	0.1716
Other drop-in centers visit (1=ever, 0=never)	0.930	(0.422)	-0.0157
MStyle website visit (1=ever, 0=never)	10.04	(11.84)	0.4976
MStyle Khmer Facebook visit (1=ever, 0=never)	0.926	(0.437)	-0.0166
Voice4U call (1=ever called, 0=never called)	0.557	(0.518)	-0.1264
MStyle service directory/guide (1=ever received, 0=never received)	3.094*	(1.693)	0.2437
Referral slips for health/social services from MStyle outreach worker in the past 12 months (1=ever received, 0=never received)	4.042*	(2.253)	0.3014

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error; N=561; Wald chi-square=*34.96*; Degree of freedom=27; P value=0.1399; Pseudo R-square=0.0940*

Consistent Condom Use with Male Partners

Table 25 presents the results of the binary logistic regression model for predicting consistent condom use with male partners among MSM. Controlling for confounders, consistent condom use was not predicted by high exposure to the MStyle program. MSM that were unreached by NGOs were less likely to consistently use condoms (Odds Ratio= 0.559, p<0.05), as were MSM that reported experiencing stigma (Odds Ratio= 0.663, p<0.05). MSM with higher incomes were less likely to report consistent condom use, for example MSM with incomes above $300 were less likely than those with incomes below $100 to report consistent condom use (Odds Ratio= 0.439, p<0.05). Education level showed no impact on consistent condom use.

Table 25 Binary Logistic Regression: Impact of MStyle Program on Consistent Condom Use with Male Partners

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Level of program exposure			
No Exposure (reference)			
Low Exposure	0.823	(0.276)	-0.0317
High Exposure	1.588	(0.430)	0.0829
Age			
18-24 (reference)			
25-29	1.044	(0.311)	0.0077
30 and above	0.649	(0.266)	-0.0719
Educational level			
Primary education (reference)			
Secondary school	1.226	(0.418)	0.0346
High school and above	1.131	(0.384)	0.0208
Income			
Under $100 (reference)			
$100 - $200	0.456**	(0.122)	-0.1501
$201 - $300	0.330***	(0.106)	-0.2032
Above $300	0.439*	(0.176)	-0.1568
Marital status			
Single (never been married) (reference)			
Married	0.720	(0.220)	-0.0556
Cohabitating	0.796	(0.252)	-0.0393
Risk index			
Low risk (reference)			
Medium risk	0.325***	(0.0912)	-0.1862
High risk	0.665	(0.162)	-0.0752
Unreached (yes=1, no=0)	0.581*	(0.158)	-0.0930
Discrimination index (high=1, low=0)	0.635	(0.161)	-0.0777
Stigma (looked down by other because of sexual identity=1, otherwise=0)	0.664*	(0.139)	-0.0701
Duration living in current location (square root of month)	1.080***	(0.0221)	0.0131
Duration working in current workplace (square root of month)	0.983	(0.0353)	-0.0030
Duration engaged in sexual activities with men (square root of year)	0.777	(0.111)	-0.0432
N	561		
Wald chi-square	99.64		
Degree of freedom	19		
P value	0.0000		
Pseudo R-square	0.1614		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

The only program component that showed an impact on consistent condom use with male partners was having visited the MStyle Khmer Facebook page (Odds Ratio=3.163, p<0.05). See Table 26. No statistically significant associations were seen with regard to exposure to printed program materials, having visited MStyle club or drop-in center, visits to the program website, or meeting with outreach workers in one-on-one or small-group sessions.

Table 26 Binary Logistic Regression: Impact of Exposure to Different Packages of MStyle Program on Consistent Condom Use with Male Partners

Predictor Variable	Odds Ratios	Robust Std. Err.	Predicted Probability
Age			
18-24 (reference)			
25-29	1.178	(0.454)	0.0294
30 and above	1.076	(0.589)	0.0130
Educational level			
Primary education (reference)			
Secondary school	2.626*	(1.124)	0.1685
High school and above	1.772	(0.778)	0.0950
Income			
Under $100 (reference)			
$100 - $200	0.584	(0.222)	-0.1038
$201 - $300	0.416*	(0.185)	-0.1635
Above $300	0.397	(0.216)	-0.1712
Marital status			
Single (never been married) (reference)			
Married	0.366*	(0.152)	-0.1752
Cohabitating	0.418*	(0.162)	-0.1553
Risk index			
Low risk (reference)			
Medium risk	0.322**	(0.122)	-0.1947
High risk	0.727	(0.221)	-0.0602
Discrimination index (high=1, low=0)	0.660	(0.249)	-0.0745
Stigma (looked down by other because of sexual identity=1, otherwise=0)	1.044	(0.310)	0.0078
Duration living in current location (square root of month)	1.085**	(0.029)	0.0146
Duration working in current workplace (square root of month)	0.950	(0.049)	-0.0092
Duration engaged in sexual activities with men (square root of year)	0.956	(0.166)	-0.0081
Exposure to other mass media (1=yes, 0=no)	0.852	(0.277)	-0.0288
Exposure to outreach education printed material (1=high exposure, 0=low exposure)	0.880	(0.535)	-0.0229
Ever met with outreach worker from MStyle branded program in the past 3 months for one-one-one education session (1=yes, 0=no)	0.781	(0.487)	-0.0445
Ever met with outreach worker from MStyle branded program in the past 3 months for small group education session (1=yes, 0=no)	1.059	(0.670)	0.0102
MStyle branded program club visit (1=ever, 0=never)	1.837	(0.837)	0.1092
Other drop-in centers visit (1=ever, 0=never)	0.881	(0.458)	-0.0227
MStyle website visit (1=ever, 0=never)	0.619	(0.377)	-0.0861
MStyle Khmer Facebook visit (1=ever, 0=never)	3.163*	(1.497)	0.2067
Voice4U call (1=ever called, 0=never called)	8.352	(12.59)	0.3810
MStyle service directory/guide (1=ever received, 0=never received)	1.024	(0.537)	0.0042
Referral slips for health/social services from MStyle outreach worker in the past 12 months (1=ever received, 0=never received)	1.893	(1.060)	0.1145

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error; N=561; Wald chi-square=75.05; Degree of freedom=27; P value=0.0000; Pseudo R-square*=0.1760

Stigma and Discrimination

As described in table 27, program exposure had no impact on stigma. HEMSM were much more likely to report discrimination (Odds Ratio= 2.317, p<0.01). Interestingly, being aged 25-29 years was associated with a higher discrimination index than MSM aged 18-24 (Odds Ratio= 2.563, p<0.05). Additionally, MSM that had a high HIV risk index were more likely to report discrimination (Odds Ratio= 1.874, p<0.05).

Table 27 Binary Logistic Regression: Impact of MStyle Program on Stigma and Discrimination

	Stigma Model		Discrimination Model		
Predictor Variable	Odds Ratios	Robust Std. Err.	Odds Ratios	Robust Std. Err.	Predicted Probability
Level of program exposure					
No Exposure (reference)					
Low Exposure	1.309	(0.518)	1.330	(0.579)	0.0416
High Exposure	1.280	(0.468)	2.317**	(0.731)	0.1404
Age					
18-24 (reference)					
25-29	1.044	(0.361)	2.563*	(1.082)	0.1528
30 and above	1.741	(0.721)	2.508	(1.260)	0.1486
Educational level					
Primary education (reference)					
Secondary school	0.838	(0.319)	0.686	(0.283)	-0.0578
High school and above	1.062	(0.373)	0.871	(0.352)	-0.0224
Income					
Under $100 (reference)					
$100 - $200	0.904	(0.299)	1.265	(0.446)	0.0364
$201 - $300	0.731	(0.284)	0.589	(0.266)	-0.0667
Above $300	0.991	(0.481)	1.985	(1.016)	0.1175
Marital status					
Single (never been married) (reference)					
Married	1.597	(0.512)	1.604	(0.598)	0.0814
Cohabitating (with regular partner)	1.277	(0.425)	0.642	(0.286)	-0.0608
Risk index					
Low risk (reference)					
Medium risk	0.947	(0.306)	1.221	(0.438)	0.0284
High risk	1.217	(0.348)	1.874*	(0.573)	0.0998
Unreached (yes=1, no=0)	0.876	(0.269)	0.804	(0.263)	-0.0332
Duration living in current location (square root of month)	0.948*	(0.0230)	0.996	(0.0275)	-0.0006
Duration working in current workplace (square root of month)	1.040	(0.0508)	0.920	(0.0409)	-0.0126
Duration engaged in sexual activities with men (square root of month)	1.009	(0.174)	1.025	(0.181)	0.0037
N	561		561		
Wald chi-square	14.35		43.65		
Degree of freedom	17		17		
P value	0.6419		0.0004		
Pseudo R-square	0.0354		0.0835		

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

Table 28 demonstrates that, controlling for confounders, there were no statistically significant associations between measures of stigma or discrimination based on geographic area, meaning that no impact of the program was seen on these outcomes on their target areas.

Table 28 Binary Logistic Regression: Influence of Geographical Area on Stigma and Discrimination

	Stigma		Discrimination	
Predictor Variable	Odds Ratios	Robust Std. Err.	Odds Ratios	Robust Std. Err.
Geographic area(Within program catchment area=1, Outside program catchment area=0)	0.871	(0.223)	1.665	(0.471)
Age				
18-24 (reference)				
25-29	1.023	(0.354)	2.455*	(1.007)
30 and above	1.566	(0.643)	2.207	(1.074)
Educational level				
Primary education (reference)				
Secondary school	0.842	(0.318)	0.655	(0.262)
High school and above	1.045	(0.365)	0.862	(0.325)
Income				
Under $100 (reference)				
$100 - $200	0.916	(0.317)	0.945	(0.321)
$201 - $300	0.731	(0.286)	0.480	(0.211)
Above $300	0.967	(0.474)	1.579	(0.804)
Marital status				
Single (never been married) (reference)				
Married	1.626	(0.514)	1.689	(0.593)
Cohabitating (with regular partner)	1.240	(0.416)	0.649	(0.286)
Risk index				
Low risk (reference)				
Medium risk	0.936	(0.306)	1.224	(0.425)
High risk	1.205	(0.343)	1.851*	(0.559)
Unreached (yes=1, no=0)	0.752	(0.207)	0.678	(0.206)
Duration living in current location (square root of month)	0.949*	(0.0230)	1.000	(0.025)
Duration working in current workplace (square root of month)	1.048	(0.0501)	0.915	(0.042)
Duration engaged in sexual activities with men (square root of month)	1.027	(0.173)	1.087	(0.190)
N	561		561	
Wald chi-square	13.10		34.53	
Degree of freedom	16		16	
P value	0.6657		0.0046	
Pseudo R-square	0.0342		0.0772	

*Note: * indicates p<0.05; ** indicates p<0.01; *** indicates p<0.001; Robust Std. Err.: Robust Standard Error*

19. Summary and Discussion

General

Overall, the MStyle program was found to have powerful impacts on utilization of HIV testing generally, and on HIV finger prick testing and STI screening among MSM. There were some notable differences between this evaluation and the one performed in 2012.

Of the 561 MSM in this survey, most were young (58% aged between 18 and 24 years), single and never married (66%). The most common occupations were general worker (14%), student (11%), cafe/beer gardens/restaurant worker (11%), NGO/company staff (10%), and factory worker (10%). Only 3% of MSM in the sample had a primary occupation as a street- or venue-based sex worker, approximately 6% reported buying sex from a male partner in the last 3 months, which is lower than the previous figure of 38% (FHI 360, 2008). Only 27% of MSM reported having sold sex to a male client at least once in the past three months. Only 1 MSM reported being HIV positive, and he reported being enrolled in ART. Approximately 58% of MSM were at medium or high risk for HIV, with no differences noted between MSM that were from within or outside the geographic area covered by the program.

Program Reach and Exposure

The analysis found that nearly two-thirds (63%) of MSM in the program's catchment area experienced any level of exposure to the program, indicating moderate penetration of the program. Broadly, 79% of MSM within the program's catchment area were "reached" by NGOs, compared to 56% of MSM outside the program's catchment area that were reached. MStyle program data from 2010 reported that 93% of MSM in the target areas were reached. This older, higher estimate of program reach may mean that the program reach has decreased, but more likely it is a reflection of differences between this evaluation's population-based approach compared and the previous evaluation's time-location data collection approach, or other methodological differences (PRASIT, 2010).

Most MSM that had heard about the MStyle program had learned of it from friends (61%) showing the importance of social networks, or from outreach workers (28%), with small proportions learning about it from other modalities. Forty-one percent (41%) of all MSM reported that outreach activities were the best communication channel to provide information on sexual health and HIV, while 19% preferred TV, and 16% preferred Facebook. Similarly, the most common major sources of information about STIs and HIV were outreach workers (34%), friends and colleagues (18%), TV (17%), and Facebook (11%).

Outreach and SBC

Within the program's catchment area, 33% of MSM reported ever having been approached by a MStyle outreach worker, and only 18% had been approached in the past three months, with most of these interactions in small-group sessions (54%) in private homes (35%), public park/street (15%), or entertainment establishments (21%). One-on-one sessions showed a strong predictive and statistically significant effect on the likelihood of finger prick HIV testing in the past 12 months (Odds Ratio=16.02, $p<0.01$) and on being HIV tested in any modality (Odds Ratio=6.551, $p<0.05$). While most respondents (57-81%) reported not recalling exposure to SBC materials, the vast majority of those that were exposed to these materials found them to be attractive.

MStyle Club

Less than half (45%) of all MSM had ever heard about the MStyle Club and 19% had ever visited it. Half (51%) of MSM within the program's catchment area had heard about the MStyle club and only 26% had visited it. The vast majority of MSM that had visited the club found its location to be convenient (83%), the facilities "good" (84%), the activities "attractive" (80%), and the services to be "good" (87%).

Social Media and Communication Technologies

Social media and communication technologies appeared to be greatly underutilized. Most MSM in the sample had never heard about the MStyle website "My Community" (83%) or the MStyle Khmer Facebook page (80%), though larger proportions of MSM who were within the program catchment area had heard about these channels than MSM who were outside the program catchment area. Small proportions of MSM had ever visited these communication channels (5% and 9%, respectively). Only 1 MSM had ever downloaded a referral slip from the MStyle website. MStyle program data from 2010 reported that 40% of MSM in the program had visited the website, again higher than our estimate of 6% of MSM, which may indicate decreased program performance, though it may be an indication of a shift in social media toward Facebook since the last evaluation was performed. (PRASIT, 2010).

Use of Condoms and Lubricant

No clear impacts of the program were seen on MSM's use of condoms and lubricant. Overall, 70% of MSM reported using a condom at their last unpaid sex with a male partner, 89% of MSM reported using a condom the last time they bought sex from a male partner, and 80% of MSM reported using a condom the last time they sold sex to a male partner. Compared to MSM with no program exposure, MSM with low or high program exposure were more likely to have talked with male partners about using lubricant and/or condoms, and have consistently used condoms/and or lubricant with male partners. MStyle program data from 2010 reported that 66% of MSM exposed to MStyle reported "always" using a condom when having sex with male partners, compared to 54% for non-exposed MSM. These older data show much higher condom use than this evaluation found, with only 42% of HEMSM and 25% of LEMSM reporting consistent condom use. It is not clear if this represents a true change in behavior among MSM over time or a difference in methods (PRASIT, 2010). HEMSM were more likely to report consistent condom and consistent condom and lubricant use, however, controlling for confounders, the logistic regression analysis showed no impact of exposure to the program on consistent condom use with male partners.

MStyle Guide

Only 13% of MSM within the program catchment area reported ever receiving a copy of the MStyle Guide for health services. Even among MSM exposed to the program, only 21% had ever received a copy of this publication. Among those that had received a copy of the Guide, only 26% had ever used it to find health or social services. The logistic regression analysis showed a strong impact of receipt of the guide on STI screening in the past 12 months (Odds Ratio= 3.094, $p<0.05$).

Referrals

Only 49% of exposed MSM reported receiving a referral slip for STI testing at their last meeting with an outreach worker, which is less than the MStyle program data from 2010 that reported that 84% of MSM received referral slips for VCCT or STI services during last meeting with peer outreach worker. This may reflect methodological differences, or potentially indicate a decrease in program performance over the interim period, though the earlier data were collected before the implementation of fingerprick HIV testing, which decreases the need for VCCT (PRASIT, 2010). Most MSM that utilized referrals provided to them used

the referrals to access STI testing (48%) and HIV fingerprick testing (38%). Small proportions of MSM utilized referral slips to access other services. Referral, however, was seen to have a strong positive impact on uptake of STI screening in the past 12 months, as shown in the logistic regression analysis (Odds Ratio= 4.042, $p<0.05$). Referrals also had a very strong impact on the likelihood of being tested for HIV (Odds Ratio=50.4, $p<0.003$), though some of this effect may be the result of referrals for confirmatory HIV tests after a reactive screening test result.

STI and HIV Risk and Testing

The majority of MSM saw themselves at risk for contracting HIV and STIs, with 56% of all MSM reporting that they had behaviors that put them at risk for contracting an STI (with no difference based on program exposure). HEMSM, however, were more likely to have been screened for STIs in the past 12 months had than LEMSM or unexposed MSM (71% vs 43% vs 37%, respectively; $p=0.000$). The logistic regression analysis showed that high exposure to the program increased more than twice the likelihood of being screened for STIs (Odds Ratio= 2.433, $p<0.01$). As noted above, referrals had a strong positive impact on uptake of STI screening in the past 12 months, as did receiving a copy of the MStyle Guide, as described in the regression analysis.

Similarly, 56% of MSM thought they had behaviors that put them at risk for contracting HIV, with unprotected anal sex (36%), multiple sexual partners (21%), having oral sex (13%), and condom breakage (10%) being the most common risks cited. HEMSM also were more likely to have been screened for HIV in the past 12 months than LEMSM or unexposed MSM (79% vs 53% vs 45%, respectively; $p=0.000$). Compared to previous data that showed that 67% of MSM had been tested in the past 6 months, this evaluation found that only 57% of MSM had been tested for HIV in the past 12 months (NCHADS, 2013b). Overall, the logistic regression analysis showed the impressive impact that high exposure to the program increased more than 15 times the likelihood of being fingerprick tested for HIV (Odds Ratio= 15.28, $p<0.001$), and significantly increased the overall likelihood of being tested for HIV (Odds Ratio= 2.718, $p<0.01$)

A significantly larger proportion of HEMSM reported feeling comfortable asking their partner to get an HIV test than LEMSM or unexposed MSM, and a larger proportion of HEMSM than LEMSM or unexposed MSM reported ever actually having asked their partner to get an HIV test.

Perceptions about finger prick HIV testing among MSM were generally positive, though a much larger proportion of HEMSM (70%) than LEMSM (11%) reported ever being tested for HIV using this modality, and only 51% of HEMSM and 6% of LEMSM reported being tested in the past 12 months. On a positive note about the quality of services, of those that had been tested using the HIV fingerprick test, significant majorities reported receiving pre-test counselling (89%), 82% reported being satisfied with the test, and 83% believed the test result was reliable.

Discrimination and Stigma

Given the lack of evidence from the binary logistic regression analysis of program impact on either stigma or discrimination (based on location inside or outside the program catchment area), the analysis results suggested that program efforts to influence the enabling environment had no measurable effects.

20. Conclusion

Regarding this evaluation's primary research question, the analysis revealed that exposure to the MStyle program had powerful positive impacts on HIV testing and STI screening. The program reached the majority of MSM within its catchment area as well as a notable proportion of MSM outside its catchment area. No impact was detected with regard to the program's influence on stigma and discrimination or on consistent condom use.

While direct comparisons cannot be made because of dissimilarities in populations and methods, there are differences between the data from this evaluation and previous data. For example: 1) MSM in the target areas reached (94% in 2010; 79% in 2016); 2) MSM receiving referrals for HCT or STI screening (84% in 2010; 49% in 2016); and 3) condom use (66% of MSM exposed to MStyle reported "always" using a condom in 2010; 39% of highly exposed MSM reporting consistent condom use in 2016) (PRASIT, 2010). While not a direct reflection on the MStyle program, previous data showed that 67% of MSM had been HIV tested in the past 6 months, this evaluation found that only 57% of MSM had been tested for HIV in the past 12 months (NCHADS, 2013b).

The analysis revealed that MSM that participated in the program viewed it in an overwhelmingly positive light. MSM thought that the program and services were attractive, and were largely satisfied with HTC services, STI screening, and had high utilization of lubricant and condoms. The MStyle Club was used by only half of MSM within the program catchment area. Service referrals had measurable positive impacts on STI screening and HIV testing, though the provision of referrals was low. While exposure to the program's SBC materials was suboptimal, the vast majority of MSM that were exposed to them thought highly of them. Social media (web page and Facebook page) were significantly underutilized, with a minority of MSM knowing about them, and only small minorities of MSM using them.

21. References

Arreola, S., Hebert, P., Makofane, K., Beck, J., & Ayala, G. (2012). Access to HIV Prevention and Treatment for Men Who Have Sex with Men. The Global Forum on MSM and HIV (MSMGF). Retrieved from http://www.msmgf.org/files/msmgf/documents/GMHR_2012.pdf.

Austin, C., P. (2011). An Introduction to Propensity Score Methods for Reducing the Effects of Confounding in Observational Studies. Multivariate Behav Res, 46(3), 399-424. doi:10.1080/00273171.2011.568786.

Beyrer, C., Baral, Stefan, D., Griensven, V., F., Goodreau, S.,M., Chariyalertsak, S., Wirtz, A., L. & Brookmeyer, R. (2012). Global epidemiology of HIV infection in Men who have Sex with Men. The Lancet, 380(9839), 367-377. doi:10.1016/s0140-6736(12)60821-6.

Chhea, C. & Saphonn, V. (2011). Estimations and Projections of HIV/AIDS in Cambodia 2010-2015. Retrieved from http://www.nchads.org/Publication/HSS/Estimations%20and%20Projections%20of%20HIV-AIDS%20in%20Cambodia%202010-2015_eng.pdf.

FHI 360. (2008). Population Size Estimation of MSM in Cambodia 2008: Capture - Recapture Methodoloy in 6 Cities. Retrieved from http://nchads.org/confandsymp/2008/Day%202/Mekong%20I&II/F2%20 FHI%20MSM%20Size%20Estimations.pdf.

Grazina, J., L. (2008). Introduction to Respondent Driven Sampling Behavioural Surveillance.

Men's Health Cambodia (MHC). (2015). NGO profile 2015: MHC. KHANA-Flagship. Phnom Penh, Cambodia.

Men's Health Social Service (MHSS). (2015). NGO profile 2015: MHSS. KHANA-Flagship. Phnom Penh, Cambodia.

Morineau, G., Song, N., & Phal, S. (2004). Men Who Sex with Men in Phnom Penh, Cambodia: Population size and sex trade. Retrieved from http://gametlibrary.worldbank.org/FILES/630_MSM%20in% 20Phnom%20Penh,%20Cambodia.pdf.

NCHADS. (2007). Behavioral Behavioral Sentinel Sentinel Surveillance.

NCHADS. (2013a). Behavioral Behavioral Sentinel Sentinel Surveillance Surveillance.

NCHADS. (2013b). Standard operating procedures (SoP) for boosted continuum of prevention to care and treatment for most at risk populations in Cambodia.

NCHADS. (2015a). National HIV Sentinel Surveilance.

NCHADS. (2015b). National HIV Sentinel Surveilance among ANC and MSM 2014.

PRASIT. (2010). Project for HIV and AIDS Strategic Technical Assistance (PARASIT) Program Review (2008-2010): MStyle. Providing HIV/AIDS prevention and care for men who have sex with men.

PRASIT. (2012). Size estimation of transgender population in Cambodia 2012.

UNAIDS. (2009). UNAIDS Action Framework: Universal Access to appropriate HIV prevention, treatment, care and support services for Men who have Sex with Men and Transgender People.

UNAIDS. (2010). Global Report on the Global AIDS Epidemic. Retrieved from http://www.unaids.org/globalreport/Global_report.htm.

UNAIDS. (2015). How AIDS Changed Everything. MDG 6: 15 Years, 15 Lessons of Hope from the AIDS Response. Retrieved from http://www.unaids.org/sites/default/files/media_asset/ 20150714_FS_MDG6_Report_en.pdf.

USAID HIV Flagship Project. (2013a). Annual progress report: November 14, 2012-September 30, 2013.

USAID HIV Flagship Project. (2013b). Comprehensive GIS mapping of most-at-risk populations: Atlas 2013.

USAID HIV Flagship Project. (2014). Annual progress report: October 01, 2013-September 31, 2014.

USAID HIV Flagship project. (2014). MStyle service package guideline: Men who Have Sex with Men. Phnom Penh, Cambodia.

USAID HIV Flagship Project. (2015a). Year 4 Annual Work plan Narrative: 1 October 2015 – 30 September 2016.

USAID HIV Flagship Project. (2015b). Annual progress report: October 01, 2014-September 30, 2015

USAID HIV Flagship Project. (2015c). Flagship's coverage plan 2015. KHANA. Phnom Penh, Cambodia

WHO. (2014). Consolidated guidelines on HIV prevention, diagnosis, treatment and care for key populations. Retrieved from http://www.who.int/hiv/pub/guidelines/keypopulations/en/.

Yi, S. (2015). National Size Estimation and Behavioral Survey among MSM in Cambodia.KHANA-Flagship. Phnom Penh, Cambodia.