Integrated Biological and Behavioral Surveillance (IBBS) Survey among Men who have Sex with Men (MSM) and Transgender (TG) People in Terai Highway Districts of Nepal

Round I

Ministry of Health
National Centre for AIDS and STD Control
Teku, Kathmandu
2016

Field Work Conducted by:

National Institute for Development and Research, Kathmandu

The IBBS Surveys are part of the National HIV Surveillance Plan led by NCASC. The field work of the survey was carried out by National Institute for Development and Research (NIDR) with quality assurance from National Public Health Laboratory and with technical and financial assistance from the Global Fund with Save the Children International.

SURVEY TEAM MEMBERS

Principal Investigators

Dr. Tarun Paudel
Rajan Bhattarai

CO-INVESTIGATORS

Bir Bahadur Rawal
Madhav Chaulagain
Bishnu Prasad Shrestha
Upendra Shrestha

Consultant

Keshab Deuba

KEY FIELD TEAM MEMBERS

Prof. Bhimsen Devkota	Team Leader
Tark Raj Bhatt	National M& E Coordinator
Purushottam Khatiwada	Research Officer
Udaya Bahadur Bohara	Statistician
Dipa Timilsina	Admin Finance Officer
Gajendra Bhatt	Accountant
Dan Bahadur Bohara	Lab Coordinator

Sandip K C	Field Coordinator	Sagar Prasad Bhatta	Field Coordinator
Suryamani Rai	Field Coordinator	Raju Khanal	Field Researcher
Bhuwan Bahadur Singh	Field Researcher	Bhuwan Panthi	Field Researcher
Nawaraj Sapkota	Field Researcher	Dambar Chand	Field Researcher
Chandra Bahadur Rai	Field Researcher	Dev Raj Dhital	Field Researcher
Sashi Sapkota	Field Researcher	Bishnu Prasad Bhatta	Clinician
Ganesh Bahadur Bista	Clinician	Jaya Prakash Yadav	Clinician
Nandan Kumar Singh	Lab Technician	Prakash Bhatta	Lab Technician
Md. Amir Ansari	Lab Technician	Aanik Rana Magar	Counselor
Rakesh Kumar Upadhyay	Counselor	Muskan Shrestha	Counselor
Niran Chaudhari	Outreach	Karuna Nepal	Outreach
Prerana Bista	Outreach	Pitambar Chhetri	Outreach
Uday Thapa	Outreach	Ishwari Sigdel	Outreach
Suraj Chaudhari	Runner	Ravi Shrestha	Runner

KEY FIELD TEAM MEMBERS

Aashika Chaudhari	Runner	Salma Begam	Outreach
Nishan Sah	Runner	Ram Chandra Chaudhary	Runner
Badal Tiwari	Outreach	Tamanna Gurung	Runner
Krishna Kumar Rai	Field Assistant	Prem Thapa	Outreach

Tablet based app and data management team (Public Health and Environment Research Centre)

Manindra Sthapit
Rachana Shrestha

Language Editor

Laxmi Prasad ojha

ACKNOWLEDGEMENTS

The first round of Integrated Biological and Behavioural Surveillance (IBBS) survey among Men who have Sex with Men (MSM) and Transgender (TG) in Terai Highway Districts of Nepal Terai was conducted with technical and financial support from Save the Children/ Global Fund and the field work by conducted by National Institute for Development and Research (NIDR). In this regards, National Centre for AIDS and STD Control (NCASC) is thankful to Save the Children and NIDR for timely completion of the survey.

We are indebted to Mr Bir Bahadhur Rawal, Strategic Information Focal Person, NCASC, Mr Bishnu Prashad Shrestha, Monitoring and Evaluation Manager, Mr Madhav Chaugalain, Strategic Information Specialist and Mr Upendra Shrestha, M&E Coordinator of Save the Children for their technical inputs and guidance throughout the study. We are grateful to Mr Keshab Deuba, Consultant, Mr Komal Badal, UNAIDS, Mr Mirak Angdembe, Surveillance Specialist, FHI360 for their technical inputs and advice during the survey.

We would also like to acknowledge District Public Health Offices, District Administration Offices and District Police Offices of Sunsari, Rupandehi and Kailali for their support and cooperation for successful completion of the survey. The NCASC is grateful to Nepal Health Research Council (NHRC) for providing ethical approval and National Public Health Laboratory (NPHL) for conducting the external quality assessments.

Furthermore, the study team is indebted to Pinky Gurung, Chairperson,Blue Diamond Society (BDS), Manisha Dhakal, Chairperson, Federation of Sexual and Gender Minorities Nepal (FSGMN), Suman Nepal, Sanjay Sharma, Raju Lama, Manila Neupane, Puspa Lama, Chanchala Subba, Suhani Rajhdhami and other members of staff of Parichaya Samaj and Cruise aids and other district and local-level CBOs for their support and cooperation during the survey.

This survey would not have been completed without full participation of survey respondents. So the special thanks go to them and similarly runners as well as outreach workers efforts is also highly acknowledged for playing key role in management of survey respondents.

We would like to express deep gratitude to every member of the study team, tablet based application and data management team (PERC Nepal), Statistician, Research Officer, Field

Coordinators, Lab Technicians, Clinicians and Counsellors for their immense effort in successful completion of this survey.

At last but not least, I would like to thank to Prof Dr Bhimsen Devkota, Team Leader and Mr Tark Raj Bhatt, Chair and Executive Director and his team members of NIDR for their excellent work to conduct this survey timely.

Dr. Tarun Paudel,
Director, National Center for AIDS and STD Control (NCASC),
Teku, Kathmandu, Nepal
Date: 15 August 2015

ABBREVIATIONS

ABC	Abstinence, Being Faithful, Condom Use
AIDS	Acquired Immune-Deficiency Syndrome
ART	Anti-Retroviral Therapy
BDS	Blue Diamond Society
BSS	Behavioral Surveillance Survey
CBO	Community Based Organization
CC	Community Centre
CE	Community Educators
CI	Confidence Interval
CMs	Community Motivators/Mobilisers
CT	*Chlamydia Trachomati*
DIC	Drop-in-Centre
DoHS	Department of Health Service
EQA	External Quality Assessment
EQAS	External Quality Assurance Scheme
FSGMN	Federation of Sexual and Gender Minorities Nepal
FSWs	Female Sex Workers
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GOs	Governmental Organizations
HIV	Human Immuno-Deficiency Virus
HTC	HIV Testing and Counselling
IBBS	Integrated Biological and Behavioural Surveillance
IC	Information Centre
ID	Identifier
KAP	Key Affected Population
MoHP	Ministry of Health and Population
MSM	Men who have Sex with Men
MSW	Male Sex Worker
NCASC	National Centre for AIDS and STD Control
NG	*Neisseria Gonorrhoea*

NGO	Non-Governmental Organization
NHRC	Nepal Health Research Council
NIDR	National Institute for Development and Research
NHRC	Nepal Health Research Council
NPHL	National Public Health Laboratory
NRs	Nepalese Rupees
OE	Outreach Educator
OST	Opioid Substitution Therapy
PE	Peer Educator
PLHIV	People Living with HIV
PMTCT	Prevention of Mother to Child Transmission of HIV
PWID	People Who Inject Drugs
RDS	Respondent Driven Sampling
RPR	Rapid Plasma Regain
SITWG	Strategic Information Technical Working Group
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TG	Transgender
TPHA	Treponema Pallidum Hemagglutination Assay
TPPA	Treponema Pallidum Particle Agglutination
UNAIDS	United Nations Programmes on HIV and AIDS
UNGASS	United Nations General Assembly Special Session
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

This is the first round IBBS survey among MSM/TG conducted in eight districts of Terai Highway in Nepal and field work conducted by National Institute for Development and Research (NIDR). The eight districts namely Jhapa, Morang, Sunsari (Eastern Terai), Nawalparasi, Rupandehi, Kapilbastu (Western Terai), Kailali and Kanchanpur (Far-western Terai) were purposively selected on the basis of previous round of size estimation, consultation with relevant stakeholders during the formative assessment. The main objectives of the IBBS surveys were: to determine the prevalence and trend of HIV Syphilis, *Chlamydia Trachomatis* (CT) and *Neisseria Gonorrhoea* (NG) and associated risk behaviors among MSM/TG, collect information related to socio-demographic characteristics and explore the association between the risk behaviors and HIV and other specific STIs among the MSM/TG population.

Methodology

The IBBS survey used descriptive cross-sectional research design. This report presents baseline findings for future outputs. A formative assessment was conducted by NIDR before starting the survey with the main objectives of whether the proposed survey is acceptable for Respondent Driven Sampling (RDS) methodology or not and to identify the network strength of MSM/TG communities in the proposed areas. The findings of formative assessment suggested that the proposed population was suitable for RDS methodology and strong network of survey population found in all proposed eight districts.

For this first round of the IBBS survey, a total of 340 MSM/TG from selected eight districts were included in the survey. The sample comprised of 120 MSM/TG from eastern three districts (Jhapa, Morang and Sunsari), 120 MSM/TG from western three districts (Nawalparasi, Rupandehi and Kapilbastu) and 100 MSM/TG from far-western two districts (Kailali and Kanchanpur).

The samples for the study were recruited using respondent driven sampling (RDS) method. All the participants selected by RDS method were screened to ensure that they met the criteria for participating in the survey. The recruitment started with selection of eight seeds representing the sexual identity of the MSM/TG and making them as diverse as possible and one more seed was recruited at Bhairahawa RDS center later to cover population from certain areas. The seeds were

informed about the survey protocol and procedures and were responsible for screening of possible survey participants at the survey site. After their recruitment in the survey, each seed received three referral coupons, which they passed on to their peers, and a reward coupon to collect reward after successful participation of the referred persons. The referral coupons were uniquely coded in order to link recruiters and recruits. The coupon ID numbers were carefully recorded in each questionnaire. Out of nine seeds, three seeds had completed five waves, and six seeds generated four waves. The recruitment process continued until 340 MSM/TGs were recruited. The survey respondents were provided withRs.300 (USD 3) for participation in the survey and additional Rs. 200 (USD 2) as reward for each participant they recruited.

The RDS centers were established at Itahari for three districts of eastern area, Bhairahawa to cover three districts from western area and Dhangadhi to represent two districts of far-western area. The service sites were with spacious eight rooms needed for the recruitment process, interview, pre and post-test counseling and clinical/laboratory services. Experienced and trained field researchers/enumerators, clinicians, lab technicians and counselors were involved for biological and behavioral data collection. The behavioral data collection tool was pre-tested and used for data collection. The entire survey was conducted in coordination with local NGOs, Community Based Organizations (CBOs), Government Organizations. National Centre for AIDS and STD Control (NCASC) provided overall supervision and quality control while Save the Children provided financial support on behalf of the Global Fund as well as monitored the data collection process. The Technical Working Group (SITWG) provided direct technical backstopping support for successful completion of the survey.

The IBBS survey was conducted in compliance with both ethical and human rights standards. Nepal Health Research Council (NHRC) approved the survey protocol. An informed consent was obtained from the survey participants prior to participating in the survey. No personal identifiers were collected in the survey period. A unique identification (ID) number was used to track the respondent in each questionnaire, medical records, and all biological specimens collected.

The biological samples were collected to identify the distribution of HIV and STIs while the behavioral information covered socio-demographic characteristics, risk behaviors, awareness on

HIV and STIs, exposure to HIV services and programs, stigma and discrimination, among others.

Interviewer-administered questionnaire data and biological data based on lab tests was collected onto tablet computers and directly loaded into a master database using a wireless internet connection in the field. All the collected data were synced to the server and only allowed to edit by the field coordinators in consultation with enumerators. At the end of each day, the collected data were reviewed by field coordinators in presence of enumerators. RDS related estimates were adjusted to represent the structure of the survey population which is based on information regarding who recruited whom, and the relative size of the respondents' network using the Volz–Heckathorn estimator (RDS II)

Major Findings

Socio-Demographic Characteristics

In terms of the age distribution of the respondent, three fifths (59.8%) were of age 25 years and above and rests were below the age of 25 years. Out of 120 respondents from western area 81 were age of 25 years and above while there were 52 respondents out of 100 in far-western area with age of 25 years and above. Median age of the respondents was 25 years while that of male sex worker (MSW) and non-male sex worker (non-MSW) were 27 and 24 years respectively. High majority of the respondents found following Hindu religion (89.4%) followed by Buddhist (4.7%).

By education, nearly one-third of the MSM/TG had secondary education (29.7%) and SLC and above (27.1%) level followed by lower secondary (15.6%). About 13.2% participants were illiterate. In terms of marital status, 59% MSW, 71% non-MSW and 64.7% MSM/TG were unmarried. Sex of married partner shows that vast majority (94.7%) of the MSW, 76.6% non-MSW and 80.4% MSM/TG were married to females. Only 13.7% MSW we remarried with male/meti, which was 19.1% in case of non-MSW and 15.8% for MSM/TG.

Two- fifths of the respondents were living with regular sex partner. Similarly, 49.7% MSW and 31.2% non- MSW were currently living with their regular sex partners. Currently, 54.4% were living with their male/meti partner and 39.7% with wife and 5.9% with TG.

More than a quarter of the respondents (28% MSW, 30.1% non-MSW and 29% MSM/TG) were laborer, followed by students (9% MSW, 22.8% non-MSW and 15.3% MSM/TG). The median monthly income of respondents was NRs 9250 whereas maximum monthly income was reported as NRs 150, 000 and minimum income was NRs 500.

HIV and STI Prevalence

The overall RDS adjusted prevalence of HIV in MSM/TG stands at 8.2%. By area, HIV prevalence comes out to be highest in the western area (16.5%) followed by eastern area (6.5%) and far western area (5.3%).The HIV prevalence among MSW was 12.8% while it was 4.3% among non-MSW. The prevalence of HIV among MSW was found higher among Non-TG (16.3%) than in TG (10.1%). However, the prevalence of HIV among non-MSW was observed higher among non-TG (5.1%) than in TG (2.3%). History of active Syphilis was highest among MSW (10.7%) followed by MSM/TG (9.4%) and non-MSW (8%). However, Syphilis history was found in 0.6% respondents in all three groups.

Service Seeking Behaviors

Nearly two third (63.4%) of MSM/TG were aware about the confidential HIV testing services. HIV and STI prevalence was higher in those who reported that they had interacted with Peer Educators (PE) or Outreach Educators (OE) or Community Mobilisers (CM) or Community Educators (CE) in the last 12 months, visited Drop-In Center (DIC), Information Center (IC), Counseling Center (CC), Sexually Transmitted Infection (STI) clinic (exception in case of HIV) and HTC centers. However, it is noted that participation in HIV/STI prevention programs by the key affected population groups including MSM/TG is crucial to get informed and prevent HIV and STI.

Exposure to HIV Programs

Only a quarter (24.7%) of MSW and MSM/TG visited HTC center in the past 12 months. More than two-fifth of them (41.9% MSW, 40% non-MSW and 41% MSM/TG) visited the HTC center 2-3 times. The services they received include HIV pre and post-test counseling, and HIV test. Less than one-third of the respondents (32.6% MSW, 29.3% non-MSW and 31% MSM/TG) received counseling on correct use of condom during each sexual intercourse. Information on HIV window period was received less often; 9.3% MSW, 9.8% non-MSW and 9.5% MSM/TG reported it.

Comprehensive Knowledge of STIs and HIV Prevention

It was found that only 16.3% MSW,10.5% non-MSW and 13.5% MSM/TG were aware of at least one major male STI symptoms. The respondents perceived that penial discharge (49.1% MSW, 44.9% non-MSW and 47.1% MSM/TG),burning pain during urination (45.6% MSW, 34.8% non-MSW and 40.4% MSM/TG) and genital ulcers/sores (40.8% MSW, 46.2% non-MSW and 43.4% MSM/TG) were the main suymptoms of STIs. Other symptoms reported include swelling in groin area and anal discharge.In total, more than a quarter of the respondents (24.3% MSW, 31% non-MSW and 27.5% MSM/TG) did not know any symptoms of STIs. Majority of the respondents knew 2-4 symptoms of STIs.

Out of those who experienced STIs, only 24.1% MSW (33.3% TG), 29.4% non-MSW (40% TG) and 26.1% MSM/TG (34.6% TG) sought treatment from a hospital. Consultation with private doctor was reported by 20.7% MSW, 29.4% non-MSW and 23.9% MSM/TG.About 6-7% used BDS clinics.Moreover, 10.3% MSW, and 6.5% MSM/TG took home medications.

Sexual Behaviors, Condom and Lubricant Use

More than two third (72%) of the MSW reported having more than one non- paying male anal sex partner in the past month. Nearly two-third (68.5%) of the MSM/TG had anal sex more than one time while this behavior was reported by 66.7% non-MSW. About 27.1 % of the total respondents had only one non-paying male anal sex partner. The median number of non-paying anal male sex partner was 2 for all three groups.

Having more than one one-time paying male anal sex partner was reported by 57.1% MSW, 56.95 non-MSW and 42.7% MSM/TG. In average, one time paying male anal sex partner were three for MSM/TG and MSW and two for non-MSW.

About two third (65.7%) of MSW, 58.1 % non-MSW and 55.4% MSM/TG reported that they had more than one paid male anal sex partner in the past month. In average, number of such partners were three for MSW and MSM/TG and two for non-MSW. The number of one time paid anal sex partner varied from 0 to 9. Nearly four fifth (77.1%) of MSM/TG had their first sex with male/meti while for 22.9% MSM/TG it was with MSW. The proportion of respondents having first sex with male/meti was little higher (83.1%) among MSW and lower in case of non-MSW (70.4%).

Self-reported condom use behaviors of the respondents indicate that still many of them practice risky sexual behaviors. Overall, only one-third of the respondents (34% MSW, 34.5% non-MSW and 34.2% MSM/TG) reported that they always used condoms with non-paying male anal sex partner in the past month. Similarly, four out of ten MSW/non-MSW and MSM/TG always used condom with one time paid male anal sex partner in the past month. About 8.6% MSW, 4.6% non-MSW and 7.1% MSM/TG never used condom in such a condition. But more than one third (39.6%) of the MSM/TG, 35.3% MSW and 41.9% non-MSW reported that they always used condom with female sex partner in the past month. Only 19.1% of MSM/TG, 16.7% non-MSW and 21.3% MSW can show condom when asked for it. The proportion of MSW who reported that they could have condoms when needed was 83.7%, while it was 71% in non-MSW and 77.6% in MSM/TG. Rest of them would not be able to get condoms when needed.

Eight out of ten (78.1%) MSM/TG had ever used lubricant while having anal sex. In the same way, 80% MSW and 76.9% non-MSW had ever used lube. Similarly, 89.7% TG ever used lubricant against 68.6% non-TG.

Alcohol and Drug Use

Half (49.5%) of the MSM/TG and non-MSW (50.6%) had ever consumed alcohol, which was little less prevalent in MSW (42.1%). Majority of the MSM/TG and non-MSW used alcohol at least once a week (63.5% MSM/TG and 61.5% non-MSW). Of those who consumed alcohol, 48% MSW, 57.3% non-MSW and 67.2% MSM/TG did not use alcohol in their last sex.

Only 3.6% MSM/TG used illicit drug in the past year. It was reported by 3.4% MSW and 3.7% non-MSW. In total, about 75 % MSM/TG used Ganja, 41.7% used *Chares*, 16.7% used tablets and 8.3% used others. Similarly, 50 % of the MSW who used illicit drugs used Ganja and 16.7% used tablets. All six non-MSW who reported using drugs, reported use of Ganja and 83.3% used *Chares* while tablets was used by 16.7%. Only 3% MSW, 1.3% non-MSW and 2.2% MSM/TG were reported use of injecting drugs in the past one year.

Stigma and Discrimination

More than one-third of the total MSW (38.3%) and MSM/TG (34.3%) reported that they were treated unfairly because of their sexual orientation and reaction while a little more than one-fourth (29.6%) Non-MSW reported such treatment by others. Against such unfair treatment, less

than one third of the MSW, non-MSW and MSM/TG (29.2-29.6%) kept it within self while 40.7% TG, 36.2% non-TG and 32% MSW reported this to others.

A quarter of MSW (24.7%), one-fifth(20.3%) of the MSM/TG and less than one fifth (15.4%) of Non-MSW had ever thought about sucide . The data indicate that sucidal ideation was highest among MSW and least among Non-MSW.

In the past 12 months, 36% MSW, 29.6% MSM/TG and 26.1% MSW thought of ending own life many times while such a feeling was produced one or two times in 45.7% MSW, 38% MSM/TG and 24% Non-MSW. It was notable that 76.9% MSW Non-TG, 63.6% Non-MSW TG and 63% MSM/TG Non-TG planned to commit a suicide. Of those who planned to commit suicide, six out of ten Non-MSW (60%), half of the MSM/TG (50.7%) and 45.7% MSW had ever attempted suicide

Program Implications and Recommendations

i. The majority of MSM/TG have their sexual debuts during teen age period (10 to 16 years). Therefore, the HIV prevention intervention should be focused on the teen age groups. Targeted interventions for students, out of school adolescents and youth should be implemented focusing on delayed sex, consistent and correct condom use and partner reduction, among others.
ii. Communication interventions on MSM/TG should focus on safe sexual behaviors as they tend to be engaged in risky sexual behaviors that lead to HIV and STI transmission.
iii. It is necessary to spread the message of consistent condom use with regular, non-paying and paid sex partners while having sex, whether oral or anal sex.
iv. Information about available HIV and STI services, including condoms should be disseminated widely through mass media as well as interpersonal communication.
v. It is necessary to improve access and exposure of the MSM/TG population to structured HIV programs (Peer education, DIC, HCT/STI clinics). Given the low exposure to STI services and information and higher prevalence of STIs, special attention should be given to enhance exposure of MSM/TG populations to the STI services and information in future HIV interventions.
vi. Develop and implement advocacy and awareness program against sexual violence and discrimination with MSM/TG committed by hooligans and security personnel.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

CHAPTER ONE: INTRODUCTION

1.1HIV Infection and IBBS Survey on MSM/TG in Context of Nepal

National Centre for AIDS and STD Control has estimated that there are 39,397 people living with HIV in Nepal including 26,702 reported HIV cases (NCASC, 2015).The previous rounds of survey conducted by National Centre for AIDS and STD Control (NCASC) in 2015 revealed that HIV prevalence among the client of sex workers was 36.7% while for people with injecting drug (PWID), it was 11.5%. Similarly, in migrant worker, sex worker and spouse/partner of migrant workers, it was 7.2%, 4.8%, and 4.2% respectively. In case of MSM/TG, HIV prevalence was only 1.5%. Similarly, the age group of population 30-39 was reported with high HIV prevalence, followed by the age group 25-29 and 20-24 respectively (NCASC, 2015).

The epidemic of HIV in Nepal is concentrated among key populations at higher risk. National HIV and AIDS Strategy 2011-2016 has identified People with Injecting drugs (PWIDs), Female Sex Workers (FSWs) and their clients, migrant workers and their spouses and men who have sex with other men (MSM) and Transgender (TG) as the key affected population (KAP) and most vulnerability for prevalence of HIV at higher risk of spreading the HIV epidemic (NCASC, 2011).

Five rounds of Integrated Bio-Behavioral Surveillance survey (IBBS) (i.e. 1st round in 2004, 2nd round in 2007, 3rd round in 2009, 4th round in 2012, and fifth round in 2015) have been conducted in Kathmandu valley Nepal with the aim of detecting the prevalence and trend of HIV and determining its associated behavior factors of MSM/TG.

The past IBBS surveys conducted among MSM/TG in Kathmandu valley, indicated that HIV prevalence among MSM/TG has remained almost stable till the fourth round of survey as the survey shows prevalence of HIV in first round (2004) 3.9%; second round (2007) 3.3%; third round (2009) 3.8% and fourth round (2012) 3.8%whereas fifth round survey shows (2015) 2.4 % prevalence of HIV. However, the status of behavior factors and other sexually transmitted diseases are different.

Geographically, the inhabitant of the MSM/TG is largely scattered across Nepal so the possibility of prevalence of HIV would exist across the other territories in Nepal. This IBBS survey was conducted first time in Terai highways from eastern to far-western Nepal, has surveyed biological and behavioral aspects of MSM/TG in Terai highway districts of Nepal.

1.2 Rationale of the Study

The goals of national HIV programmes are to reduce the transmission rate of HIV and to provide care for already infected people. Understanding of the extent of prevalence of HIV infection is needed to achieve these goals. As discussed earlier, prevalence of HIV infection differs in key populations. Biological and behavioural surveillance (IBBS) survey produces relevant information that provides information to formulate the plan, policy and programmes for the prevention and treatment of the HIV. Similarly, the care and support are provided to the deprived people based on the finding of the IBBS survey.

Being one of the key HIV effected population, the recent prevalence of MSM/TG has placed a significant number in Kathmandu valley (i. e. 2.4%). That the information entrusted from the IBBS survey among MSM/TG has become an important guideline for the policy makers. As inhabitant of the MSM/TG is scattered across the country, it is important and necessary to conduct the IBBS survey in order to find out the biological and behaviours aspects of the MSM/TG among the population outside of Kathmandu valley.

In one hand, Terai highway districts with the high population density and cross border where the inhabitant of MSM/TG comes into a large account, on the other hand, MSM/TG is one of the vulnerability group of people and Key HIV affected populations who have high chances to transmit the sexual disease. Therefore, it is necessary that IBBS survey is conducted among MSM/TG in Terai highway districts so that the findings of the survey is used for prevention and treatment of HIV.

1.3 Study Objectives

The overall aim of the survey was to establish the baseline for proposed HIV-related trends analysis in future among MSM/TG in Terai highway districts.

1. To estimate the prevalence of HIV and STI infections among survey population.
2. To assess the sexual behaviors related to HIV, STI and Syphilis among survey populations.
3. To collect information related to socio-demographic characteristics using sexual behavior including knowledge and use of condoms; knowledge of HIV/AIDS; knowledge and treatment of STIs; exposure of MSM/TG to available HIV/STI services in selected survey areas.
4. To explore the association between the risk behaviors, HIV, and other specified sexually transmitted infections among the MSM/TG population.

CHAPTER TWO: SURVEY DESIGN AND METHODOLOGY

This section presents survey design in particular its process, participant recruitment, sampling, field survey process, ethical aspects, clinical and laboratory procedures, study management, quality assurance, data handling, management and analysis and limitation of surveys**.**

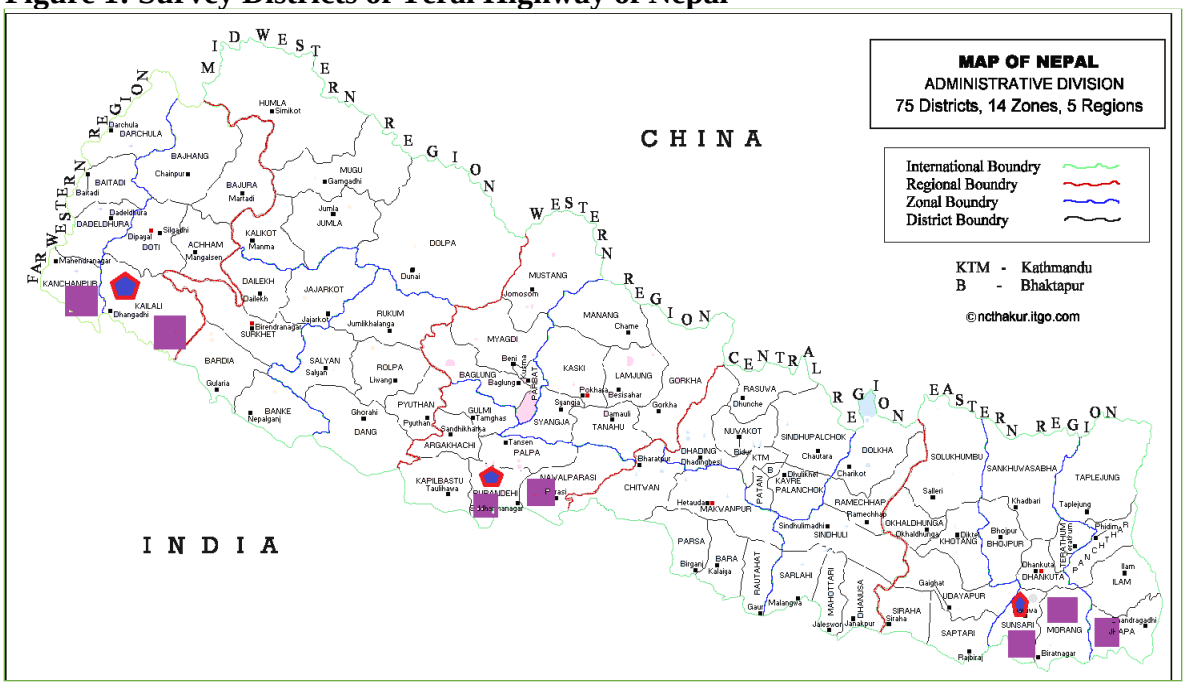
2.1 Survey Design

The survey used descriptive cross-sectional design.

2.2 Study Population

The study was conducted among MSM/TGs who are considered one of the key affected populations (KAP) (NCASC, 2012) for the transmission of HIV and STI infection.

Figure 1: Survey Districts of Terai Highway of Nepal



Survey districts

RDS Centers (**Dhangadi**-Kailali, **Bhairhawa**-Rupandehi and **Itahari**-Sunsari)

MSM/TG and TGs from the eight selected Terai districts namely Jhapa, Morang and Sunsari (Eastern Terai), Nawalparasi, Rupandehi and Kapilbastu (Western Terai), Kailali and Kanchanpur (Far Western Terai) were eligible for inclusion in the study.

For the purposes of this study MSM/TG were divided into two sub-groups, MSWs and non-MSWs and also TG and non-TG.

- Male sex workers (MSWs): '*Those males aged 16 years or above who have had sexual relations, (either oral or anal) with another male in the 12 months preceding the survey in exchange for money or other commodities.'*
- Non-MSWs: '*Those males aged 16 years or above who have had sexual relations (either oral or anal) with another male in the 12 months preceding the survey without receiving cash payment or other commodities.'*
- *Transgender Sex Worker (TGSW): Those TG aged 16 years and above reporting have been paid in cash or kind for sex with males within 12 months and who identified themselves in a different gender than that assigned to them at birth or identified themselves belonging to transgender community.*
- *Non-Transgender (Non-TG): Those males aged 16 years and above reporting have had sex with males within 12 months and who identified themselves either MSW or non- MSW.*

All the participants selected by RDS method were screened to ensure that whether they meet the criteria for the study or not.

2.3 Sampling Design and Sample Size

The respondent-driven sampling (RDS), a form of chain-referral, methodology was utilized to recruit participants in the survey. The RDS process was initiated purposively selecting a set of eight MSM/TG sample from each survey district as 'seeds'. One seed was added at Bhairahawa RDS center to extend coverage. Three recruitment coupons had been given to each seed for further recruitment of participants from their networks.

The sample size was calculated to detect 15-percentagepoints difference in key indicators, such as type of sexual partners and consistency of condom use, with the help of a basic statistical formula (Annex 2). Based on the formula, a total of 340 MSM/TG were included in this survey.
It is the first time in Nepal that the IBBS survey among MSM/TG has conducted outside the Kathmandu valley. On the basis of existing literatures, size estimations reports and suggestion of stakeholders, eight districts of Terai area were selected to collect 340 samples for the study.

Table 1: Survey Participants with Location and Categories

Survey Location	Eastern Area	Western Area	Far-western Area
Allocated no. of participants	120	120	100

Survey Participants by categories			
Participants	**Involved in sex work**	**Not involved in sexwork**	**Total**
TG	129(74.6%)	44(25.4%)	173(50.9%)
Non TG	49(29.3%)	118(70.7%)	167(49.1%)
Total	178(52.4%)	162(47.6%)	340(100%)

2.4 Formative Assessment

NCASC and Save the Children wanted to ensure that the sample size is sufficient, and appropriateness of the method to recruit survey participants. For this purpose, formative assessment was conducted in three places Itahari, Bhairahawa and Dhangadi, adopting guidelines provided by the Save the Children.

Since RDS allows a dual incentive system to induce recruitment, each participant received NRs. 300 (equivalent to USD 3) for the participation in the survey and another NRs. 200 (equivalent to USD 2) through the reward coupon for each individual they recruited. A participant could have received up to NRs. 900 (equivalent to USD 9) for successfully recruiting three peers into the study.

2.5 Survey Process

A quantitative research approach was used for the survey. Structured questionnaires were used to collect behavioral data relating to sexual behavior, sex partners, use of condoms and lubricants by the MSM/TG as well as their demographic, social characteristics, connection with MSM/TGs network and exposure to services related to HIV and STI.

Before starting the interview, all those coming with the referral cards were informally asked certain screening questions relating to the general behavior of MSM/TG, and their sexual partners to ensure that they meet the definitions of MSW or non-MSW. Rapport building process was adopted with the support from the runners who assisted to the survey team in the screening process.

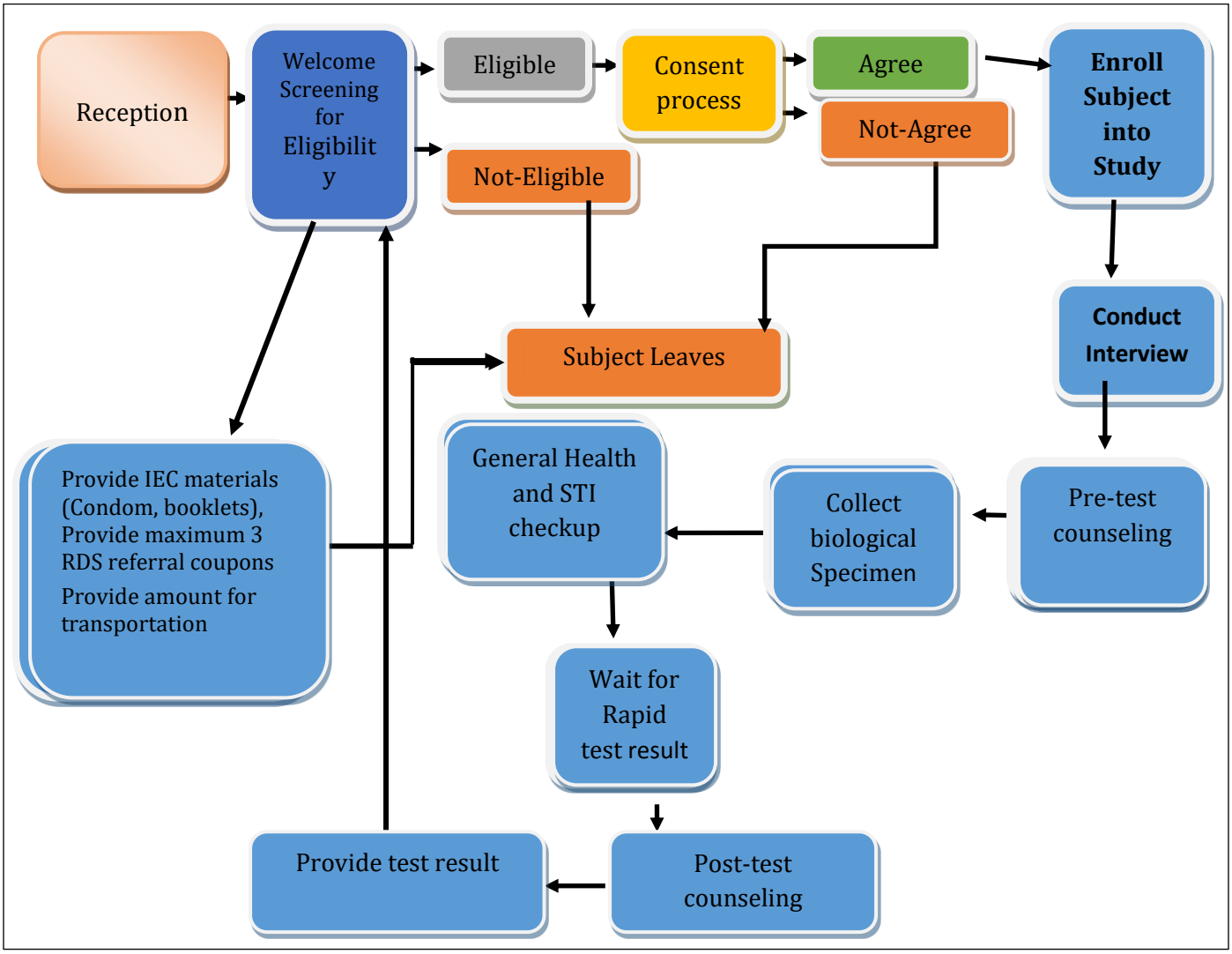
Three centrally located RDS centers were established for the data collection, one in Itahari which covered the respondents of Jhapa, Morang and Sunsari districts one in Bhairahawa that covered

the respondents of Nawalparasi, Rupandehi and Kapilbastu districts and one in Dhangadhi which covered the respondents of Kailali and Kanchanpur districts. There were 8 separate rooms in each RDS centers.

1. Reception room: respondents get entry card to enter the welcome room after qualifying from screening.
2. Welcome room: the respondents were welcomed for the participation and provided a survey tracking card with a unique Identity Number (ID No.). The survey tracking card was circulated with respondent to each room, after completion, the research staff signed on the card, and finally returned to the welcome room. It was ensured that respondents completed all the steps and were eligible to get travel cost.
3. Interview room: Three separate interview rooms were set up for the structured questionnaire survey where the witness (outreach staff or person who introduced the respondent to the survey team) signed the consent form prior to the interview process.
4. Counseling room: A separate counseling room was set up for the pre and post-test counseling. Pre-test counseling was carried out after interview, prior to referral for the lab test and post-test counseling was performed after the lab report got ready.
5. Laboratory room: HIV and Syphilis test was undertaken, taking out 5ml blood by lab technician.
6. Clinical examination room: STI check-up, anal swab and urine sample collection of the respondents was performed.

Since the study was conducted at one center in each location, there was hardly any possibility for duplication or repeated interviews of the same MSM/TG participant. Nevertheless, the study team asked each participant several questions to make sure this was the first time they had participated in the study. Such questions included queries relating to their experience of having undergone any blood tests, the part of the body from where the blood was taken, their experience of HIV testing or testing for other diseases, meeting with NIDR staff and peer educators, and possession of an ID card with the study number.

Figure 2: Field Survey Process



2.6 Survey Duration

The IBBS survey among Men who have Sex with Men (MSM) and Transgender (TG) was started in April 2016 and completed in August 2016 and the field data was collected from 6th June 2016 to 15th June 2016.

2.7 Recruitment and Training of Research Team

Survey team members, field researchers (data collectors), lab technicians, clinicians and counselors were recruited to carry out the survey for MSM/TG of Terai districts. A five days training package was carried out to train, especially field researchers, supervisors, lab technician,

clinician and counselors by following National IBBS training manual in Kathmandu. The training session familiarized the team members with the study objectives, the characteristics of the target groups, rapport-building techniques, the contents of the questionnaire, consent form; oral informed, witness consent taking process, clinical and laboratory processes and procedures including universal precaution and waste management during survey period.

2.8 Ethical Review

The survey was conducted in compliance with both ethical and human rights standards. These standards included participants' anonymity as well as pre- and post-test counseling. As the study was done with individuals, who were often stigmatized an ethical approval was obtained from Nepal Health Research Council (NHRC) prior to the fieldwork. The study protocols were carefully reviewed. Verbal and witnessed consent was obtained from all the respondents in a private setting before the interview and clinical test. No personal identifiers were collected.

All the respondents were provided with a unique identification (ID) number written on a colored printed card. The same identifier was marked on the questionnaire, medical records, and all biological specimens collected from that particular respondent. This card was also used for the distribution of the test results. Trained counselors provided HIV and Syphilis test results during the post-test counseling to only those participants who produced the card. The survey team maintained confidentiality of the data collected throughout the survey.

2.9 Clinical and Laboratory Procedures

2.9.1 Clinical Procedures

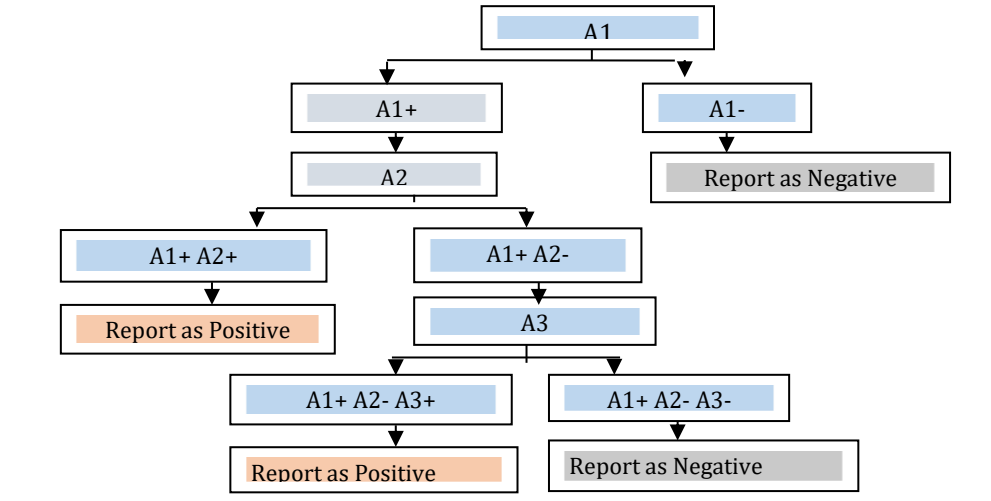
A static clinic was established at each survey site to provide the clinical services to survey participants, especially for STI diagnosis and treatment. The participants were clinically examined for STI symptoms and basic health checkup (measuring blood pressure, body temperature, weight, and pulse) and provided symptomatic treatment to the respondents in accordance with the National STI Case Management Guidelines, when necessary by a trained clinician. Clinicians collected anal swab and urine from the suspected syndromic cases for Chlamydia Trachomatis (CT) and Neisseria Gonorrhea (NG) test. Collected samples of urine and anal swab were labeled with respondent's unique ID and then stored on less than 2^0 C temperature and all the stored samples were sent to Ojaswi Laboratory Kathmandu in every 3 days for safe storage before sending them to NPHL for external quality assurance.

2.9.2 Laboratory Methods

Laboratory Service entailed on-site rapid screening of HIV1/2 and Syphilis followed by a confirmation test. About 5 ml of whole blood was drawn from each MSM/TG using disposable syringes. The blood sample was placed in a centrifuge to separate the blood cells from the serum. Each sample was labeled with the ID number of the respondent. Both HIV rapid tests and Syphilis RPR tests were performed using serum and blood by an experienced lab technician. Ojaswi Polyclinic Private Limited (Laboratory) facilitated and maintained all the standards of laboratory. Universal precautions and stringent waste management protocol was followed. All positive and a random 10 percent of the negative samples of HIV and Syphilis were sent to National Public Health Laboratory (NPHL), Teku, Kathmandu for external Quality Assurance.

HIV1/ 2

The HIV screening of the serum sample was performed using rapid test kits following the HIV testing strategy II algorithm. Determine HIV 1/2 (Abbott, Japan), Uni-Gold HIV ½ (Trinity Biotech, Ireland), and Stat-Pak HIV 1/2 (Chembio Diagnostic system, Inc. USA) were used as later flow (rapid immune chromatography) kits for testing for the presence of antibodies against HIV in the serum. Serum that tested positive with the initial kit was confirmed with the second kit. Samples that were found reactive on both tests were considered HIV antibody positive. Samples that were non-reactive on the first test were considered HIV antibody negative. Any sample that was reactive on the first test but nonreactive on the second test was retested with the third "tie breaker" kit. The quality of the assay was assured by the in-built control of each kit.



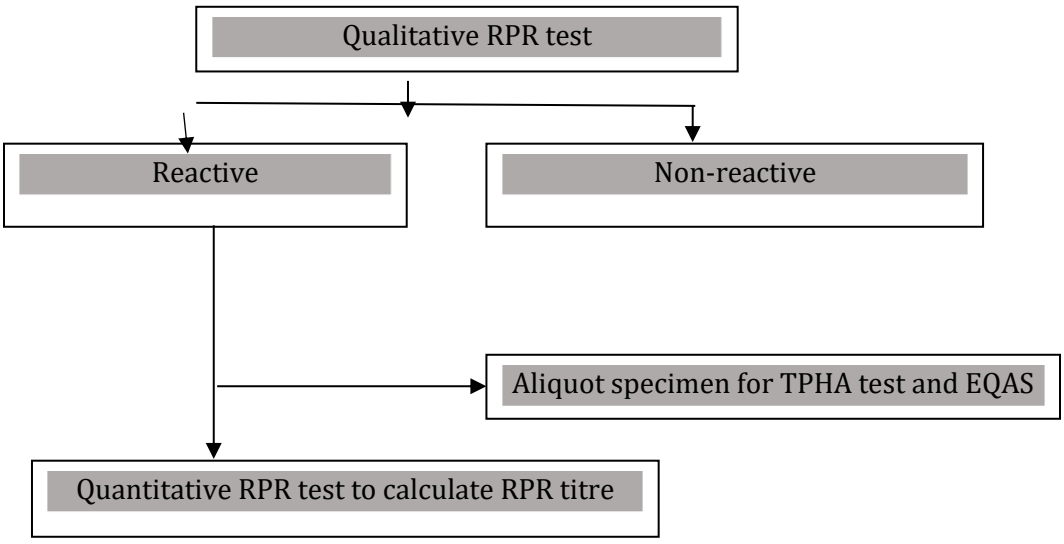
Note: A1 (First test): Determine1/2 A2 (Second test): UniGold1/2 A3 (Third test): Statpak1/2 +: Positive

Syphilis

A syphilis test was performed following the national guideline (National guideline on case management of sexually transmitted disease, (NCASC, 2014)). The serum was tested for nonspecific and specific treponemal agents. A non-treponemal test Rapid Plasma Regain (RPR) [Becton, Dickson, and company USA] was used for both qualitative screening and quantitative titration. All RPR reactive serum was confirmed using the specific *Treponema Pallidum* Particle Agglutination (TPPA) test (Fujirebio Inc.). All the RPR positive serums were also tested by *Treponema Pallidum* Particle Agglutination (TPPA) test using Serodia TPPA as a confirmatory test. The Ojaswi Polyclinic and Laboratory Private Limited (SPDC) carried TPPA for further confirmatory test of Syphilis at its laboratory. On the basis of titre of RPR, all the specimens with RPR/TPPA-positive results were divided into two categories.

- TPPA-positive with RPR-negative or RPR-positive with titre< 1:8 were classified as showing a history of syphilis
- TPPA-positive with RPR titre of 1:8 or greater were classified as showing a current syphilis requiring immediate treatment.

Figure 3: Syphilis Testing Algorithm



2.10 Collection, Storage and Transportation of Blood Samples

This section describes blood, urine, and anal swab samples collection, storage and transportation process applied during the survey period.

2.11 Blood Sample Collection

Before collecting blood sample from participant National HIV testing and counseling protocol was followed. Pre-test counseling was done by trained counselors and sought their consent to take blood for HIV and STI testing. Blood samples for testing HIV and Syphilis were taken from each participant using a 5ml disposable syringe. Each sample was labeled with the respondent's ID number. Collected sample was placed in a centrifuge to separate the blood cells from the serum. The specimens were placed in a cold box and in fridge managed at RDS center at the end of the day and sent to Ojaswi Policlinic and Laboratory by maintaining cold chain after every three days. At the study site separated serum samples were stored in deep fridge -8°C to -15°C. The lab technician as well as the field coordinator regularly monitored the temperature with digital thermometer inside the refrigerator and maintained the logbook of measured temperature.

Respondents were tested for syphilis with the Rapid Plasma Reagin (RPR) test card. All samples with positive RPR were sent to Ojaswi Policlinic and Laboratory for further diagnosis with *Serodia Treponemapallidum Hemagglutination* test.

2.12 Urine and Swab Samples Collection

Real time PCR, using Goffin Molecular Technologies Presto *Chlamydia trachomatis* (CT)-*Neisseria gonorrhea* (NG) Assay kit was used for testing Gonorrhea and Chlamydia. Twenty ml of first catch urine was taken at least two hours after the last void was collected. Urine was collected in a sterile universal urine plastic container size of 20 ml screw cap tube. The urine container was stored at below 2 ^{0}C temperature and sent to National Public Health Laboratory (NPHL) on the same day. Anal swab was collected by inserting the swab stick about 2.5 cm deep into the anal canal, stick was rotated and moved gently from side to side for 3-5 seconds before removing. Collected swab was placed in the Amplicor STM tube. Both urine and anal swab containers were immediately marked with ID number, collection date and time and sent to NPHL for PCR testing by maintaining cold chain.

2.13 Quality Control

Quality control was strictly maintained throughout the process of specimen collection, handling and testing. The Team Leader and National M & E Coordinator (Monitoring and Evaluation of the project from the research organization) were responsible for internal quality control. NIDR took immediate actions based on the feedback given by the external monitoring team (NCASC,

Save the Children). Similarly, field coordinator, field supervisor, and field researchers were responsible for ensuring the quality of behavioral data collection according to the protocol.

Regular meeting with survey team and BDS team regarding quality of information and recruitment of quality respondents ensured quality control. Similarly, keeping systematic records of test results with ID numbers, storage and cold chain maintenance of blood samples were the steps taken for quality control. Regarding the rapid HIV testing, Lab Technician had done test in the field using recommended national algorithm.

Determine HIV-1/2 as primary identifier, Uni-Gold HIV1/2 was used for confirmatory test while StatPak HIV1/2 was used as a tiebreaker in case of discordant result from the two tests. Similarly, further confirmation test of Syphilis and TPPA was done at Owaswi Polyclinic and Laboratory at Kathmandu. Finally, all positive samples and randomly selected 10% of negative samples of both HIV and Syphilis were submitted to the NPHL for external quality assurance.

2.14 Pre and Post-Test Counseling and Test Results Distribution

Prior to the lab procedure, the respondents were invited for pre-test counseling, where they were informed about lab and clinical process, HIV and STI test, collection of blood, urine and swab sample. Information regarding symptoms and preventive measures of HIV and Sexually Transmitted Infections (STIs) and benefits of current tests were provided during the pre- test.

Post-test counseling was conducted after the preparation of lab report; the lab report was prepared within half an hour from the time of blood collection. Therefore, the respondents had to wait less than half an hour for the post counseling. The post counseling was provided to all respondents according to the VCT Guidelines (NCASC, 2014.) The respondents having positive test result were treated more carefully and provided available treatment or were referred to appropriate health service authorities.

2.15 Data Management and Analysis

The survey questionnaire was pre-tested in tabloids before starting fieldwork. The drafted survey tools were piloted among MSM/TG community at Parichaya Samaj, Lalitpur. All together 6 respondents from MSM/TG community were included in the pre- testing process of survey tools. Findings from pre- testing of survey tools were presented in SITWG meeting to incorporate the necessary changes in survey tools.

The surveyed questionnaires generated in Excel sheet were thoroughly checked for any inconsistencies before importing data into the SPSS database.

All the RDS related estimates were adjusted to represent the structure of the survey population using Volz–Heckathorn estimator. All analyses were performed using STATA version 13.1 software (STATA Corporation, College Station, TX).

2.16 Survey Constraints/Limitations

There were three separate locations for the survey where there was no possibility of cross recruitment of respondents. Each location was assigned fixed number of respondents; 120 samples from 3 districts of Eastern area (Jhapa, Morang and Sunsari), 120 samples from three districts of Western area (Nawalparasi, Rupandehi, and Kapilbastu) and 100 samples from 2 district of Far western area (Kailai and Kanchanpur). Among eight surveyed districts, Kanchanpur and Kapilbastu districts had least number of participants though the seeds were represented from each districts and it happened due to cross recruitment of respondents from neighboring districts.

As a consequence, it may have weakened and ruptured network of this hidden population, which may have affected the survey findings. Finally, as in other surveys with sensitive population, this survey also might have faced respondent biases articulating their personal sexual behaviors to the interviewers. The interviewers therefore used probes to overcome such biases.

CHAPTER THREE: RESULTS

3.1 Introduction

This section presents data based on clinical test of HIV and STIs and interviews with the MSM/TG/MSW/TG population followed by sero-prevalence data on HIV and STIs. The, association between demographic and socio-economic data and HIV and STIs, and behavioral surveillance data are analyzed with the result of the clinical test to find out the relation between demographic and socioeconomic features.

3.2 Demographic Information

This section presents data on distribution of sample by area, caste/ethnicity and sexual identity.

Figure 4 : Percentage of Respondents by Age Group and Area (N=340)

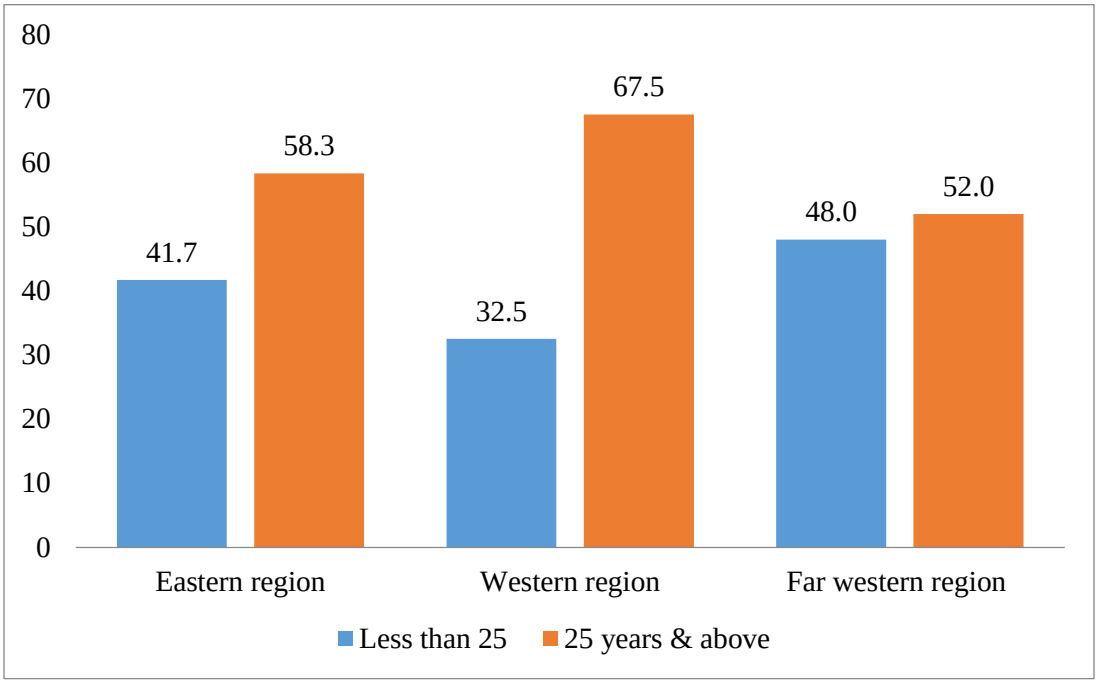


Figure 5 shows the percentage of participants by area and age wise in IBBS survey 2016. Total numbers of participants in this survey were 340. Among them, 120 were from eastern area, 120 from western area and 100 participants from far western area. All of participants were categorized in to two groups on the basis of their age. Majority of the participants are above 25 years age in all areas. Out of total 340 respondents, 59.7% are 25 years and above. Respondents above 25 years are distributed as: eastern area 58.33% (70), western area 67.5% (81) and far western area 52% (52).

Figure 5: Distribution of Respondents by Caste/Ethnicity (N=340)

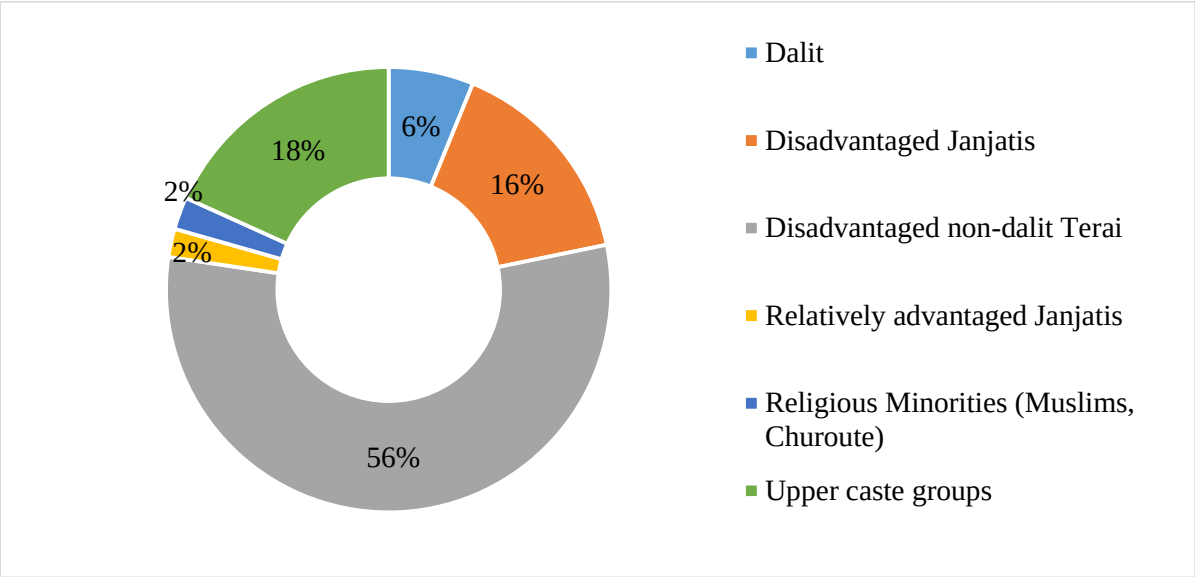


Figure 6 represents the caste/ethnicity of the respondents. More than half (56 %) of the respondents who participated in the survey belonged to the disadvantaged non-dalit Terai community[1]followed by upper caste groups [2](18%), disadvantaged Janjatis[3] (16%) and Dalits[4](6%). only few respondents (2%) were from religious minorities and relatively advantaged Janjatis[5].

[1]*Disadvantaged non-dalitTerai community includes Yadav,Teli,Kalwar, Sudhi, Sonar, Lohar, Hajam/Thakur and so on.*

[2] *Upper caste groups includes Brahmin/chhetri Thakuri Sanyasi and Terai Brahman-Rajput,Kayastha, Baniyaand Marwadi etc.*

[3] *Disadvantaged Janjatis includes Magar, Tamang, Rai,Limbu,Tharu, Rajbansiand Satar etc.*

[4] *Dalit includes Kami. Damai, sarki, Badi, Chamar, Maushar, Dom, Dhobi and so on.*

[5]*Relatively advantaged Janjatis included Newar, Gurug and Thakali.*

3.3 Respondents by Sexual Activities and Sexual Identity

Figure 6 : Respondents by Sexual Activities and Sexual Identity (N=340)

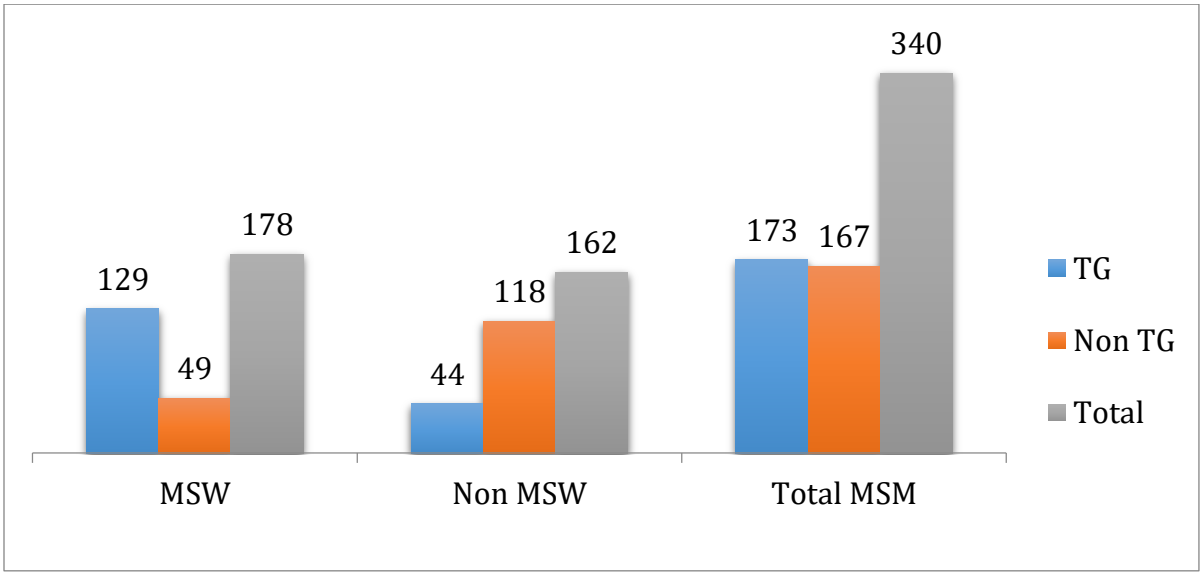


Figure 7shows data about survey participants according to their sexual activities and sexual identity. A total of 340 respondents participated in the survey. The respondents comprised of 173 TG and 167 non-TG or MSM/TG. Out of 340 respondents, there were 178 MSW and 162 non-MSW where 129 belonged to TG and 49 belonged to non-TG. Similarly, among non-MSW there were 44 TG and 118 non-TG

3.4 HIV and STI Prevalence

Table 2: HIV and STI Prevalence

	Eastern area (%)			Western area (%)			Far western area (%)			Total MSM/TG/TG(%)
Prevalence	MSW	Non MSW	Total	MSW	Non MSW	Total	MSW	Non MSW	Total	
	N=62	N=58	N=120	N=86	N=34	N=120	N=30	N=70	N=100	N=340
HIV (95% CI)	12.8 (4.3-33.2	NA	6.3 (2.0-17.7)	22.3 (5.9-56.5)	6.5(0.9-35.6)	16.5 (5.0-44.0)	6.7 (2.1-19.6)	4.8 (1.3-16.1)	5.3 (2.0-13.3)	8.2 (4.1-15.7)*
Active Syphilis	20.97*	10.3*	15.8*	2.3*	5.8*	3.3*	13.0*	7.14*	9.0*	9.4*
Syphilis History	1.6*	NA	0.8*	NA	NA	NA	NA	1.4*	1.0*	0.6*
Any STI (95 % CI)	17.3 (8.1-33.1)	5.2(1.9-13.3)	11.1 (5.9-19.7)	1.6 (0.2-11.1)	6.3 (1.3-25.0)	3.2 (0.8-8.1)	12.2 (3.2.-36.8)	3.0 (1.1-8.1)	5.1 (2.1-11.6)	6.9(4.3-10.9)*
Gonorrhea/Chlamydia										
Urethral -CT	NA	NA	NA	NA	NA	NA	NA	1.4*	1.0*	0.3*

Note: For HIV and any STI, estimated population proportion (%) of the variables with asterisk (*) are unadjusted and besides the asterisk (*) values are RDS adjusted.

Figure 7: HIV Prevalence (RDS Adjusted) in Different Groups by Areas

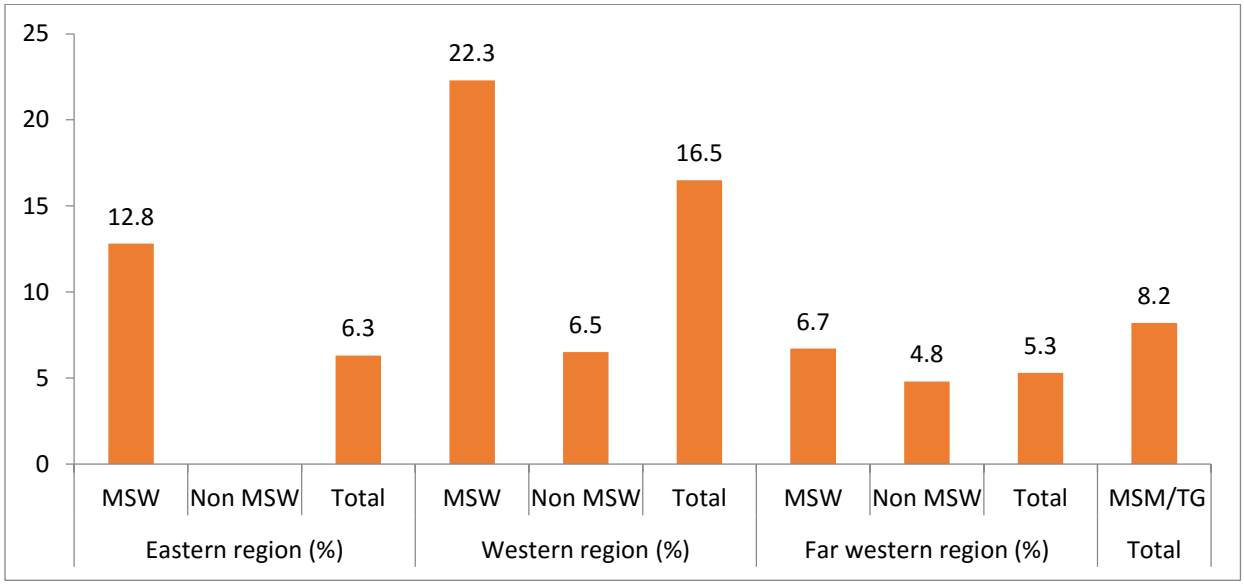


Table 2 and Figure 8display data on prevalence of HIV and STI within MSM/TG who were categorized in two groups, i.e. sex worker and non- sex worker in all three different areas where survey was conducted. Out of total 340 respondents, more than half i. e. 52.35% are MSW. Among 120 MSM/TG in eastern area 62 are MSW and 58 are Non-MSW. Likewise, in western area out of 120 respondents, 86 are MSW and 34 are Non-MSW, and from the far western among 100 respondents 30 are MSW and 70 are Non-MSW.

Similarly, RDS adjusted data shows that prevalence of HIV within MSM/TG is 8.2percent (CI5.7-11.7). The prevalence of HIV within MSW is higher than Non-MSW. The data also indicates that the prevalence of HIV within surveyed group among sex worker is higher in western area 16.5 percent fallowed by 6.3 percent Eastern area and 5.3 percent in Far-western area. Moreover, HIV within MSM/TG, Non-MSW have no any reported cases in Eastern area and higher in western area 8.8 percent, and 5.7 percent in Far western area.

Within MSW group, 6.9% MSM/TG in total have some STIs and 9.4% have active syphilis. Prevalence of some STIs was highest in eastern area (11.1%). Similarly the prevalence of active syphilis was also highest in MSM/TG from eastern areas (15.8 %) Prevalence of active syphilis was also highest in MSW group from eastern area (20.97%). The infection of gonorrhea within MSM/TG is low in comparison to prevalence of syphilis. There are no any reported cases of gonorrhea in eastern and western area but it is 0.3% in far western area.

3.5Association between Socio-Demographic Characteristics and HIV/STI

Table 3: Association between Socio-Demographic Characteristics and HIV

Socio-demographic characteristics	Eastern area			Western area			Far western area			Over all		
	HIV			**HIV**			**HIV**			**HIV**		
	Yes	**%**	**P value**	**Yes**	**%**	**P value**	**Yes**	**%**	**P value**	**Yes**	**%**	**P value**
Age												
Less than 25 (N=137)	2	1.5	0.698*	3	2.2	0.749*	0	0	0.003*	5	3.6	0.012
25 years and above (N=203)	5	2.5		9	4.4		9	4.4		23	11.3	
Currently married												
Yes (N=120)	2	1.7	1.0*	8	6.7	0.363*	2	1.7	1.0*	12	10	
No (N=220)	5	2.3		4	1.8		7	3.2		16	7.3	
Literacy status												
Literate (N=277)	6	2.1	1.0*	12	4.3	0.069*	7	2.5	0.294*	25	9.3	0.322*
Illiterate & literate with no formal schooling (N=63)	1	1.9		0	0.0		2	3.2		3	4.8	

** p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5. Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG.*

Table 3shows the data on relationship between main socio-demographic characteristics and HIV prevalence among the MSM/TG population. The data clearly shows that HIV prevalence was significantly higher in the age group 25 years and above (11.3%) in comparison to less than 25 years (3.6%).Moreover, there is also high prevalence of HIV in currently married group (10%) than no currently married (7.3%). The prevalence within Literate & formal schooling have9.3 percent and illiterate and literate but no schooling has 4.8 percent.

Table 4: Association between Socio-Demographic Characteristics and STI

Socio-demographic characteristics	Eastern area			Western area			Far western area			Over all		
	STI			STI			STI			STI		
	Yes	%	P value	Yes	%	P value	Yes	%	P value	Yes	%	P value
Age												
Less than 25 (N=137)	3	2.2	0.012*	2	1.5	0.595*	2	1.5	0.053*	7	5.1	0.010
25 years and above (N=203)	17	8.4		2	1.0		9	4.4		28	13.8	
Currently married												
Yes (N=120)	7	5.8	0.794	2	1.7	1.0*	4	3.3	0.223	13	10.8	0.809
No (N=220)	13	5.9		2	0.9		7	3.2		22	10.0	
Literacy status												
Literate & formal schooling (N=277)	16	5.8	1.0*	4	1.4	0.579*	8	2.9	0.125	28	10.1	0.813
Illiterate & literate but no schooling (N=63)	4	6.3		0	0.0		3	4.8		7	11.1	

Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG.* p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.

Table 4 shows data on relationship between main socio-demographic characteristics and STI prevalence among the MSM/TG population. The data clearly shows that STI prevalence was significantly higher in the age group 25 years and above (13.8%) compared to the age group below 25 years (5.1%).

3.6 HIV and STI Status among MSM/TG

Table 5: HIV and STI Status among MSM/TG (Unadjusted)

	MSW (%)			Non MSW (%)			MSM/TG (%)		
HIV and STI	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
HIV	10.1	16.3	11.8	2.3	5.1	4.3	8.1	8.4	8.2
Active Syphilis	11.6	8.2	10.7	11.4	6.8	8.0	11.6	7.2	9.4
Syphilis History	NA	2.0	0.6	2.3	NA	0.6	0.6	0.6	0.6
Gonorrhea/Chlamydia									
Urethral-CT	NA	NA	NA	NA	0.8	0.6	NA		0.3

Table 5 presents prevalence of HIV and STI among MSM/TG and TG. Overall, HIV prevalence was highest among MSW (11.8%) which was only 4.3% in non-MSW. The prevalence of HIV among MSW was found higher among Non-TG (16.3%) than in TG (10.1%). In total, the

prevalence of HIV among MSM/TG was found almost similar between TG and non-TG. Syphilis history was found in 0.6% MSM/TG. History of active Syphilis was also highest among MSW (10.7%) which was 8% in non-MSW (8%).

3.7 Association between Sexual Behavior and HIV/STI Prevalence

Table 6 shows the association between sexual behaviour and HIV/STI prevalence among MSM/TG.

Table 6: Association between Sexual Behavior and HIV/STI Prevalence

Sexual Behavior	HIV			STI		
	Yes	%	P value	Yes	%	P value
Age at first sex						
Below 10 years (N=5)	0	0.0	0.524*	1	20.0	0.747*
10-16 (N=215)	17	7.9		24	11.2	
17-20 (N=102)	8	7.8		9	8.8	
21-30 (N=16)	3	18.8		1	6.3	
Ever had sex with a male in exchange for money						
Yes (N=161)	17	10.6	0.139	25	15.5	0.004*
No (N=179)	11	6.2		10	5.6	
Vaginal/anal/oral sex with women in the past year						
Yes (N=145)	11	7.6	0.707	8	5.5	0.012*
No (N=195)	17	8.7		27	13.9	

Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG. * p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.

HIV prevalence tends to be higher among respondents who had their first sex between ages of 21 – 30 years (18.8%) while STI was highest among sex below 10 years of age (20%) as compared to older age groups. However, the difference was not statistically significant.

On the other hand, HIV and STI prevalence was statistically higher among respondents who reported ever had sex with a male in exchange of money (10.6% HIV and 15.5% STI) as compared to those who never had sex with a male in exchange for money. Similarly, a significantly higher proportion of respondents who did not have vaginal /anal/oral sex with women in the past year were tested HIV and STI 8.7% and 21% respectively.

3.8 Association between Consistent Condom Use and HIV/STI Status

Table 7 :Association between Consistent Condom Use and HIV/STI Status

Consistent Condom use	HIV			STI		
	Yes	%	P value	Yes	%	P value
Consistent Condom use with Non-paying male sex partner past month						
Yes (N=158)	14	8.9	0.696	14	8.9	0.418
No (N=182)	14	7.7		21	11.5	
Consistent Condom use with one time male clients						
Yes (N=128)	10	7.8	0.826	14	10.9	0.762
No (N=212)	18	8.5		21	9.9	
Consistent Condom use with regular male clients						
Yes (N=178)	16	9.0	0.596	18	10.1	0.908
No (N=162)	12	7.4		17	10.5	
Consistent Condom use with paid male/meti sex partner						
Yes (N=33)	1	3.0	0.5*	3	9.09	0.551*
No (N=307)	27	8.8		32	10.4	
Consistent Condom use with paid female sex partner						
Yes (N=20)	2	3.0	0.675*	1	5.0	0.422*
No (N=320)	26	8.1		34	10.6	

Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG. * p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.

Table 7 shows data on relationship between consistent condom use and HIV and STI prevalence. It is noted that there is not a statistically significant association between consistent condom use and HIV/STI status.

3.9 Accessibility of Condom/Lubricant and HIV/STI Prevalence

Table 8: Association between Accessibility of Condom/Lubricant and HIV/STI Prevalence

Accessibility of Condom/Lubricant	HIV			STI		
	Yes	%	P value	Yes	%	P value
Received condom from outreach service, drop-in center or sexual health clinic						
Yes (N=263)	22	8.4	0.908	30	11.4	0.603
No (N=71)	6	8.5		5	7.0	
Ever used lubricant when having anal sex						
Yes (N=50)	2	4.0	0.53*	6	12.0	0.212*
No (N=14)	1	7.1		0	0.0	
Can obtain a condom every time when needed						
Yes (N=264)	23	8.7	0.551	28	10.6	0.724

No (N=76)	5	6.6		7	9.2	
Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG. * p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.						

The data regarding association between access of condom and lubricant and STI/HIV prevalence (Table 8) shows that HIV prevalence was higher in those MSM/TG/T participants who reported higher access to condom from Outreach Center/DIC or sexual health clinic (8.5% HIV). STI prevalence was also reported higher among those who had access to condom from Outreach Center/DIC or sexual health clinic (11.4%). However, the result was not statistically significant to show the difference in prevalence. Similarly, ever use of lubricant had no statistically significant association with HIV and STI prevalence.

On contrary to the above findings, HIV and STI prevalence was found to be higher in MSM/TG who reported that they obtain a condom every time when needed (8.6% HIV and 10.7% STI) while the prevalence rate of HIV and STI was lower in those who had no access to condom when needed (4.9% HIV and 10.6% STI). However, the difference in HIV prevalence in these two groups was not statistically significant.

3.10Association between use of Alcohol/Drug and HIV/STI status

Table 9: Association between use of Alcohol/Drug and HIV/STI status

Use of Alcohol and Drug	**HIV**			**STI**		
	Yes	**%**	**P value**	**Yes**	**%**	**P value**
Ever had any drinks containing alcohol						
Yes (N=157)	15	9.6	0.435	16	10.2	0.954
No (N=183)	13	7.1		19	10.4	
Injecting drugs using a syringe in the last 12 months						
Yes (N=7)	2	28.6	0.144*	0	0.0	1.00*
No (N=333)	25	7.9		35	10.5	
***Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG.* p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5*.**						

Table 9 indicates association between use of Alcohol/Drug and HIV/STI status .The HIV and STI prevalence was not significant in MSM/TG who ever had any drinks containing alcohol (i.e. HIV prevalence was 9.6% in ever user against 7.1% in non-user, and STI prevalence was 10.2% in ever user against 10.4% in non-user). Only two of 340 MSM/TG had reported injecting drug

use in the past 12 months, and HIV prevalence was 28.6 in users against 7.9 % non- users. STI prevalence was found to be 10.5%. None of the MSW who injecting drug use had any STI.

3.11 Comprehensive Knowledge of HIV

Table 10: Association between Knowledge and Prevalence of HIV and STI

Comprehensive knowledge of HIV	HIV			STI		
	Yes	%	P value	Yes	%	P value
ABC						
Yes (N=127)	11	8.7	0.886	12	9.45	0.692
No (N=213)	17	8.2		23	10.8	
BCDEF						
Yes (N=133)	8	6.02	0.216	15	11.36	0.605
No (N=207)	20	9.7		20	9.62	

Table 10 examines data on relationship between knowledge of HIV and HIV/STI prevalence. The data shows that association between knowledge on ABC and BCDEF of HIV transmission with HIV infection was not statistically significant.

3.12 Participation in HIV/STI Prevention Program and HIV/STI Status

Table 11: Association between Participation in HIV/STI Prevention Program and HIV/STI Status

Participation in HIV/STI Prevention Program	HIV			STI		
	Yes	%	P value	Yes	%	P value
Interacted with PE/OE/CM/CE in the last 12 months						
Yes (N=205)	15	7.3	0.084	22	10.7	0.856
No (N=135)	12	9.0		13	9.8	
Visited DIC/IC/CC in the past 12 months						
Yes (N=191)	17	8.9	0.613	23	12.0	0.230
No (N=149)	11	7.4		12	8.1	
Visited STI clinic in the past 12 months						
Yes (N=51)	4	7.8	0.907	7	13.8	0.386
No (N=289)	24	8.3		28	9.7	
Visited HTC center in the past 12 months						
Yes (N=84)	6	7.1	0.675	6	7.14	0.273
No (N=256)	22	8.6		29	11.33	
Note: STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG. * p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.						

Data shown in Table 11 indicates that participation in HIV/STI prevention program in past 12 months and its association with HIV and STI prevalence. The data indicates that there was no

statistically significant difference between interactions held with PE/OE/CM/CE, visit to DIC/IC/CC, STI clinic and HTC and STI/HIV prevalence.

3.13Association between STI and HIV Status

Table 12: Association between STI and HIV Status

STI and HIV status	HIV		
	Yes	**%**	**P value**
Any STI			
Yes (N=35)	4	11.4	0.511*
No (N=305)	24	7.9	
Active Syphilis			
Yes (N=32)	3	9.4	0.737*
No (N=308)	25	8.1	
Syphilis History			
Yes (N=2)	1	50.0	0.158*
No (N=338)	27	7.8	
Urethral Chlamydia			
Yes (N=1)	0	0.0	1.00*
No (N=339)	28	8.3	
Note: Any STI includes current Syphilis, Anal CT & NG, and Urethral CT & NG.* p value is obtained from Fisher's Exact Test for those variables, as in a cell expected count is less than 5.			

The data shown in Table 12 suggests that there is no statistically significant association between active syphilis and HIV (9.4% of the total active syphilis cases were tested HIV positive). This trend tends to follow by prevalence of any STI and HIV (11.4% cases were tested HIV positive). Similarly, association between STI and HIV was not statistically significant. Only one case of syphilis history was tested HIV positive.

3.14Self-Categorization on the Basis of Your Sexual Behavior

Table 13: Self-Categorization on the Basis of Your Sexual Behavior

	MSW (%)			**Non MSW (%)**			**MSM/TG (%)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Self-reported sexual identity	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Dohori[6]	NA	2.0	0.6	4.5	1.7	2.5	1.2	1.8	1.5
Ta[7]	NA	NA	NA	NA	3.4	2.5	NA	2.4	1.2

[6] *Dohori- MSM/TG/ TG behaves as both receiver and penetrator.*

[7] *Ta-MSM/TG who acts as penetrator (donor).*

Kothi/Panthi[8]	1.6	NA	1.1	NA	0.8	0.6	1.2	0.6	0.9
Nachaniya[9]	2.3	2.0	2.2	NA	NA	NA	1.7	0.6	1.2
Pinky ta[10]	0.8	NA	0.6	NA	NA	NA	0.6	NA	0.3
Man/mard	7.8	67.3	24.2	6.8	50.8	38.9	7.5	55.7	31.2
Homosexual	2.3	12.2	5.1	9.1	23.7	19.8	4.0	20.4	12.1
Gay	0.8	6.1	2.2	NA	11.0	8.0	0.6	9.6	5.0
Meta/meti[11]	15.5	6.1	12.9	11.4	0.8	3.7	14.5	2.4	8.5
Woman	2.3	NA	1.7	4.5	NA	1.2	2.9	NA	1.5
Transgender (TG)	66.7	2.0	48.9	63.6	0.8	17.9	65.9	1.2	34.1
Others (Bisexual)	NA	2.0	0.6	NA	6.8	4.9	NA	5.4	2.6
Self-categorization of sexual orientation	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Tesrolingi	77.5	14.3	60.1	63.6	9.3	24.1	74.0	10.8	42.9
Man	11.6	85.7	32.0	27.3	90.7	73.5	15.6	89.2	51.8
Woman	10.9	NA	7.9	9.1	NA	2.5	10.4	NA	5.3

Table 13 shows self-reported sexual behavior data. It shows that two third of the MSW TG (67.3%), more than half of the non-MSW TG (50.8%) and MSM/TG non-TG (55.7%) identified themselves as Men/Mard. Overall, one third (31.2%) of the MSM/TG identified themselves as Men/*Mard*. MSW, non-MSW and MSM/TG who reported Meta/Meti were 12.9%, 3.7% and 8.5% respectively. The proportion of homosexual was highest among MSM/TG (12.1%) followed by MSW (9.1%) and least in non-MSW (4%). In total 5% MSM/TG, 8% non-MSW and 2.2% MSW informed that they were gay. Similarly, the self-reported sexual orientation indicates that 60.1% MSW, 24.1% non-MSW and 42.9% MSM/TG were *tesrolingi* (third gender).

3.15 Birthplace and Currently Living Districts

Table 14: Birthplace and Currently Living Districts

	MSW (%)			**Non MSW (%)**			**MSM/TG (%)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Area	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Eastern	35.7	32.7	34.8	29.5	38.1	35.8	34.1	36.5	35.3
Western	44.2	59.2	48.3	22.7	20.3	21.0	38.7	31.7	35.3

[8] *Kothi/Panthi-MSM/TG who acts as receiver and mainly in Terai Area of Nepal.*
[9] *Nachaniya- MSM/TG who performs dance in ritual functions in Terai Area of Nepal.*
[10] *Pinky ta- MSM/TG who acts as penetrator for money.*
[11] *Meta/meti-Transgender (TG) who are sex workers.*

Far western	20.2	8.2	16.9	47.7	41.5	43.2	27.2	31.7	29.4
Currently living districts	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Jhapa	9.3	8.2	9.0	13.6	6.8	8.6	10.4	7.2	8.8
Kailali	18.6	8.2	15.7	38.6	35.6	36.4	23.7	27.5	25.6
Kanchanpur	1.6		1.1	9.1	5.9	6.8	3.5	4.2	3.8
Kapilvastu	8.5	12.2	9.6	4.5	3.4	3.7	7.5	6.0	6.8
Morang	14.0	10.2	12.9	11.4	19.5	17.3	13.3	16.8	15.0
Nawalparasi	8.5	28.6	14.0	2.3	5.1	4.3	6.9	12.0	9.4
Rupandehi	27.1	18.4	24.7	15.9	11.9	13.0	24.3	13.8	19.1
Sunsari	12.4	14.3	12.9	4.5	11.9	9.9	10.4	12.6	11.5

Table 14 shows that by place of birth, slightly more than one-third of the MSM/TG were born in eastern (35.3%) and western (35.3%) area followed by far-western area (29.4%). Nearly half of MSW were from western area (48.3%) while nearly half of the non-MSW were from far western area (43.2%). Out of the total respondents, the majority of the MSM/TG (25.6%) were currently living in Kailali district followed by Rupandehi (19.1%) and Morang (15%). Similarly, more than one fifth of the respondents of the sample MSW and non-MSW were from Rupendehi (24.7% and 24.3% respectively)

Table15: Demographic Characteristics

Background characteristics	**MSW (%)**			**Non MSW (%)**			**MSM/TG (%)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Age category (in yrs.)	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
16-19	4.7	18.4	8.4	4.5	23.7	18.5	4.6	22.2	13.2
20-24	25.6	28.6	26.4	20.5	30.5	27.8	24.3	29.9	27.1
25-29	23.3	14.3	20.8	27.3	11	15.4	24.3	12	18.2
30-34	10.9	8.2	10.1	4.5	10.2	8.6	9.2	9.6	9.4
35-39	10.9	16.3	12.4	15.9	11	12.3	12.1	12.6	12.4
40+	24.8	14.3	21.9	27.3	13.6	17.3	25.4	13.8	19.7
Mean/SD of Age	30/10	27/8	29/9	34/10	26/9	27/10	32/10	27/9	28/9
Median Age	28	24	27	35	22	24	29	24	25
(Range)	(17-60)	(17-56)	(17-60)	(19-66)	(17-55)	(17-66)	(17-66)	(17-56)	(17-66)
Religion	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Hindu	88.4	85.7	87.6	84.1	94.1	91.4	87.3	91.6	89.4
Buddhist	4.7	4.1	4.5	11.4	2.5	4.9	6.4	3	4.7
Muslim	3.9	2	3.4	0	1.7	1.2	2.9	1.8	2.4
Christian	1.6	0	1.1	2.3	0.8	1.2	1.7	0.6	1.2

Kirat	0.8	6.1	2.2	2.3	0.8	1.2	1.2	2.4	1.8
Saibaba	NA	2	0.6	NA	NA	NA	NA	0.6	0.3
Nastik	0.8	NA	0.6	NA	NA	NA	0.6	NA	0.3
Education	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Illiterate	18.6	6.1	15.2	18.2	8.5	11.1	18.5	7.8	13.2
Primary	21.7	16.3	20.2	11.4	6.8	8	19.1	9.6	14.4
Lower Secondary	17.8	14.3	16.9	20.5	11.9	14.2	18.5	12.6	15.6
Secondary	23.3	44.9	29.2	15.9	35.6	30.2	21.4	38.3	29.7
SLC Above	18.6	18.4	18.5	34.1	37.3	36.4	22.5	31.7	27.1
Married Status	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Married	41.9	38.8	41	34.1	27.1	29	39.9	30.5	35.3
Unmarried	58.1	61.2	59	65.9	72.9	71	60.1	69.5	64.7
Sex of married Partner	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Male/meti	16.7	5.3	13.7	13.3	21.9	19.1	15.9	15.7	15.8
Female	79.6	94.7	83.6	86.7	71.9	76.6	81.2	80.4	80.8
Trans gender	3.7	NA	2.7	NA	6.3	4.3	2.9	3.9	3.3
Currently living with a regular sexual partner	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	46.5	51	47.8	36.4	29.7	31.5	43.9	35.9	40
No	53.5	49	52.2	63.6	70.3	68.5	56.1	64.1	60
Currently living with	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Male/Meti	61.7	48	57.6	43.8	51.4	49	57.9	50	54.4
Wife	35	44	37.6	43.8	42.9	43.1	36.8	43.3	39.7
Transgender (TG)	3.3	8	4.7	12.5	5.7	7.8	5.3	6.7	5.9

Table 15 shows data on demographic characteristics of the respondents. The median age of the MSM/TG was 25 years; it was 35 years for non-MSW TG and 29 years for MSM/TG. . Adolescents of age 16-19 years were 8.4% in MSW, 18.5% in non-MSW and 13.2% in MSM/TG. The proportion of older non-MSW respondents was a little higher among MSW (21.9%) than with MSM/TG (19.7%) and MSW (17.3%).

It is noted that highest number of MSM/TG respondents i.e. 9 out of 10 were Hindu (89.4 %,) followed by Buddhist (4.7%) and Muslim (2.4%).By education. 18.6% of MSM/TG had SLC and above, 23.3 % had secondary education, 17.8 had lower secondary, 21.7 primary and 18.6 were illiterate.

By marital status, nearly two-thirds (64.7%) of the MSM/TG were unmarried. The vast majority,

i.e. 94.7% MSW, 76.6% non-MSW and 80.4% MSM/TG were married to females. Only 13.7% MSW was married with male/meti, which was 19.1% in case of non-MSW and 15.8% for MSM/TG.

Table 16: Living situation of the Respondents

	MSW (%)			Non MSW (%)			MSM/TG (%)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Current living situation	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Homeless on the street	1.6	NA	1.1	NA	NA	NA	1.2	NA	0.6
Living in own home	73.6	83.7	76.4	72.7	72	72.2	73.4	75.4	74.4
Living in a residential hotel	NA	NA	NA	2.3	NA	0.6	0.6	NA	0.3
Rented apartment/room	24.8	16.3	22.5	25	28	27.2	24.9	24.6	24.7
Lived away from home in past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	35.7	24.5	32.6	31.8	29.7	30.2	34.7	28.1	31.5
No	64.3	75.5	67.4	68.2	70.3	69.8	65.3	71.9	68.5

Table 16 shows that over three quarters of the respondents (76.4% MSW and 72.2% Non-MSW and 74.4% MSM/TG; 83.7% non-TG MSW) were living in own home. Only 24.7% were living in rented apartment. About a quarter of the respondents in all three groups were living in a rented room.

Overall, about one third of them had lived away from home in the past 12 months. The trend was similar for MSW, non-MSW and TG.

Table 17: Occupational Background and Income of the Respondents

	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Occupational Background	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Student	6.7	15.6	9.1	3.0	29.1	22.8	5.9	25.0	15.3
Driver	NA	2.2	.6	NA	1.9	1.5	NA	2.0	1.0
Civil servant	1.7	NA	1.2	NA	NA	NA	1.3	NA	.7
Businessman	5.9	13.3	7.9	21.2	7.8	11.0	9.2	9.5	9.3
Private company staff	2.5	4.4	3.0	3.0	1.0	1.5	2.6	2.0	2.3
Unemployed	9.2	4.4	7.9	12.1	8.7	9.6	9.9	7.4	8.7
Laborer/wage labor	25.2	37.8	28.7	39.4	27.2	30.1	28.3	30.4	29.3
Others*	48.7	22.2	41.5	21.2	24.3	23.5	42.8	23.6	33.3
Last month's income in NRs.	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
None	.8	2.0	1.1		5.1	3.7	.6	4.2	2.4

Below 3000	18.6	16.3	18.0	20.5	29.7	27.2	19.1	25.7	22.4
3001-6000	22.5	30.6	24.7	27.3	15.3	18.5	23.7	19.8	21.8
6001-10000	20.9	28.6	23.0	13.6	22.0	19.8	19.1	24.0	21.5
Above 10000	37.2	22.4	33.1	38.6	28.0	30.9	37.6	26.3	32.1
Descriptive Statistics of monthly income	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Mean	12152	8733	11228	10378	12907	12177	11706	11616	11663
Median	9765	8250	9370	9000	9056	9095	9700	8857	9250
Maximum	70000	30000	70000	30000	150000	150000	70000	150000	150000

Others were farmers, dancers and sex workers by their occupations

Table 17 shows that more than a quarter of the respondents (28.7% MSW, 30.1% non-MSW and 29.3% MSM/TG) were laborer, followed by students (9% MSW, 22.8% non-MSW and 15.3% MSM/TG) Less than 10% of the respondents were unemployed and 5-11% were businesspersons (8%). The mean income of respondents was NRs 11000 to 12000 whereas maximum income was reported as NRs 150,000 which was less than half for MSW (NRs 70000).

3.16 Alcohol Consumption

Table 18: Alcohol Consumption

	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Ever Consumed alcohol	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	41.1	44.9	42.1	52.3	50.0	50.6	43.8	53.2	49.5
No	58.9	55.1	57.9	47.7	50.0	49.4	56.2	46.8	50.5
Consumption of alcohol in last month	**N=51**	**N=22**	**N=73**	**N=21**	**N=57**	**N=78**	**N=72**	**N=79**	**N=151**
Everyday	7.8	22.7	12.3	9.5	NA	2.6	11.8	5.4	7.6
3-4 days a week	31.4	22.7	28.8	9.5	28.1	23.1	16.9	18.8	18.2
At least once a week	41.2	31.8	38.4	76.2	56.1	61.5	56.6	67.0	63.5
Did not drink alcohol in the past week	19.6	22.7	20.5	4.8	15.8	12.8	14.6	8.8	10.8
Amount of Consumption of alcohol during last sex	**N=53**	**N=22**	**N=75**	**N=23**	**N=59**	**N=82**	**N=76**	**N=81**	**157**
A lot	13.2	9.1	12.0	13.0	1.7	4.9	11.1	1.8	5.1
Some	7.5	22.7	12.0	8.7	8.5	8.5	3.2	7.3	5.9
A little	30.2	22.7	28.0	26.1	30.5	29.3	22.5	21.5	21.9
No alcohol	49.1	45.5	48.0	52.2	59.3	57.3	63.2	69.3	67.2

Table 18 shows that half (49.5%) of the MSM/TG had ever consumed alcohol. Majority of the MSM/TG and non-MSW used alcohol at least once a week-63.5% MSM/TG and 61.5% non-MSW. Of those who consumed alcohol, 48% MSW, 57.3% non-MSW and 67.2% MSM/TG did not use alcohol in their last sex.

3.17 Use of Illicit Drugs

Table 19: Use of Illicit Drugs

Use of Illicit Drugs in the past year	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Used Illicit drugs	N=4	N=2	6	2	4	6	6	6	12
Yes	3.1	4.2	3.4	4.7	3.4	3.7	3.5	3.6	3.6
No	96.9	95.8	96.6	95.3	96.6	96.3	96.5	96.4	96.4
Gaja	N=2	N=1	3	N=2	N=4	6	N=4	N=5	N=9
Yes	50.0	50.0	50.0	100.0	100.0	100.0	66.7	83.3	75.0
No	50.0	50.0	50.0	0.0	0.0	0.0	33.3	16.7	25.0
Chares	N=0	N=0	N=0	N=2	N=3	N=5	N=2	N=3	N=5
Yes	0.0	0.0	0.0	0.0	75.0	83.3	33.3	50	41.7
No	100.0	100.0	100.0	100.0	25.0	16.7	66.7	50	58.3

Tablets	N=0	N=1	N=1	N=0	N=1	N=1	N=0	N=2	N=2
Yes	0.0	50.0	16.7	0.0	25.0	16.7	0.0	33.3	16.7
No	100.0	50.0	83.3	100.0	75.0	83.3	100.0	66.7	83.3
Glue/dendrite	N=0	N=0	N=0	N=0	N=0	N=0	N=0	N=0	N=0
Yes	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Heroine	N=0	N=0	N=0	N=0	N=0	N=0	N=0	N=0	N=0
Yes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Others	N=0	N=1	N=1	N=0	N=0	N=0	N=0	N=1	N=1
Yes	NA	50.0	16.7	0.0	0.0	0.0	0.0	16.7	8.3
No	NA	NA	NA	NA	NA	NA	NA	83.3	91.7
Injected drugs in the last year	N=119	N=46	N=165	N=43	N=115	N=158	N=162	161	N=323
Yes	2.5	4.3	3.0		1.7	1.3	1.9	2.5	2.2
No	97.5	95.7	97.0	100.0	98.3	98.7	98.1	97.5	97.8

Table 19 displays that only 3.6% MSM/TG used illicit drugs in the past year. In total, about 75 % MSM/TG used Ganja, 41.7% used *Chares*, 16.7 % used tablets and 8.3 % used others. None of the MSM/TG used Heroine. Similarly, 50 % of the MSW who used illicit drugs used Ganja and 16.7% used tablets. All six non-MSW reported use of Ganja and 83.3% used *Chares* while tablets were used by 16.7%. None of the respondents reported that they used dendrites and heroine. Only 2.2% MSM/TG reported use of injecting drugs in the past one year.

3.18 Respondents First Sex

Table 20: Respondents First Sex

Sexual behavior	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Age at First Sex	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
below 10	.8	2.0	1.1	2.3	1.7	1.9	1.2	1.8	1.5
10-16	65.6	71.4	67.2	63.6	58.1	59.6	65.1	62.0	63.6
17-20	30.5	22.4	28.2	31.8	32.5	32.3	30.8	29.5	30.2
21-30	3.1	4.1	3.4	2.3	7.7	6.2	2.9	6.6	4.7
Descriptive Statistics for age at first sex	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Mean/SD	15/ 8	16/ 3	15/ 3	15/ 3	16/ 3	16/ 3	15/ 3	16/ 3	15/ 3
Median	15	16	15	15	15	15	15	15	15
Range	**(6-28)**	**(10-18)**	**(6-28)**	**(11-20)**	**(8-25)**	**(8-25)**	**(6-28)**	**(8-28)**	**(6-28)**

First Sex Partner	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Male/Meti/TG	87.6	71.4	83.1	79.5	66.9	70.4	85.5	68.3	77.1
Female	12.4	28.6	16.9	20.5	33.1	29.6	14.5	31.7	22.9
Ever had sex with a male/mati in exchange for money	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	82.4*	98.0*	86.9*	72.4*	81.8*	79.1*	80.4*	88.3*	83.9*
CI	(42.89-96.7)	(92.6-99.5)	(53.7-97.4)	(39.4-91.4)	(55.7-94.2)	(59.3-90.7)	(51.3-94.1)	(70.8-95.9)	(66.1-93.3)
No	17.6*	2.0*	13.1*	27.6*	18.2*	20.9*	19.6*	11.7*	16.1*
CI	(3.3-57.1)	(0.5-7.4)	(2.6-46.3)	(8.6-60.6)	(5.8-44.3)	(9.3-40.7)	(5.9-48.7)	(4.1-29.2)	(6.7-33.9)
Age at first sex with a male/meti in exchange for money	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
10-16	22.7	23.1	22.8	18.2	13.2	15.0	21.6	17.2	19.9
17-20	48.0	53.8	49.5	50.0	44.7	46.7	48.5	48.4	48.4
21-30	26.7	23.1	25.7	27.3	31.6	30.0	26.8	28.1	27.3
31+	2.7		2.0	4.5	10.5	8.3	3.1	6.3	4.3
Descriptive Statistics for age at first sex with a male/meti in exchange for money	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Mean/SD	20/ 5	19/ 4	20/ 4	19/ 4	21/ 6	20/ 5	20/ 5	20/ 5	20/ 5
Median	19	18	19	19	20	20	19	20	19
Range	(11-36)	(13-28)	(11-36)	(12-26)	(12-43)	(12-43)	(11-36)	(12-43)	(11-43)
Time of last sex with male/meti in exchange for money	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Within last 7 days	33.9	42.9	36.1	45.8	48.1	47.4	37.2	46.7	41.6
8-15 days	16.1	4.8	13.3	4.2	11.1	9.0	12.8	9.3	11.2
16-30 days	16.1	23.8	18.1	12.5	16.7	15.4	15.1	18.7	16.8
31-60 days	9.7	14.3	10.8	20.8	13.0	15.4	12.8	13.3	13.0
61- 365 days	21.0	14.3	19.3	16.7	9.3	11.5	19.8	10.7	15.5
Before 365 days	3.2		2.4		1.9	1.3	2.3	1.3	1.9
Descriptive Statistics for	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**

time of last sex									
Median days	7	25	11	10	20	15	7	20	12
(Range)	(1-365)	(1-180)	(1-365)	(1-390)	(1-800)	(1-800)	(1-390)	(1-800)	(1-800)

Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.

Table 20 shows data on sexual behavior of the respondents. The data indicates that majority of the MSW (67.2%), non-MSW(59.6%) and MSM/TG (63.6%) had their sexual debuts during 10 to 16 years followed by 17-20 years (28.2% MSW, 32.3% non-MSW and 30.2% MSM/TG). The median age was 15 years for all three groups with a range of 6-28 years.

In total more than two third (77.1%) of the MSM/TG had their first sex with male/meti while only 22.9 % MSM/TG had first sex with a female partner.

About 83.9 % MSM/TG ever had sex with a male/meti in exchange of money. Almost half (48.4%) of the MSM/TG respondents had their first sex with a male in exchange for money when they were 17-20 years.

The median age while having first sex with a male in exchange for money was 19 years. The age at first sex with a male in exchange for money varied from 12-43 years.

It was reported that four out of ten (41.6%) MSM/TG had had sex with male/meti in exchange for money within last seven days. More than one third (36.1%) of the MSW had their last sex with male in exchange for money within the last seven days. The median time of last sex was 11 days for MSW, 15 days for non-MSW and 12 days for MSM/TG.

3.19 Non-Paying Sex Partner in the Last Month

Table 21: Non-Paying Sex Partner in the Last Month

Non-paying sex partner	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Number of non-paying male sex partner in past month	**N=129**	**N=48**	**N=177**	**N=43**	**N=117**	**N=160**	**N=172**	**N=165**	**N=337**
None	21.9	25.4	22.9	15.4	39.4	35.6	20.4	36.6	30.2
One	13.7	22.3	16.1	31.3	19.6	21.5	17.7	20.1	19.2
Two-Five	52.8	46.5	51.0	43.3	38.8	39.5	50.6	40.4	44.4
>Five	11.6	5.8	9.9	10.0	2.2	3.4	11.2	2.9	6.2
Descriptive Statistics of non-paying male sex partner	**N=129**	**N=48**	**N=177**	**N=43**	**N=117**	**N=160**	**N=172**	**N=165**	**N=337**
Mean/SD	3/2	2/2	3/3	3/2	2/3	2/3	2/3	2/3	2/3

Median	2	2	2	2	1	1	2	1	2
Range	(0-40)	(0-25)	(0-40)	(0-10)	(0-36)	(0-36)	(0-40)	(0-36)	(0-40)
Number of non-paying Female sex partner in past month	**N=129**	**N=48**	**N=177**	**N=44**	**N=118**	**N=162**	**N=173**	**N=166**	**N=339**
None	61.2	39.6	54.9	57.3	58.1	58.0	60.2	54.4	56.7
One	29.4	31.1	29.9	28.6	16.7	18.7	29.2	19.6	23.4
Two-Five	9.4	29.3	15.2	14.1	24.6	22.9	10.6	25.6	19.7
>Five	NA	NA	NA	NA	.5	.4	NA	.4	.2
Range of non-paying female sex partner in past month	(0-5)	(0-5)	(0-5)	(0-3)	(0-9)	(0-9)	(0-5)	(0-9)	(0-9)

Table 21 indicates that 21.9% MSW, 35.6% non-MSW and 30.2% MSM/TG had no any non-paying male sex partner in the past month. Of those who had such partner, MSW had three partners on average while non-MSW and MSM/TG had two sex partners. About 15.2% MSW, 22.9% non-MSW and 19.7% MSM/TG had 2-5 female sex partners in the past month. The range of having sex with FSW varied from 0 to 9 in the past month.

More than half of the respondents had no non-paying female sex partners in the past month. On average, the respondents reported two non-paying male sex partners in the past month prior to the survey. Nearly half of the respondents (44.4 %) (51% MSW and 39.5% Non-MSW) had 2-5 non-paying male sex partners in the past month. Only 6.2% reported having more than five non-paying male sex partners in the same period.

Similarly, over half (56.7%) of the respondents, in total, did not have non-paying female sex partner in the past month. Out of them, 23.4% had only one non-paying female sex partner-it was reported by 29.9% MSW and 18.7 % Non-MSW. Two to five non-paying female sex partners was reported by 15.2 % MSW and 22.9% Non-MSW. None of the MSW had more than five non-paying female sex partners in the past month.

3.20 Anal Sex Partners in the Past Month

Table 22: Types of Anal Sex Partners in the Past Month

Different Types of Anal sex partners in the past Month	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Number of non-paying male anal sex partner	**N=103**	**N=40**	**N=143**	**N=39**	**N=81**	**N=120**	**N=142**	**N=121**	**N=263**
None	2.9	2.5	2.8	5.1	2.5	3.3	3.1	5.4	4.4
One	26.2	22.5	25.2	33.3	28.4	30.0	24.6	29.2	27.1
More than one	70.9	75.0	72.0	61.5	69.1	66.7	72.3	65.3	68.5

Descriptive Statistics of non-paying male anal sex partner	**N=103**	**N=40**	**N=143**	**N=39**	**N=81**	**N=120**	**N=142**	**N=121**	**N=263**
Mean/SD	3/3	2/3	3/3	3/2	2/3	2/3	3/3	2/3	2/3
Median	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Range	0-20	0-40	0-40	0-8	0-36	0-37	0-20	0-40	0-40
Number of one-time paying male anal sex partner	**N=80**	**N=25**	**N=105**	**N=19**	**N=46**	**N=65**	**N=99**	**N=71**	**N=170**
None	2.5	4.0	2.9	NA	NA	NA	5.2	.3	3.1
One	36.3	52.0	40.0	36.8	45.7	43.1	43.8	67.7	54.2
More than one	61.3	44.0	57.1	63.2	54.3	56.9	51.0	32.0	42.7
Descriptive Statistics of one-time paying male anal sex partner	**N=80**	**N=25**	**N=105**	**N=19**	**N=46**	**N=65**	**N=99**	**N=71**	**N=170**
Mean/SD	4/10	2/1	3/8	2/1	2/3	2/2	3/9	2/2	3/7
Median	2	1	1	1	1	1	2	1	1
Range	0-90	0-15	0-90	1-5	1-12	1-12	0-90	0-15	0-90
Number of regular paying male anal sex partner	**N=102**	**N=32**	**N=134**	**N=27**	**N=66**	**N=93**	**N=129**	**N=98**	**N=227**
None	3.9	6.3	4.5	NA	3.0	2.2	2.3	7.3	4.9
One	27.5	37.5	29.9	33.3	42.4	39.8	30.7	47.9	39.7
More than one	68.6	56.3	65.7	66.7	54.5	58.1	67.0	44.8	55.4
Descriptive Statistics of regular paying male anal sex partner	**N=102**	**N=32**	**N=134**	**N=27**	**N=66**	**N=93**	**N=129**	**N=98**	**N=227**
Mean/SD	3/4	2/2	3/4	3/2	2/3	2/3	3/4	2/3	3/3
Median	2.0	1.0	2.0	2.0	1.0	1.0	2	1	2
Range	0-40	0-15	0-15	1-12	0-36	0-36	0-40	0-36	0-40
Number of paid male anal sex partner	**N=15**	**N=10**	**N=25**	**N=1**	**N=9**	**N=10**	**N=19**	**N= 32**	**N=51**
None	13.3	10.0	12.0	NA	NA	NA	1.4	3.7	2.9
One	13.3	30.0	20.0	25.0	40.9	38.5	10.5	44.7	32.9
More than one	73.3	60.0	68.0	75.0	59.1	61.5	88.1	51.6	64.2
Descriptive Statistics of paid male anal sex partner	**N=15**	**N=10**	**N=25**	**N=1**	**N=9**	**N=10**	**N=19**	**N= 32**	**N=51**
Mean/SD	3/2	2/1	3/2	2/1	2/1	2/1	3/2	2/1	2/1
Median	2	2	3	2	1	1	3	2	2
Range	0-9	0-4	0-9	1-3	1-4	1-5	0-9	0-4	0-9

Table 22 shows that more than two third (72%) of the MSW reported having more than one non-paying male anal sex partner in the past month. More than two-third (68.5%) of the MSM/TG

had anal sex more than one time. About 25-30 % respondents had only one non-paying male anal sex partner. The median number of non-paying anal male sex partner was 2 for all three groups. Having more than one time paying male anal sex partner was reported by 57.1% MSW and 42.7% MSM/TG. The average of one time paying male anal sex partner was three for MSM/TG and MSW and two for non-MSW.

About two third (65.7%) of MSW, 58.1 % non-MSW and 55.4% MSM/TG reported that they had more than one paid male anal sex partner in the past month. The average of such partners was three for MSW and MSM/TG and two for non-MSW. The number of one time paid anal sex partner varied from 0 to 9.

3.21Oral Sex Partners in the Past Month

Table 23: Oral Sex Partners in the Past Month

Oral Sex with different Paying partners in the past Month	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Number of one time paying male oral sex partner	**N=82**	**N=26**	**N=108**	**N=20**	**N=49**	**N=69**	**N=102**	**N=75**	**N=177**
None	24.4	23.1	24.1	15.0	42.9	34.8	22.5	36.0	28.2
One	24.4	38.5	27.8	30.0	28.6	29.0	25.5	32.0	28.2
More than one	51.2	38.5	48.1	55.0	28.6	36.2	52.0	32.0	43.5
Number of paying regular male oral sex partner	**N=102**	**N=33**	**N=135**	**N=27**	**N=67**	**N=94**	**N=129**	**N=100**	**N=229**
None	26.5	27.3	26.7	33.3	29.9	30.9	27.9	29.0	28.4
One	21.6	24.2	22.2	14.8	34.3	28.7	20.2	31.0	24.9
More than one	52.0	48.5	51.1	51.9	35.8	40.4	51.9	40.0	46.7

Table 23 shows data on oral sex with different paying partners in the past month. In total, 24.1% MSW, and 28.2% MSM/TG did not have paying male oral sex partner, as against 48.1% MSW and 43.5% MSM/TG. In the same way, 51.1% MSW and 46.7% MSM/TG had more than one paying regular male oral sex partner. About a quarter (24.9%) of the MSM/TG and nearly half of the MSM/TG (46.7%) had any paying regular male oral sex partner.

3.22 Sex Partners of MSM/TG

Table 24:Sex partners of MSM/TG

First and last sex partners	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
First sex partners	**N=82**	**N=26**	**N=108**	**N=20**	**N=49**	**N=69**	**N=102**	**N=75**	**N=177**
Male/meti	87.6	71.4	83.1	79.5	66.9	70.4	85.5	68.3	77.1
Female	12.4	28.6	16.9	20.5	33.1	29.6	14.5	31.7	22.9
Last sex partners	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=167**	**N=173**	**N=167**	**N=340**
Non-paying male partner	48.8	53.1	50.0	54.5	45.8	48.1	50.3	47.9	49.1
Non-paying female partner	3.9	10.2	5.6	15.9	12.7	13.6	6.9	12.0	9.4
Male client	38.8	30.6	36.5	25.0	26.3	25.9	35.3	27.5	31.5
Female client	0.8	NA	0.6	2.3	5.9	4.9	1.2	4.2	2.6
Paid male sex worker	6.2	NA	4.5	2.3	3.4	3.1	5.2	2.4	3.8
Paid female sex worker	0.8	NA	0.6	NA	5.1	3.7	0.6	3.6	2.1
No response	0.8	6.1	2.2	NA	0.8	0.6	0.6	2.4	1.5
Last anal sex male partner	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=167**	**N=173**	**N=167**	**N=340**
Non-paying male partner	60.5	65.3	61.8	68.2	67.8	67.9	62.4	67.1	64.7
Male client	32.6	26.5	30.9	29.5	25.4	26.5	31.8	25.7	28.8
Paid male sex worker	6.2	6.1	6.2	2.3	5.1	4.3	5.2	5.4	5.3
Paid female sex worker	NA	NA	NA	NA	1.7	1.2	0.6	1.8	1.2

Table 24 shows that 77.1% of MSM/TG had first sex with male/meti while f22.9% MSM/TG had first sex with female. High majority of the respondents reported that had first sex with male/meti was little higher (83.1%) among MSW and lower in case of non-MSW (70.4%).

The data suggests that half of the MSW (50%) had non-paying first male sex partner against 48.1% Non-MSW and 49.1% MSM/TG. Only 5.6 % MSW, 13.6 % non-MSW and 9.4% MSM/TG had had sex with female non-paying sex partner. Male client was first sex partner for 36.5% MSW, 25.9% non-MSW and 31.5% MSM/TG.

Similarly, paid male sex worker was first sex partner for 4.5% MSW and 3.8% MSM/TG. Concerning the last anal sex male partner of the respondents, majority of the respondents (61.8% MSW and 64.7% MSM/TG) had non-paying male partner. A little more than a quarter (30.9% MSW, 26.5% non-MSW and 28.8% MSM/TG) of the respondents had anal sex with male client in the last sex. About 4-6 % visited paid male sex worker for anal sex in the last time. Very few respondents turned to be paid female sex worker for anal sex-1.7% non-MSW non-TG and 1.2%

MSM/TG.

3.23 Condom Use Behavior with last Sex Partners

Table 25: Condom Use Behavior with Last Sex Partners

Condom use behaviors	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Used condom in last Sex	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=167**	**N=173**	**N=167**	**N=340**
Yes	38.8*	49.2*	41.8*	51.4*	64.2*	62.1*	41.7*	61.2*	53.6*
CI	(26.3-52.8)	(29.2-69.2)	(30.8-53.6)	(31.9-70.4)	(50.5-75.9)	(50.1-72.8)	(30.8-53.6)	(49.3-71.8)	(44.7-62.2)
No	61.2*	50.8*	58.2*	**48.6***	35.8*	37.9*	58.3*	38.8*	46.4*
CI	**(47.2-73.7)**	**(30.8-70.6)**	(46.4-69.2)	(29.6-68.0)	**(24.0-49.6)**	**(27.2-49.9)**	**(46.4-69.2)**	**(28.2-50.7)**	**(37.8-55.3)**
Used condom in last anal Sex with male sex partner	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=167**	**N=173**	**N=167**	**N=340**
Yes	47.1*	63.3*	51.8*	66.5*	54.4*	56.4*	51.6*	56.2*	54.4*
CI	(32.9-61.7)	(42.8-79.9)	(39.8-63.6)	(46.6-81.8)	(39.8-68.3)	(43.5-68.4)	(39-6-63.6)	(43.8-67.9)	(45.5-63.1)
No	52.9*	36.7*	48.2*	33.5*	45.6*	43.6*	48.4*	43.8*	45.6*
CI	(38.3-67.1)	(20.9-45.9)	(20.1-57.3)	(18.2-53.4)	(31.7-60.2)	(31.6-56.5)	(36.4-60.4)	(32.1-56.3)	(36.9-54.5)
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 25 shows that a slightly more than half of the total respondents (56.5% MSW and MSM/TG) used condom in the last sex. Overall, condom used in the last anal sex was 62.4% in MSW, 59.3% in non-MSW and 60.9% in MSM/TG.

3.24 Use Of Condom in the Last Sex with Different Sex Partners

Table 26: Use Of Condom in the Last Sex with Different Sex Partners

Use of Condom in the Last Sex partners	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
With non-paying male Sex partner	**N=102**	**N=39**	**N=141**	**N=37**	**N=79**	**N=116**	**N=139**	**N=118**	**N=257**
Yes	69.6	71.8	70.2	45.9	68.4	61.2	63.3	69.5	66.1
No	30.4	28.2	29.8	54.1	31.6	38.8	36.7	30.5	33.9
With non-paying female Sex partner	**N=33**	**N=19**	**N=52**	**N=15**	**N=42**	**N=57**	**N=48**	**N=61**	**N=109**
Yes	30.3	31.6	30.8	40.0	40.5	40.4	33.3	37.7	35.8
No	69.7	68.4	69.2	60.0	59.5	59.6	66.7	62.3	64.2

With One time paid male Sex partner	N=80	N=25	N=105	N=19	N=46	N=65	N=99	N=71	N=170
Yes	73.8	76.0	74.3	57.9	82.6	75.4	70.7	80.3	74.7
No	25.0	24.0	24.8	42.1	15.2	23.1	28.3	18.3	24.1
No response	1.3	NA	1.0	NA	2.2	1.5	1.0	1.4	1.2
With regular paying male Sex partner	**N=98**	**N=31**	**N=129**	**N=27**	**N=64**	**N=91**	**N=125**	**N=95**	**N=220**
Yes	70.4	67.7	69.8	63.0	65.6	64.8	68.8	66.3	67.7
No	29.6	29.0	29.5	37.0	34.4	35.2	31.2	32.6	31.8
Don't remember	NA	3.2	.8	NA	NA	NA	NA	1.1	0.5
With paying female Sex worker	**N=9**	**N=9**	**N=18**	**N=0**	**N=13**	**N=13**	**N=9**	**N=22**	**N=31**
Yes	55.6	77.8	66.7	NA	76.9	76.9	55.6	77.3	71.0
N0	33.3	22.2	27.8	NA	23.1	23.1	33.3	22.7	25.8
No response	11.1	NA	5.6	NA	NA	NA	11.1	NA	3.2

Table 26 shows that, majority of MSW (70.2%) used condom with non-paying male sex partner which is higher than the use of condom by MSM/TG (66.1%). The trend of condom use tends to be higher among non-TGs in all three groups.

In total, 30.8% MSW reported condom use with non-paying female sex partner which was higher than among MSM/TG (35.8%).

Three-quarters of the MSW and MSM/TG had used condom with one time paid male sex partner. The trend was almost similar with regular paying male sex partner (69.8% MSW, and 67.7% MSM/TG).

3.25 Consistent Condom use with Different Sex partners in the Past Month

Table 27: Consistent Condom use with Different Sex partners in the Past Month

Consistent Condom Use	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Used Condom with non-paying male anal sex partner in past month	**N=102**	**N=39**	**N=141**	**N=37**	**N=79**	**N=116**	**N=139**	**N=118**	**N=257**
Always	32.4	38.5	34.0	37.8	32.9	34.5	33.8	34.7	34.2
Most of the time	26.5	30.8	27.7	13.5	32.9	26.7	23.0	32.2	27.2
Sometimes	28.4	25.6	27.7	32.4	21.5	25.0	29.5	22.9	26.5
Never	12.7	5.1	10.6	16.2	12.7	13.8	13.7	10.2	12.1
Used Condom with one-time paid male anal sex partner in past month	**N=80**	**N=25**	**N=105**	**N=19**	**N=46**	**N=65**	**N=99**	**N=71**	**N=170**

Always	42.5	44.0	42.9	42.1	43.5	43.1	42.4	43.7	42.9
Most of the time	35.0	28.0	33.3	21.1	34.8	30.8	32.3	32.4	32.4
Sometimes	12.5	20.0	14.3	26.3	17.4	20.0	15.2	18.3	16.5
Never	8.8	8.0	8.6	10.5	2.2	4.6	9.1	4.2	7.1
Don't remember	1.3		1.0		2.2	1.5	1.0	1.4	1.2
Used Condom with non-paying female sex Partner in past month	**N=33**	**N=19**	**N=52**	**N=15**	**N=42**	**N=57**	**N=48**	**N=61**	**N=109**
Always	15.2	10.5	13.5	6.7	16.7	14.0	12.5	14.8	13.8
Most of the time	12.1	15.8	13.5	26.7	14.3	17.5	16.7	14.8	15.6
Sometimes	33.3	26.3	30.8	33.3	38.1	36.8	33.3	34.4	33.9
Never	39.4	47.4	42.3	33.3	28.6	29.8	37.5	34.4	35.8
No response	NA	NA	NA	NA	2.4	1.8	NA	1.6	0.9
Used Condom with paid male sex Partner in past month	**N=11**	**N=6**	**N=17**	**N=5**	**N=26**	**N=31**	**N=16**	**N=32**	**N=48**
Always	45.5	16.7	35.3	20.0	46.2	41.9	37.5	40.6	39.6
Most of the time	18.2	33.3	23.5	80.0	23.1	32.3	37.5	25.0	29.2
Sometimes	27.3	50.0	35.3	NA	19.2	16.1	18.8	25.0	22.9
Never	9.1	NA	5.9	NA	11.5	9.7	6.3	9.4	8.3
Condom use with paying female sex Partner in past month	**N=9**	**N=9**	**N=18**	**N=0**	**N=13**	**N=13**	**N=9**	**N=22**	**N=31**
Always	33.3	22.2	27.8	NA	53.8	53.8	33.3	40.9	38.7
Most of the time	22.2	22.2	22.2	NA	30.8	30.8	22.2	27.3	25.8
Sometimes	22.2	33.3	27.8	NA	NA	NA	22.2	13.6	16.1
Never	11.1	22.2	16.7	NA	15.4	15.4	11.1	18.2	16.1
No response	11.1	NA	5.6	NA	NA	NA	11.1	NA	3.2
Condom use with regular and casual clients in past six months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=167**	**N=173**	**N=167**	**N=340**
Always	1.6	2.0	1.7	6.8	1.7	3.1	2.9	1.8	2.4
Most of the time	10.9	10.2	10.7	11.4	5.1	6.8	11.0	6.6	8.8
Sometimes	27.9	34.7	29.8	20.5	17.8	18.5	26.0	22.8	24.4
Never	49.6	51.0	50.0	56.8	72.0	67.9	51.4	65.9	58.5
Don't know	3.9		2.8		.8	.6	2.9	.6	1.8
No response	6.2	2.0	5.1	4.5	2.5	3.1	5.8	2.4	4.1

Table 27 data on consistent use of condom. Overall, only one-third of the respondents (34% MSW and 34.2% MSM/TG) reported that they consistently use condoms with non-paying male anal sex partner in the past month. One out of ten MSW/non-MSW and MSM/TG never used condom with non-paying male anal sex partner in the past month preceding the survey.

Similarly, four out of ten MSW and MSM/TG always used condom with one time paid male anal sex partner in the past month. About 8.6% MSW, and 7.1% MSM/TG never used condom in such a condition. The MSW/MSM/TG reported risky sexual behaviors by only 13.5% MSW and 13.8% MSM/TG had used condom with non-paying female sex partner in the past month. It was found that 42.3% MSW, and 35.8% MSM/TG never used condom with non-paying female sex partner in the past month.

More than one third (39.6%) of the MSM/TG reported that they used condom always with female sex partner in the past month. Even while having sex with paying female sex partner in the past month, only 27.8% MSW, 53.8% non-MSW and 38.7% MSM/TG used condom. About 15-16% of them never used condom while having sex with paid FSW in the past month. Moreover, 50% MSW and 58.5% MSM/TG never used condom with regular and casual clients in the past six months.

3.26 Availability and Possession of Condom

Table 28: Availability and Possession of Condom

Availability of Condom	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Can show condom	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Can show condoms	22.5	18.4	21.3	25.0	13.6	16.7	23.1	15.0	19.1
Cannot show a condom	76.7	81.6	78.1	75.0	86.4	83.3	76.3	85.0	80.6
No response	.8	NA	.6	NA	NA	NA	.6	NA	.3
Can have condom whenever needed	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	84.0*	79.2*	80.0*	69.3*	72.2*	71.7*	80.4*	73.7*	76.4*
CI	(72.5-91.3)	(54.5-92.4)	(71.9-89.7)	(45.5-85.9)	(57.1-83.6)	(58.7-81.9)	(69.8-87.9)	(61.6-83.4)	(67.8-83.2)
No	16.0*	20.8*	20*	30.7*	27.8*	28.3*	19.6*	26.3*	23.6*
CI	(8.7-27.6)	(7.6-45.5)	(10.3-28.0)	(14.1-54.4)	(16.4-42.9)	(18.0-41.4)	(12.1-30.2)	(16.6-38.9)	(16.8-32.2)
Reason for not being able to have condom when needed	**N=24**	**N=9**	**N=33**	**N=15**	**N=56**	**N=71**	**N=39**	**N=65**	**N=104**
Cost too much	4.2	0.0	3.0	6.7	8.9	8.5	5.1	7.7	6.7
Shop/Pharmacy too far away	41.7	33.3	39.4	26.7	35.7	33.8	35.9	35.4	35.6
Shops/Pharmacies closed	4.2	22.2	9.1	13.3	23.2	21.1	7.7	23.1	17.3
Shy to buy condom	25.0	22.2	24.2	33.3	21.4	23.9	28.2	21.5	24.0
Don't know where	0.0	11.1	3.0	13.3	1.8	4.2	5.1	3.1	3.8

to obtain									
Don't want to carry condom	4.2	0.0	3.0	0.0	8.9	7.0	2.6	7.7	5.8
Others	20.8	11.1	18.2	6.7	0.0	1.4	15.4	1.5	6.7
Received condoms from an outreach service, DIC or sexual health clinic	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=161**	**N=173**	**N=166**	**N=340**
Yes	80.5*	76.1*	79.3*	73.2*	51.4*	54.9*	78.9*	56.6*	65.5*
CI	(65.7-89.9)	(51.9-90.4)	(67.1-87.8)	(49.4-88.4)	(36.9-65.6)	(41.9-67.4)	(66.7-87.4)	(43.7-68.6)	(55.9-73.9)
No	19.5*	23.9*	20.7*	26.8*	48.6*	45.1*	21.1*	43.4*	34.5*
CI	(10.1-34.2)	(9.6-48.0)	(12.2-32.8)	(11.6-50.6)	(34.4-63.1)	(32.6-58.1)	(12.6-33.3)	(31.4-56.3)	(26.0-44.1)
Price Paid for last condom (in NRs.)	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Free	82.9	89.8	84.8	77.3	57.6	63.0	81.5	67.1	74.4
2-5	.8		.6	2.3	3.4	3.1	1.2	2.4	1.8
6-10	.8		.6	2.3	1.7	1.9	1.2	1.2	1.2
11-100	15.5	10.2	14.0	15.9	36.4	30.9	15.6	28.7	22.1
100+				2.3	.8	1.2	.6	.6	.6
Descriptive statistics of Price of last condom	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Mean/SD	39/23	50/70	42/41	34/22	50/70	36/33	42/41	35/23	38/23
Median/SD	35	20	27	32	20	25	27	35	35
Range	5-100	5-200	5-200	2-115	5-200	2-200	5-200	2-115	2-200
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Less than one-fifth (19.1%) of the MSM/TG could show condoms, which was 21.3% in case of MSW. However, more than three-quarters (76.4%) of the MSM/TG and 80% MSW indicated that they could get condoms whenever they needed. It was found that three-quarters (74.4%) MSM/TG had obtained condom free of cost-this percentage was even higher in case of MSW (i.e. 84.8%). The median price for a condom was Rs 35 for MSM/TG, and Rs 27 for MSW.

3.27 Use of Lubricant

Table 29: Use of Lubricant

Use of lubricant	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Ever used lube in anal sex	**N=126**	**N=47**	**N=173**	**N=44**	**N=109**	**N=153**	**N=170**	**N=156**	**N=326**

Yes	75.0*	86.9*	79.4*	100.0	51.3*	60.1*	84.5*	57.4*	66.2*
CI	(41.4-92.7)	(45.8-98.1)	(52.9-92.9)		(24.5-77.4)	(32.8-82.3)	(59.5-95.3)	(31.2-79.9)	(44.0-82.9)
No	25*	13.1*	20.6*	NA	48.7*	39.9*	15.5*	42.6*	33.8*
CI	(7.3-58.6)	(1.9-54.2)	(7.1-47.1)		(22.6-75.5)	(17.7-67.2)	(4.7-40.4)	(20.1-68.8)	(17.1-55.9)
Use of water-based lubricant in the last anal sex	**N=126**	**N=47**	**N=173**	**N=44**	**N=109**	**N=153**	**N=170**	**N=156**	**N=326**
Water based lubricant	58.9*	68.9*	61.7*	68.3*	38.2*	44.0*	61.3*	44.9*	51.9*
CI	(42.9-73.2)	(46.8-84.9)	(48.5-73.4)	(46.3-84.1)	(25.0-53.5)	(31.5-57.4)	(48.2-72.9)	(33.2-58.2)	(42.1-61.5)
Other lubricants	41.1*	31.1*	38.3*	31.7*	61.8*	56.0*	38.7*	55.1*	48.1*
CI	(26.8-57.0)	(15.2-53.3)	(26.7-51.5)	(15.9-53.3)	(46.5-75.0)	(42.6-68.5)	(27.1-51.8)	(41.8-67.8)	(38.5-57.9)
Types of lubricant used in the last anal sex	**N=126**	**N=47**	**N=173**	**N=44**	**N=109**	**N=153**	**N=170**	**N=156**	**N=326**
Saliva	5.6	8.5	6.4	11.4	10.1	10.5	7.1	9.6	8.3
Oil	10.3	6.4	9.2	13.6	20.2	18.3	11.2	16.0	13.5
Water based lube	58.7	61.7	59.5	59.1	50.5	52.9	58.8	53.8	56.4
Antiseptic/antibiotic cream	7.9	10.6	8.7	NA	.9	.7	5.9	3.8	4.9
Ghee	.8	NA	.6	2.3	NA	.7	1.2	NA	.6
Cream/lotion	7.1	2.1	5.8	4.5	4.6	4.6	6.5	3.8	5.2
Others	4.0	NA	2.9	4.5	2.8	3.3	4.1	1.9	3.1
Don't know	.8	8.5	2.9	4.5	7.3	6.5	1.8	7.7	4.6
No response	4.8	2.1	4.0	NA	3.7	2.6	3.5	3.2	3.4
Used condom with lubricant in the last anal sex	**N=126**	**N=47**	**N=173**	**N=44**	**N=109**	**N=153**	**N=170**	**N=156**	**N=326**
Yes	65.9	74.5	68.2	68.2	66.1	66.7	66.5	68.6	67.5
No	32.5	23.4	30.1	31.8	28.4	29.4	32.4	26.9	29.8
Don't know	.8	2.1	1.2	NA	2.8	2.0	.6	2.6	1.5
No response	.8	NA	.6	NA	2.8	2.0	.6	1.9	1.2
Heard of lubricant that is specially used with condom	**N=126**	**N=47**	**N=173**	**N=44**	**N=109**	**N=153**	**N=170**	**N=156**	**N=326**
Yes	42.1	44.7	42.8	40.9	32.1	34.6	41.8	35.9	39.0
No	46.8	40.4	45.1	52.3	54.1	53.6	48.2	50.0	49.1
Don't remember	11.1	14.9	12.1	6.8	13.8	11.8	10.0	14.1	12.0
Use of special lubricant with condom in anal sex in the past month	**N=53**	**N=21**	**N=74**	**N=18**	**N=35**	**N=53**	**N=71**	**N=56**	**N=127**
Always	30.2	47.6	35.1	27.8	37.1	34.0	29.6	41.1	34.6

Most of the time	32.1	23.8	29.7	38.9	22.9	28.3	33.8	23.2	29.1
Sometimes	22.6	19.0	21.6	27.8	28.6	28.3	23.9	25.0	24.4
Never	15.1	4.8	12.2	5.6	8.6	7.5	12.7	7.1	10.2
Don't remember	NA	4.8	1.4	NA	2.9	1.9	NA	3.6	1.6
Reason for occasional or non use of lubricant	**N=24**	**N=9**	**N=33**	**N=15**	**N=56**	**N=71**	**N=39**	**N=65**	**N=104**
Cost too much	4.2	0.0	3.0	6.7	8.9	8.5	5.1	7.7	6.7
Shop/Pharmacy too far away	41.7	33.3	39.4	26.7	35.7	33.8	35.9	35.4	35.6
Shops/Pharmacies closed	4.2	22.2	9.1	13.3	23.2	21.1	7.7	23.1	17.3
Shy to buy condom	25.0	22.2	24.2	33.3	21.4	23.9	28.2	21.5	24.0
Don't know where to obtain	0.0	11.1	3.0	13.3	1.8	4.2	5.1	3.1	3.8
Don't want to carry condom	4.2	0.0	3.0	0.0	8.9	7.0	2.6	7.7	5.8
Others	20.8	11.1	18.2	6.7	0.0	1.4	15.4	1.5	6.7
Purpose of using special lubricant	**N=50**	**N=15**	**N=65**	**N=22**	**N=40**	**N=62**	**N=72**	**N=55**	**N=127**
Decrease pain/inflation	36.0	20.0	32.3	50.0	35.0	40.3	40.3	30.9	36.2
Increase feeling/Stamina	10.0	13.3	10.8	0.0	2.5	1.6	6.9	5.5	6.3
Decrease risk of condom breakage	34.0	26.7	32.3	40.9	35.0	37.1	36.1	32.7	34.6
Prevent HIV/AIDS infection	6.0	13.3	7.7	9.1	2.5	4.8	6.9	5.5	6.3
Others	10.0	6.7	9.2	0.0	15.0	9.7	6.9	12.7	9.5
Don't know	4.0	20.0	7.7	0.0	10.0	6.5	2.8	12.7	7.1
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 29 shows that nearly eight out of ten (78.1%) MSM/TG had ever used lubricant while having anal sex. In the same way, 80% MSW and 89.7% MSM/TG ever used lubricant. More than half of the MSM/TG (56.4%) used water-based lube followed by oil (13.5%), saliva (8.3%), antiseptic/antibiotic cream (4.9%) and cream/lotion (5.2%).

Use of water-based lubricant in last anal sex was reported by over half of the respondents (i.e 59.5% MSW, 52.9% non-MSW and 56.4% MSM/TG). Use of antiseptic/antibiotic cream tended to be higher in 8.7% MSW and 4.9% MSM/TG.

Approximately four out of ten respondents had heard of a lubricant that is specially used with condom (42.8% MSW, 34.6% non-MSW and 39% MSM/TG). Only about 35% respondents always used lubricant with condom. Distance of pharmacy, shyness, pharmacy closed, cost and

hesitancy to carry condoms were the main reasons behind occasional or non-use of lubricant with condom.

The purpose for using lubricant by the MSM/TG was to reduce pain/inflammation (36.2%) decrease risk of breakage of condom (34.6%) and prevent HIV infection (6.3%).

3.28 Problem Encountered in Using Lubricant with Condom

Table 30: Problem Encountered in Using Lubricant with Condom

Use of lubricant	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Types of problem encountered in using lubricant	**N=56**	**N=23**	**N=79**	**N=18**	**N=44**	**N=62**	**N=74**	**N=67**	**N=141**
Condom slippage	NA	8.7	2.5	NA	2.3	1.6	NA	4.5	2.1
Irritation or burning sensation	NA	NA	NA	5.6	NA	1.6	1.4	NA	.7
Condom breakage	1.8	NA	1.3	16.7	4.5	8.1	5.4	3.0	4.3
No problem	80.4	82.6	81.0	77.8	79.5	79.0	79.7	80.6	80.1
Other	7.1	NA	5.1	NA	11.4	8.1	5.4	7.5	6.4
Don't know	1.8	4.3	2.5	NA	2.3	1.6	1.4	3.0	2.1
No response	8.9	4.3	7.6	NA	NA	NA	6.8	1.5	4.3
Condom break during sex in the last month	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	19.4	18.4	19.1	25.0	12.7	16.0	20.8	14.4	17.6
No	69.0	71.4	69.7	72.7	78.8	77.2	69.9	76.6	73.2
Didn't use	8.5	6.1	7.9	2.3	7.6	6.2	6.9	7.2	7.1
Don't know	2.3	4.1	2.8	NA	0.8	0.6	1.7	1.8	1.8
No response	0.8	NA	0.6	NA	NA	NA	0.6	NA	0.3

Table 30 captures data regarding the problems encountered in using lubricants with condom by the respondents. The problems were condom breakage (4.3%), slippage (2.1%) and irritation (0.7%), .Around eight out of ten MSM/TG reported that they did not have any problem in using lubricant and condom together. Overall, 19.1% MSW and 17.6% MSM/TG reported condom break during sex during the last one month.

3.29 Awareness of STI and Reported STI Symptoms in the Past Year

Table 31: Awareness of STI and Reported STI Symptoms in the Past Year

Awareness of STI and reported STI symptoms in the past year	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total

Aware of at least one major male STI symptoms	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	16.3	16.3	16.3	11.4	10.2	10.5	15.0	12.0	13.5
No	83.7	81.6	83.1	88.6	89.0	88.9	85.0	86.8	85.9
Don't know	NA	2.0	.6	NA	.8	.6	NA	1.2	.6
Perceived symptoms of male STI (Multiple response)	**N=122**	**N=47**	**N=169**	**N=42**	**N=116**	**N=158**	**N=164**	**N=163**	**N=327**
Penis discharge	50.8	44.7	49.1	50.0	43.1	44.9	50.6	43.6	47.1
Burning pain during urination	46.7	42.6	45.6	45.2	31.0	34.8	46.3	34.4	40.4
Genital ulcers/sores	41.8	38.3	40.8	50.0	44.8	46.2	43.9	42.9	43.4
Swelling in groin area	23.0	21.3	22.5	19.0	12.9	14.6	22.0	15.3	18.7
Anal discharge	28.7	34.0	30.2	21.4	14.7	16.5	26.8	20.2	23.5
Anal ulcer/sores	28.7	25.5	27.8	35.7	27.6	29.7	30.5	27.0	28.7
Other	.8	2.1	1.2	2.4	3.4	3.2	1.2	3.1	2.1
Don't know	23.0	27.7	24.3	19.0	35.3	31.0	22.0	33.1	27.5
First step taken after experiencing STI	**N=21**	**N=8**	**N=29**	**N=5**	**N=12**	**N=17**	**N=26**	**N=20**	**N=46**
Sought treatment from hospital	33.3	NA	24.1	40.0	25.0	29.4	34.6	15.0	26.1
Sought treatment from chemist	4.8	12.5	6.9	NA	25.0	17.6	3.8	20.0	10.9
Sought treatment from private doctor/ clinician	14.3	37.5	20.7	20.0	33.3	29.4	15.4	35.0	23.9
Sought treatment from BDS clinic	4.8	12.5	6.9	20.0	NA	5.9	7.7	5.0	6.5
Received treatment from friend	9.5		6.9	NA	NA	NA	7.7	NA	4.3
Took medicine available at Home	14.3	NA	10.3	NA	NA	NA	11.5	NA	6.5
Nothing	NA	25.0	6.9	20.0	8.3	11.8	3.8	15.0	8.7
Other (Specify)	14.3	12.5	13.8	NA	8.3	5.9	11.5	10.0	10.9
No response	4.8	NA	3.4	NA	NA	NA	3.8	NA	2.2
Number of major male STI symptoms known	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
None	27.9	28.6	28.1	25.0	38.1	34.6	27.2	35.3	31.2
One symptoms	12.4	18.4	14.0	9.1	9.3	9.3	11.6	12.0	11.8
Two symptoms	15.5	8.2	13.5	25.0	14.4	17.3	17.9	12.6	15.3
Three symptoms	21.7	20.4	21.3	13.6	22.9	20.4	19.7	22.2	20.9
Four symptoms	16.3	20.4	17.4	25.0	11.9	15.4	18.5	14.4	16.5
Five symptoms	3.1	2.0	2.8	2.3	1.7	1.9	2.9	1.8	2.4
Six symptoms	3.1	2.0	2.8	NA	1.7	1.2	2.3	1.8	2.1

Table 31 represents respondents' awareness on STI and reported STI symptoms in the past year. It was notable that only 16.3% MSWand 13.5% MSM/TG were aware of at least one major male STI symptom. The respondents perceived that penial discharge(49.1% MSW, 44.9% non-MSW and 47.1% MSM/TG) ,burning pain during urination(45.6% MSW, 34.8% non-MSW and 40.4% MSM/TG) and genital ulcers/sores(40.8% MSW, 46.2% non-MSW and 43.4% MSM/TG) were the main suymptoms of STIs. Other symptoms reported included swelling in groin area and anal discharge.In total, 24.3% MSWand 27.5% MSM/TG did not know any symptoms of STIs. Majority of the respondents knew 2-4 symptoms of STIs.

Out of those who experienced STIs, only 24.1% MSW and 26.1% MSM/TGsought treatment from a hospital. Consultation with private doctor was reported by 20.7% MSWand 23.9% MSM/TG.About 6.5% MSM/TG used BDS clinics.Moreover, 10.3% MSW, and 6.5% MSM/TG took home medications.

3.30 Practice of STI Clinic Visit

Table 32: Practice of STI Clinic Visit

STI Clinic Visiting Practices	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Visited any STI Clinic in the past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	13.1*	3.5*	10.3*	14.8*	8.4*	9.4*	13.5	7.4*	9.7*
CI	(7.1-22.9)	(0.9-12.6)	(5.9-17.5)	(5.2-35.2)	(4.2-16.0)	(5.2-16.2)	(8.0-21.8)	(3.9-13.4)	(6.5-14.4)
No	86.9*	96.5*	89.7*	85.2*	91.6*	90.6*	86.5*	92.6*	90.3*
CI	(77.1-92.9)	(87.4-99.1)	(82.6-94.1)	(64.8-94.8)	(84.0-95.8)	(83.8-94.8)	(78.2-91.9)	(86.6-96.1)	(85.6-93.5)
Participated activities at STI Clinic	**N=23**	**N=4**	**N=27**	**N=8**	**N=17**	**N=25**	**N=31**	**N=21**	**N=52**
Blood tested for STI	72.7	75.0	73.1	62.5	70.6	68.0	70.0	71.4	70.6
Physical examination conducted for STI identification	45.5	75.0	50.0	37.5	58.8	52.0	43.3	61.9	51.0
Discussed on how STI is/isn't transmitted	27.3	50.0	30.8	50.0	58.8	56.0	33.3	57.1	43.1

Discussed on regular/non-regular use of condom	31.8	50.0	34.6	50.0	47.1	48.0	36.7	47.6	41.2
Took a friend with me	9.1	NA	7.7	12.5	NA	4.0	10.0	NA	5.9
Other	4.5	25.0	7.7	12.5	5.9	8.0	6.7	9.5	7.8
Number of visits to STI Clinics in the past 12 months	**N=23**	**N=4**	**N=27**	**N=8**	**N=17**	**N=25**	**N=31**	**N=21**	**N=52**
One	61.9	25.0	56.0	75.0	66.7	69.6	65.5	57.9	62.5
2-3 times	33.3	50.0	36.0	25.0	33.3	30.4	31.0	36.8	33.3
More than 7 times	4.8	25.0	8.0				3.4	5.3	4.2
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 32 represents data on STI clinic visit. Less than 15% respondents, all three groups alike, visited STI clinic in the past 12 months. Of those who had visited to STI clinics, more than two – third tested blood for STI (73.1% MSW, and 70.6% MSM/TG). Other services received by those respondents include physical examination to identify STI, discussion on mode of transmission of STI, and use of condom. Only 7.7% MSW and 5.9% MSM/TG took a friend with him/her to the STI clinic. The number of STI clinic visits was limited mostly to one visit fore majority of the respondents (56% MSW, and 62.5%MSM/TG), about one third of them visited the clinic twice or thrice (36% MSW and 33.3% MSM/TG).

3.31 HTC Visit Practices

Table 33: HTC Visit Practices

VCT/HCT visit Practices	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Visited any HTC Center in the past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	20.6*	11.3*	17.9*	24.5*	12.9*	14.8*	21.5*	12.6*	16.1*
CI	(11.0-35.1)	(4.5-25.9)	(10.4-28.9)	(11.6-44.5)	(7.3-21.9)	(9.2-22.9)	(13.2-33.1)	(7.7-19.9)	(11.3-22.4)
No	79.4*	88.7*	82.1*	75.5*	87.1*	85.2*	78.5*	87.4*	83.9*
CI	(64.9-88.9)	(74.1-95.6)	(71.1-89.6)	(55.5-88.4)	(78.1-92.7)	(77.1-90.8)	(66.9-86.8)	(80.1-92.3)	(77.6-88.7)
Activities participated at HCT	**N=31**	**N=12**	**N=43**	**N=14**	**N=27**	**N=41**	**N=45**	**N=39**	**N=84**

center									
Received pre-HIV/AIDS test counseling	67.7	91.7	74.4	42.9	55.6	51.2	60.0	66.7	63.1
Blood sample taken for HIV/AIDS test	71.0	75.0	72.1	57.1	88.9	78.0	66.7	84.6	75.0
Received post-HIV/AIDS test counseling	58.1	75.0	62.8	57.1	66.7	63.4	57.8	69.2	63.1
Received HIV/AIDS test result	58.1	50.0	55.8	50.0	74.1	65.9	55.6	66.7	60.7
Received counseling on using Condom correctly in each sexual intercourse	25.8	50.0	32.6	21.4	33.3	29.3	24.4	38.5	31.0
Took a friend with me	3.2	0.0	2.3	0.0	3.7	2.4	2.2	2.6	2.4
Received information on HIV/AIDS window period	3.2	25.0	9.3	7.1	11.1	9.8	4.4	15.4	9.5
Number of visits to VCT in the past 12 months	**N=31**	**N=12**	**N=43**	**N=14**	**N=27**	**N=41**	**N=45**	**N=39**	**N=84**
One	32.3	25.0	30.2	23.1	59.3	47.5	29.5	48.7	38.6
2-3 times	41.9	41.7	41.9	53.8	33.3	40.0	45.5	35.9	41.0
4-6 times	16.1	16.7	16.3	15.4	3.7	7.5	15.9	7.7	12.0
7-12 times	9.7	8.3	9.3	7.7	3.7	5.0	9.1	5.1	7.2
More than 12 times	NA	8.3	2.3	NA	NA	NA	NA	2.6	1.2
Visited PE/OE/CM , DIC/IC/CC, STI clinic and HTC Center in the past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	13.6*	7.0*	11.7*	NA	1.3*	1.1*	10.3*	2.4*	5.5*
CI	(6.3-26.7)	(2.2-20.4)	(6.0-21.4)		(0.4-3.7)	(0.4-3.1)	(4.8-20.7)	(1.1-5.4)	(3.0-5.10.0)

No	86.4*	93.0*	88.3*	100	98.7*	98.9*	89.7*	97.6*	94.5*
CI	(73.3-93.7)	(79.6-97.9)	(78.6-93.9)		(96.3-99.6)	(96.9-99.6)	(79.3-95.2)	(94.6-98.9)	(90.0-97)
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 33 presents data on HTC visits made by the MSM/TG. The data shows that only 16.1% MSM/TG and 17.9% MSW visited HTC center in the past 12 months. Nearly half of them visited 2-3 times (41.9% MSW and 41% MSM/TG) followed by one time (30.2% MSW and 38.6% MSM/TG). The services they received include HIV pre and post-test counseling, providing blood sample for HIV test. Less than one-third of the respondents (32.6% MSW and 31% MSM/TG) received counseling on correct use of condom during each sexual intercourse. Information on HIV window period was provided rarely-9.3% MSW, and 9.5% MSM/TG reported it.

3.32 Perceptions on HIV

Table 34: Perceptions on HIV

VCT/HCT visit Practices	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Availability of confidential HIV testing facility in community	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	75.7*	47.8*	67.1*	60.9*	60.6*	60.7*	72.4*	57.9*	63.4*
CI	(60.9-81.2)	(28.2-68.1)	(54.6-77.6)	(37.2-80.4)	(45.2-74.2)	(47.1-72.8)	(59.7-82.3)	(45.0-69.7)	(54.1-71.8)
No	24.3*	52.2*	32.9*	39.1*	39.4*	39.3*	27.6*	42.1*	36.6*
CI	(13.8-39.1)	(31.9-71.8)	(22.4-45.4)	(19.6-62.8)	(25.8-54.8)	(27.3-52.9)	(17.7-40.4)	(30.3-54.9)	(28.2-45.9)
Ever heard of HIV or AIDS	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	98.4	100.0	98.9	95.3	98.3	97.5	97.7	98.8	98.2
No	1.6	NA	1.1	4.7	1.7	2.5	2.3	1.2	1.8
Known person infected with HIV or has died of AIDS	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	64.6	59.2	63.1	59.5	52.6	54.4	63.3	54.5	59.0
No	35.4	40.8	36.9	40.5	47.4	45.6	36.7	45.5	41.0
Do you have a close relative or close friend who is	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340

infected with HIV or has died of AIDS									
Yes, a close relative	4.9	10.3	6.3	4.0	11.5	9.3	4.7	11.1	7.6
Yes, a close friend	48.8	37.9	45.9	52.0	36.1	40.7	49.5	36.7	43.7
No	46.3	51.7	47.7	44.0	52.5	50.0	45.8	52.2	48.7
Can people reduce risk of HIV by using a condom correctly every time they have sex	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	74.0	76.6	74.7	73.2	79.8	78.1	73.8	78.9	76.3
No	26.0	23.4	25.3	26.8	20.2	21.9	26.2	21.1	23.7
Can a person get the HIV virus from mosquito bites	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	18.2	18.2	18.2	20.5	16.5	17.6	18.8	17.0	17.9
No	81.8	81.8	81.8	79.5	83.5	82.4	81.3	83.0	82.1
Can people protect themselves from HIV by having one uninfected faithful sex partner	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	66.1	59.6	64.3	66.7	64.5	65.1	66.3	63.1	64.7
No	33.9	40.4	35.7	33.3	35.5	34.9	33.7	36.9	35.3
Can person get the HIV virus by using a needle that is used by someone else	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	95.2	91.5	94.2	92.7	93.9	93.5	94.6	93.2	93.9
No	4.8	8.5	5.8	7.3	6.1	6.5	5.4	6.8	6.1
Can person get the HIV by shaking hand with an HIV infected person	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	12.6	16.7	13.7	5.0	9.6	8.4	10.8	11.7	11.2
No	87.4	83.3	86.3	95.0	90.4	91.6	89.2	88.3	88.8
Can blood transfusion from an infected person to the other transmit HIV	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	97.6	97.8	97.7	100.0	97.4	98.1	98.2	97.5	97.9
No	2.4	2.2	2.3	NA	2.6	1.9	1.8	2.5	2.1
Can a pregnant woman infected with HIV transmit the virus to her	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340

unborn child									
Yes	87.0	87.8	87.2	91.9	96.2	95.0	88.1	93.8	90.8
No	13.0	12.2	12.8	8.1	3.8	5.0	11.9	6.2	9.2
What can a pregnant woman do to protect her unborn child against the risk of HIV transmission	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Take medication	45.8	30.6	42.0	61.8	46.0	50.0	49.6	41.9	45.8
Others (Specify)	14.0	19.4	15.4	11.8	12.0	11.9	13.5	14.0	13.7
Don't know	40.2	50.0	42.7	26.5	41.0	37.3	36.9	43.4	40.1
No response	NA	NA	NA	NA	1.0	.7	NA	.7	.4
Can women with HIV transmit the virus to her newborn child through breast-feeding	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	76.4	77.6	76.7	71.4	73.3	72.8	75.1	74.5	74.9
No	15.0	4.1	11.9	16.7	16.4	16.5	15.4	12.7	14.1
don't know	8.7	18.4	11.4	11.9	10.3	10.8	9.5	12.7	11.1
What have you done for yourself to avoid getting HIV	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Take medicine	16.7	NA	12.5		33.3	25.0	13.6	22.2	17.5
Nothing	5.6	NA	4.2	NA	NA	NA	4.5		2.5
Don’t know	66.7	100.0	75.0	75.0	58.3	62.5	NA	5.6	2.5
Other		NA			8.3	6.3	68.2	72.2	70.0
No response	11.1	NA	8.3	25.0	NA	6.3	13.6	NA	7.5
To what extent do you think that you are at risk of HIV infection	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
High risk	5.5	2.0	4.5	2.4	3.4	3.2	4.7	3.0	3.9
Some risk	29.1	34.7	30.7	31.0	16.4	20.3	29.6	21.8	25.7
Little or no risk	52.8	46.9	51.1	57.1	66.4	63.9	53.8	60.6	57.2
Don't know	12.6	14.3	13.1	9.5	12.9	12.0	11.8	13.3	12.6
No response		2.0	.6		.9	.6		1.2	.6
Why do you think you are at little or no risk of HIV	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Always use condom	34.5	12.2	46.6	11.3	36.1	47.4	23.5	23.5	47.0
Only one sex partner	8.1	3.4	11.5	7.5	4.5	12.0	7.8	3.9	11.7

Partners are clean	10.1	5.4	15.5	6.8	9.8	16.5	7.5	6.4	13.9
Partners are healthy	14.2	4.1	18.2	3.8	16.5	20.3	7.1	10.7	17.8
Never share injections	0.7	0.0	0.7	5.3	18.8	24.1	10.0	11.0	21.0
Share injections sometime only	3.4	2.7	6.1	1.5	1.5	3.0	2.5	2.1	4.6
Other	12.8	5.4	18.2	3.8	8.3	12.0	8.5	6.8	15.3
Don't know	8.1	0.7	8.8	3.0	4.5	7.5	5.7	2.5	8.2
Ever had an HIV test	N=129	N=49	N=178	N=44	N=118	N=162	N=173	N=167	N=340
Yes	65.1*	53.5*	61.7*	55.6*	37.4*	40.4*	62.8*	40.7*	49.4*
CI	(50.4-77.4)	(32.9-72.9)	(49.5-72.6)	(34.9-74.5)	(25.1-51.6)	(29.1-52.7)	(50.6-73.6)	(29.7-52.8)	(40.5-58.3)
No	34.9*	46.5*	38.3*	44.4*	62.6*	59.7*	37.2*	59.3*	50.7*
CI	(22.6-49.6)	(22.6-49.6)	(27.1-67.1)	(25.5-65.0)	(48.4-74.9)	(47.3-70.9)	(26.4-49.4)	(47.2-70.4)	(41.7-59.5)
Decision making on HIV test	N=97	N=31	N=128	N=31	N=69	N=100	N=128	N=100	N=228
Voluntarily	77.3	71.0	75.8	64.5	78.3	74.0	74.2	76.0	75.0
I was asked	22.7	29.0	24.2	35.5	21.7	26.0	25.8	24.0	25.0
Received HIV test result	N=97	N=31	N=128	N=31	N=69	N=100	N=128	N=100	N=228
Yes	97.9	96.8	97.7	96.8	98.6	98.0	97.7	98.0	97.8
No	2.1	3.2	2.3	3.2	1.4	2.0	2.3	2.0	2.2
Received counseling at the time of HIV test result	N=97	N=31	N=128	N=31	N=69	N=100	N=128	N=100	N=228
Yes	92.8	96.8	93.8	93.5	91.3	92.0	93.0	93.0	93.0
No	7.2	3.2	6.3	6.5	8.7	8.0	7.0	7.0	7.0
When did you have your HIV test	N=97	N=31	N=128	N=31	N=69	N=100	N=128	N=100	N=228
Within past one year	80.4	67.7	77.3	71.0	78.3	76.0	78.1	75.0	76.8
In between one to two year	15.5	25.8	18.0	12.9	15.9	15.0	14.8	19.0	16.7
In between two to four year	2.1	3.2	2.3	6.5	5.8	6.0	3.1	5.0	3.9
Before 4 year	2.1	3.2	2.3	9.7	0	3.0	3.9	1.0	2.6
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Data shown in Table 34 indicates that almost all (more than 98%) of the MSW/MSM/TG have ever heard about HIV or AIDS and around 60% of them claimed that they have seen a person infected with HIV (63.1% MSW and 59% MSM/TG). Of the HIV infected persons they have

seen, mostly it was their close friend -45.9% MSW and 43.7% MSM/TG.

More than three-quarters of the respondents (74.7% MSW and 76.3% MSM/TG) believed that people could reduce risk of HIV transmission by using condom correctly every time they have sex. A misconception that mosquito bites can transmit HIV still exists-18.2% MSW and 17.9% MSM/TG reported it). About two-third of the total respondents (64.3% MSW and 64.7% MSM/TG), believed that people could protect themselves from HIV by having one uninfected faithful sex partner.

Similarly, almost all (over 90%) of the MSM/TG believed that sharing of needles transmits HIV. A small minority believed that "shaking hands with a HIV infected person could transmit HIV (16.7% MSW, and 11.2% MSM/TG). Moreover, blood transfusion from an HIV infected person can transmit HIV was agreed by almost all the respondents i.e. 97.7% MSW and 97.9% MSM/TG. Maternal transmission of HIV to a baby was also reported by 87.2% MSW and 90.8% MSM/TG. Three quarters of the respondents, on the whole, were in favor of transmission of HIV through breast feeding.

Data on self –assessment of risk of HIV transmission shows that a little more than half of the respondents perceived little or no risk (51.15 MSW and 57.2% MSM/TG) followed by some risk (30.7% MSW and 25.7% MSM/TG).

Less than half (49.4%) MSM/TG ever had an HIV test-which was higher in MSW (61.7%). Overwhelming percentage (93%) of MSM/TG and MSW (93.8%) informed that they received counseling service while having an HIV test.

Table 35: Met/Discussed/Interacted with Peer/Outreach Educators/Community Mobilizer

Exposure to PE/OE/CM/CE	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Met/discussed/interacted with PE/OE/CM/CE	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	53.8*	41.7*	50.1*	57.1*	40.1*	42.9*	54.6*	40.4*	45.9*
CI	(38.9-67.9)	(24.0-61.8)	(38.1-62.1)	(36.9-75.3)	(27.0-54.8)	(31.1-55.5)	(42.5-66.3)	(29.2-52.7)	(37.2-54.8)
No	46.2	58.3	49.9*	42.9*	59.9*	57.1*	45.4*	59.6*	54.1*
CI	(32.1-61.0)	(38.2-76.0)	(37.9-61.9)	(24.7-63.1)	(45.2-73.0)	(44.5-68.9)	(33.7-57.7)	(47.3-70.8)	(45.2-62.8)
Activities Carried out with by PE/OE/CM/CEs	**N=87**	**N=28**	**N=115**	**N=27**	**N=64**	**N=91**	**N=112**	**N=88**	**N=206**
Discussion on how HIV/AIDS is/isn't	89.4	89.3	89.4	100.0	95.0	96.6	92.0	93.2	92.5

transmitted									
Discussion on how STI is/isn't transmitted	40.0	53.6	43.4	55.6	55.0	55.2	43.8	54.5	48.5
Regular/non-regular use of condom	63.5	67.9	64.6	59.3	58.3	58.6	62.5	61.4	62.0
Demonstration on using condom correctly	30.6	53.6	36.3	25.9	46.7	40.2	29.5	48.9	30.0
Others	3.5	3.6	3.5	7.4	3.3	4.6	4.5	3.4	4.0
MSM/TG related organization in districts	**N=112**	**N=35**	**N=147**	**38**	**84**	**N=122**	**150**	**119**	**269**
BDS	91.1	85.7	89.8	92.1	90.5	91.0	91.3	89.1	90.3
Sahara Nepal	6.3	2.9	5.1	0.0	6.0	4.1	4.7	5.0	4.8
Paribartansil Samaj	1.8	5.7	2.7	2.6	4.8	4.1	2.0	5.0	3.3
Amda Nepal	.9	2.9	1.4	2.6	1.2	1.6	1.3	1.7	1.5
Others	14.3	17.1	14.9	26.3	1.2	18.2	17.4	15.1	16.4
Don't Know	1.8	2.9	2.0	0.0	4.8	3.3	1.3	4.2	2.6
Number of meeting with PE/OE/CM/CEs	**N=87**	**N=28**	**N=115**	**N=27**	**N=64**	**N=91**	**N=112**	**N=88**	**N=206**
1 time	3.4	7.1	4.3	3.7	4.7	4.4	3.5	5.4	4.4
2-3 times	21.8	28.6	23.5	29.6	23.4	25.3	23.7	25.0	24.3
4-6 times	14.9	7.1	13.0	22.2	14.1	16.5	16.7	12.0	14.6
7-12times	20.7	17.9	20.0	11.1	29.7	24.2	18.4	26.1	21.8
More than 12 times	39.1	39.3	39.1	33.3	28.1	29.7	37.7	31.5	35.0
Mean time	3.7	3.5	3.6	3.4	3.5	3.5	3.6	3.5	3.6
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 35 shows status of exposure to meet/discuss/interact with peer/outreach educators/community mobilizer. The data indicates that 45.9% MSM/TG and 50.1% MSW had visited PE/OE/CM/CE. They discussed on modes of HIV transmission (92.5% MSM/TG and 89.4% MSW reported it) and use of condom (64.6% MSW and 62% MSM/TG). Demonstration on using condom correctly was relatively less reported-36.3% MSW and 30% MSM/TG.

Data on familiarity of MSM/TG related organization in district shows BDS on the top list (90.3% in MSM/TG). Sahara Nepal was the second important organization as reported by the MSM/TG.As reported, higher proportions of the respondents had met the PE/OE/CM/CE for more than 12 times-39.1% MSW, 29.7% Non-MSW and 35% MSM/TG. The average number of

meeting attended by those respondents was 3.6times.

3.33 Comprehensive Knowledge of ABC and BCDEF

Table 36: Comprehensive Knowledge of ABC and BCDEF(N=340)

Comprehensive knowledge of ABC and BCDEF	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
ABC	37.2	38.8	37.6	25.0	41.5	37.0	34.1	40.7	37.4
ABC adjusted	45.7*	19.1*	37.9*	41.3*	36.3*	37.1*	44.7*	32.8*	37.5*
CI	(31.7-60.4)	(9.1-35.8)	(27.1-50.1)	(22.9-62.5)	(23.9-50.7)	(26.0-49.6)	(33.0-56.9)	(22.6-44.8)	(29.4-46.2)
BCDEF	36.4	30.6	34.8	40.9	44.1	35.8	37.6	40.1	38.8
BCDEF adjusted	56.3*	18.4*	45.3*	43.3*	37.0*	38.0*	53.2*	33.2*	41.1*
CI	(42.2-69.4	(8.6-35.1)	(33.3-57.7)	(24.9-63.8)	(24.2-52.0)	(26.6-50.9)	(41.4-64.7)	(22.6-45.8)	(32.5-50.2)
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Table 36 presents data on comprehensive knowledge of ABC and BCDEF among the respondents. Knowledge of F, E, and D tends to be higher in all three groups of the respondents (98, 89 and 87.8 percent respectively in MSM/TG). Knowledge of A and B was relatively low in all three groups.

Figure 8: Comprehensive Knowledge of ABC and BCDEF (N= 340)

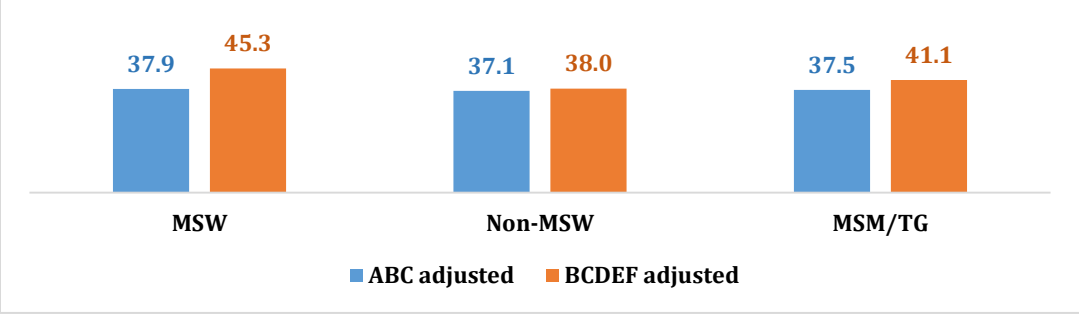


Figure 9 shows that the data on comprehensive knowledge of ABC and BCDEF (adjusted). In total, 37.5% MSM/TG had knowledge of ABC while 41.1% MSM/TG had knowledge of BCDEF.

3.34 Experience of Violence and Discrimination in the Past 12 Months

Table 37: Personal Experience of Violence and Discrimination in the Past 12 Months

Subject to Violence/Discrimination	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
In the past 12 months, were you ever beaten because of your sexual behavior	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	10.1	14.3	11.2	15.9	2.5	6.2	11.6	6.0	8.8
No	89.9	85.7	88.8	84.1	97.5	93.8	88.4	94.0	91.2
Was beaten up by	**N=13**	**N=7**	**N=20**	**N=7**	**N=3**	**10**	**N=20**	**N=10**	**N=30**
Police	NA	14.3	5.0	NA	33.3	10.0	NA	20.0	6.7
Military	7.7	NA	5.0	NA	NA	0.0	5.0	NA	3.3
Client	15.4	28.6	20.0	14.3	66.7	30.0	15.0	40.0	23.3
Regular Partner	7.7	0.0	5.0	NA	NA	NA	5.0	NA	3.3
Sexual Partner	7.7	28.6	15.0	42.9	33.3	40.0	20.0	30.0	23.3
Hooligans group	61.5	14.3	45.0	14.3	33.3	20.0	45.0	20.0	36.7
Others	23.1	57.1	35.0	28.6	0.0	20.0	25.0	40.0	30
Was forced to have sex in the past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	18.6	18.4	18.5	18.2	11.9	13.6	18.5	13.8	16.2
No	81.4	81.6	81.5	81.8	88.1	86.4	81.5	86.2	83.8
People who forcefully had sex	**N=24**	**N=9**	**N=33**	**N=8**	**N=14**	**N=22**	**N=32**	**N=23**	**N=55**
Police	8.3	22.2	12.1	12.5	7.1	9.1	9.4	13.0	10.9
Military	NA	NA	NA	NA	NA	NA	NA	NA	NA
Client	16.7	11.1	15.2	12.5	42.9	31.8	15.6	30.4	21.8
Regular Partner	0.0	11.1	3	NA	NA	NA	0.0	4.3	1.8
Sexual Partner	4.2	33.3	12.1	25.0	7.1	13.6	9.4	17.4	12.7
Hooligans group	66.7	44.4	60.6	25.0	21.4	22.7	56.3	30.4	45.5
Others	8.3	33.3	15.2	37.5	35.7	36.4	15.6	34.8	23.6
Was blackmailed in the past 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	29.5	20.4	27.0	20.5	15.3	16.7	27.2	16.8	22.1
No	70.5	79.6	73.0	77.3	84.7	82.7	72.3	83.2	77.6
Don't remember	NA	NA	NA	2.3	NA	.6	.6	NA	.3
Faced discrimination at job or everyday life	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	29.1*	8.0*	23.1*	14.1*	5.5*	6.9*	25.5*	6.0*	13.7*
CI	(18.4-42.7)	(2.6-21.9)	(15.1-33.7)	(5.7-30.5)	(2.8-10.7)	(4.0-11.8)	(16.9-36.5)	(3.4-10.6)	(9.6-19.1)
No	70.9*	92.0*	76.9*	85.9*	94.5*	93.1*	74.5*	94*	86.3*

CI	(57.2-81.6)	(78.1-97.4)	(66.3-84.9)	(69.5 - 94.2)	(89.3-97.2)	(88.2-96.0)	(63.5-83.0)	(89.4-96.7)	(80.9-90.4)
Ever experienced any kind of problems due to sexual orientation	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	3.1	2.0	2.8	2.3	.8	1.2	2.9	1.2	2.1
No	96.9	98.0	97.2	97.7	99.2	98.8	97.1	98.8	97.9
Note: Estimated population proportion (%) of the variables with asterisk (*) are calculated with STATA by using Volz–Heckathorn estimator, the proportion represented is therefore adjusted and mentioned under CI.									

Data given in Table 37 indicates that small proportions of MSM/TG have suffered from different kinds of sexual violence and discrimination. In total, 11.2% MSW, 6.2% Non-MSW and 8.8% MSM/TG reported that they were beaten by someone else in the past 12 months. Out of those who reported that they were beaten by hooligans, clients and sex partners.In the past 12 months 18.5% MSW16.2% MSM/TG were forced to have sex, particularly by hooligans, clients and sex partners. Asmall minority reported that they were beaten by police and military (6.7% MSM/TG by police, 3.3% MSM/TG by military). Similarly,27% MSWand 22.1% MSM/TG reported that they were blackmailed.

A significant minority of the respondents in particular MSW followed by MSM/TG faced different types of discriminatory behaviors at different places. MSW faced discrimination on street (41%), school (24.2%), work (24.2%) and in getting a job (12.4%), renting a house/room (11.8%), medical care (10.7%), and service in store or restaurant (16.3%) including discrimination from the police (19.1%). Similar trend of discrimination was reported by the MSM/TG such as discrimination at park (37.4%), school (22.1%) and work place (21.8%). They were also reportedly discriminated while hiring for a job (10.6%), buying or renting a house (10%), getting medical care (11.8%) and from police (17.6%).

3.35 Forced to Leave Home Due to Sexual Identity and Talking about Sexual Behavior

Table 38: Forced to Leave Home Due to Sexual Identity and Talking about Sexual Behavior

Force to leave home due to sexual identity and talk about sexual behavior	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Force to leave home	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	18.6	22.4	19.7	15.9	6.8	9.3	17.9	11.4	14.7

No	81.4	77.6	80.3	84.1	93.2	90.7	82.1	88.6	85.3
Can talk about sexual behavior	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	35.7	10.2	28.7	27.3	16.9	19.8	33.5	15.0	24.4
No	64.3	89.8	71.3	72.7	83.1	80.2	66.5	85.0	75.6
First sexual contact	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Raped	7.8	4.1	6.7	11.4	4.2	6.2	8.7	4.2	6.5
Agree	91.5	95.9	92.7	88.6	95.8	93.8	90.8	95.8	93.2
Don't know/Can't recall	0.8	NA	0.6	NA	NA	NA	0.6	NA	0.3

Table 38 presentsdata on whether the MSW/MSM/TG were forced to leave home because of their sexual identity and sexual behaviors. In response, 19.7% MSW, 14.7% MSM/TG and 9.3% Non-MSW reported that they were forced to leave home. When further asked whether they could speak about sexual behaviors, only 28.7% MSW and 24.4% MSM/TG were found confident in talking about sexual identity and behaviors.

Non-MSW were also discriminated by others at street/park (33.3%), school (19.8%), and at work (19.1%). They also reported discrimination in getting medical care (13%), getting service in a store/restaurant (13.6%), buying or renting a house (8%) and from police (16%).

3.36 Anal Sex in the Last Six Months and Cross the India-Nepal Border

Table 39: Anal Sex in the Last Six Months and Cross the India-Nepal Border

Anal sex in the past six Months	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Anal sex in the past six Months	**N=75**	**N=26**	**N=101**	**N=22**	**N=38**	**N=60**	**N=97**	**N=64**	**N=161**
Yes	88.0	92.3	89.1	90.9	73.7	80.0	88.7	81.3	85.7
No	12.0	7.7	10.9	9.1	26.3	20.0	11.3	18.8	14.3
Used a condom when you had anal sex in the last six months	**N=75**	**N=26**	**N=101**	**N=22**	**N=38**	**N=60**	**N=97**	**N=64**	**N=161**
Yes	72.7	79.2	74.4	65.0	71.4	68.8	70.9	75.0	72.5
No	27.3	20.8	25.6	35.0	28.6	31.3	29.1	25.0	27.5
Cross India-Nepal border	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Everyday	0.8	2.0	1.1	NA	NA	NA	0.6	0.6	0.6
Frequently	3.9	6.1	4.5		1.7	1.2	2.9	3.0	2.9
Often	17.8	22.4	19.1	13.6	11.0	11.7	16.8	14.4	15.6
No	77.5	67.3	74.7	86.4	87.3	87.0	79.8	81.4	80.6

No response	NA	2.0	0.6	NA	NA	NA	NA	0.6	0.3

Table 39 states anal sex in the last six months and mobility across India-Nepal border for seeking clients. In total, 89.1% MSW, 80% Non-MSW and 85.7% MSM/TG had anal sex in the past six months-highest among MSW Non-TG (92.3%). Of those who had anal sex in past six months, 74.4% MSW, and 72.5% MSM/TG reported that they used condom. Non-MSW TG least reported condom use (65%). Indo-Nepal cross-border movement was not reported by, 80.6% MSM/TG and 74.7% MSW. Rest of the respondents often crossed the border (15.6% MSM/TG, 11.7% Non-MSW and 19.1% MSW).

About one in twenty respondents (6.7% MSW, 6.2% Non-MSW and 6.5% MSM/TG) informed that they were raped during their first sexual contact while rest others reported that their first sex was consensual.

3.37 Places Where Different Sex Partners Had Met

Table 40: Places Where Different Sex Partners Had Met

Non-paying sex male/meti	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Non-paying sex male/meti	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Park	7.6	NA	5.5	NA	4.9	3.3	5.6	3.3	4.5
Discotheque	1.0	NA	0.7	NA	NA	NA	0.7	NA	0.4
restaurant	1.9	7.5	3.4	10.3	8.6	9.2	4.2	8.3	6.0
Dance Restaurant	1.0	2.5	1.4		1.2	0.8	0.7	1.7	1.1
Street	21.0	12.5	18.6	17.9	23.5	21.7	20.1	19.8	20.0
Bus Station	7.6	10.0	8.3	2.6	1.2	1.7	6.3	4.1	5.3
Public Toilets	1.0	NA	0.7	2.6	2.5	2.5	1.4	1.7	1.5
Cinema Hall	1.0	2.5	1.4	NA	NA	NA	0.7	0.8	0.8
Internet cafe	NA	2.5	0.7	NA	1.2	0.8	NA	1.7	0.8
Home	35.2	32.5	34.5	41.0	34.6	36.7	36.8	33.9	35.5
Bhatti Pasal	NA	7.5	2.1	NA	NA	NA	NA	2.5	1.1
Forest	15.2	10.0	13.8	17.9	16.0	16.7	16.0	14.0	15.1
Others	7.6	12.5	9.0	7.7	6.2	6.7	7.6	8.3	7.9
Met Last male/meti client	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Park	4.7	2.0	3.9	2.3	3.4	3.1	4.0	3.0	3.5
Restaurant	3.9	4.1	3.9	4.5	4.2	4.3	4.0	4.2	4.1
Dance Restaurant	0.8		0.6	NA	0.8	0.6	0.6	0.6	0.6
Street	22.5	18.4	21.3	13.6	18.6	17.3	20.2	18.6	19.4
Bus Station	3.9		2.8	4.5	3.4	3.7	4.0	2.4	3.2
Public Toilets	NA	NA	NA	2.3	0.8	1.2	0.6	0.6	0.6

Cinema Hall	.8		.6		NA	NA	.6	NA	.3
Internet café	NA	NA	NA	NA	2.5	1.9		1.8	.9
Home	32.6	34.7	33.1	15.9	29.7	25.9	28.3	31.1	29.7
Bhatti Pasal	1.6	8.2	3.4	4.5		1.2	2.3	2.4	2.4
Forest	14.0	10.2	12.9	18.2	16.9	17.3	15.0	15.0	15.0
Shopping center	0.8	NA	0.6	2.3	NA	0.6	1.2	NA	0.6
Others (Specify)	7.0	12.2	8.4	11.4	10.2	10.5	8.1	10.8	9.4
Don't remember	7.8	10.2	8.4	20.5	9.3	12.3	11.0	9.6	10.3
Had Sexually satisfied with the male/meti client without anal sex	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	34.1	24.5	31.5	22.7	21.2	21.6	31.2	22.2	26.8
No	62.8	75.5	66.3	65.9	74.6	72.2	63.6	74.9	69.1
Don't remember	1.6	NA	1.1		0.8	0.6	1.2	0.6	0.9
No response	1.6	NA	1.1	11.4	3.4	5.6	4.0	2.4	3.2

Table 40shows data on the places MSM/TG meet their sex partners while having non-paying sexwith male/meti . Their responses indicated that all three types of sexual groups met their clients at home(36.7% Non-MSW, 35.5% MSM/TG and 34.5% MSW), street(21.7% Non-MSW, 20% MSM/TG and 18.6% MSW) and forest(16.7% Non-MSW, 15.1% MSM/TG and 13.8% MSW. Resturant was used as a meeting place by 10.3% Non-MSW TG,9.2% Non-MSW and 6% MSM/TG. Only 3.4% MSW used resturant as a place of encounter with a client.

A small minority of MSM/TG used parks also as a venue for their encounter. About one in ten respondents could not remember where they had met with last male/meti client.

Less than one-third of the respondents (31.5% MSW, 21.6% Non-MSW and 26.8% MSM/TG) were satisfied with their sex with the male meti client without having anal sex.

3.38 Refusal to Use of Condom

Table 41: Refusal to Use of Condom

If client Refuses to use of condom	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
If client refuses to use a condom	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Refuses to have sex with the client	36.4	34.7	36.0	22.7	28.0	26.5	32.9	29.9	31.5
Forces the client to use a condom	14.0	8.2	12.4	11.4	11.9	11.7	13.3	10.8	12.1
Explains the advantages of condoms	13.2	8.2	11.8	13.6	5.9	8.0	13.3	6.6	10.0

Still has sex with the client	26.4	26.5	26.4	31.8	39.0	37.0	27.7	35.3	31.5
Only takes medication/treatment after sex	NA	2.0	0.6	NA	NA	NA	NA	0.6	0.3
Other *	0.8	8.2	2.8	4.5	7.6	6.8	1.7	7.8	4.7
Don't know	9.3	12.2	10.1	15.9	7.6	9.9	11.0	9.0	10.0

**** They were refused use of of condoms due to receive more money or experience of more sexual ecstacy .***

Table 41 indicates the refusal to use a condom.In case of a client's refusal to use condom during sexual acts, only 36% MSW, and 31.5% MSM/TG refuse to have sex with the client at the spur of moment while less than 12% only forces the clients to use condom. Even if the client refused to have sex, 37% Non-MSW, 31.5% MSM/TG and 26.4% MSW had sex with the client.

3.39 Prevlaence of suicidality among surveyed MSM/TG

Table 42: Prevlaence of suicidality among surveyed MSM/TG

Subject to Violence/Discrimination	**MSW (%)**			**Non MSW (%)**			**MSM/TG (Total %)**		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
Think committing suicide	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	25.6	22.4	24.7	25.0	11.9	15.4	25.4	15.0	20.3
No	74.4	73.5	74.2	75.0	88.1	84.6	74.6	83.8	79.1
No response		4.1	1.1					1.2	.6
How often did you have any thoughts about ending your own life in last 12 months	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Many times	30.3	15.4	26.1	18.2	50.0	36.0	27.3	33.3	29.6
A few times	21.2	15.4	19.6	36.4	42.9	40.0	25.0	29.6	26.8
Once or twice	42.4	53.8	45.7	45.5	7.1	24.0	43.2	29.6	38.0
No response	6.1	15.4	8.7				4.5	7.4	5.6
Plan to commit suicide	**N=33**	**N=13**	**N=46**	**N=11**	**N=14**	**N=25**	**N=44**	**N=27**	**N=71**
Yes	42.4	76.9	52.2	63.6	50.0	56.0	47.7	63.0	53.5
No	57.6	15.4	45.7	36.4	50.0	44.0	52.3	33.3	45.1
No response		7.7	2.2					3.7	1.4
Ever attempted suicide	**N=33**	**N=13**	**N=46**	**N=11**	**N=14**	**N=25**	**N=44**	**N=27**	**N=71**
Yes	42.4	53.8	45.7	54.5	64.3	60.0	45.5	59.3	50.7
No	57.6	46.2	54.3	45.5	35.7	40.0	54.5	40.7	49.3

Table 42 shows prevalence of suicidality which includes the ideation of suicide, suicide plan and suicide attempt. Nearly a quarter of MSW(24.7%), one-fifth(20.3%) of the MSM/TG and 15.4%

Non-MSW had ever thought about sucide . The data indicate that sucidal ideation was highest among MSW.

Specifically in the past 12 months, 29.6% MSM/TG and 26% MSW had thought about suicide many times while such a feeling was produced one or two times in 45.7% MSW and 38% in MSM/TG. It was notable that 76.9% MSW Non-TG, 63.6% Non-MSW TG and 63% MSM/TG Non-TG planned to commit a suicide. Of those who planned to commit suicide, six out of ten Non-MSW (60%), half of the MSM/TG(50.7%) and 45.7% MSW had ever attempted committing suicide.

3.40 Heard about MSM/TG Related Organization

Table 43: Heard about MSM/TGRelated Organization

Heard about MSM/TG related organization	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Heard about MSM/TG related organization	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Yes	86.8	75.5	83.7	88.6	72.9	77.2	87.3	73.7	80.6
No	10.9	16.3	12.4	4.5	22.9	17.9	9.2	21.0	15.0
don't know	2.3	8.2	3.9	6.8	3.4	4.3	3.5	4.8	4.1
No response	NA	NA	NA	NA	0.8	0.6	NA	0.6	0.3

Over eighty percent of the MSW (83.7%) and MSM/TG (80.6%) had heard about organizations affiliated to MSM/TG while a little less than that (77.2%) knew about it (Table 42).

3.41 Treated Unfairly on Sexual Orientation and Reaction

Table 44: Treated Unfairly on Sexual Orientation and Reaction

	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	Non TG	Total	TG	Non TG	Total	TG	Non TG	Total
Treated unfairly sexual orientation and reaction	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Accept it/keep to self	34.9	49.0	38.8	22.7	32.2	29.6	31.8	37.1	34.4
Do something/keep to self	32.6	20.4	29.2	40.9	25.4	29.6	34.7	24.0	29.4
Do something/talk to others	32.6	30.6	32.0	36.4	42.4	40.7	33.5	38.9	36.2

More than one-third of the total MSW (38.3%) and MSM/TG (34.3%) reported that they were treated unfairly because of their sexual orientation and reaction while a little more than one-fourth (29.6%) of the Non-MSW reported such treatment by others. Against such unfair treatment, less than one third of the MSW, and MSM/TG kept it within self while 40.7% TG, 36.2% MSM/TG and 32% MSW reported this to others.

3.42 Response Related to Network

Table 45: Response Related to Network

	MSW (%)			Non MSW (%)			MSM/TG (Total %)		
	TG	**Non TG**	**Total**	**TG**	**Non TG**	**Total**	**TG**	**Non TG**	**Total**
How many other MSM/TG do you know	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
1-10	31.8	42.9	34.8	38.6	50.8	47.5	33.5	48.5	40.9
11-20	17.1	14.3	16.3	18.2	18.6	18.5	17.3	17.4	17.4
21-30	10.9	10.2	10.7	11.4	9.3	9.9	11.0	9.6	10.3
31-40	4.7		3.4	4.5	2.5	3.1	4.6	1.8	3.2
41-50	11.6	8.2	10.7	13.6	4.2	6.8	12.1	5.4	8.8
More than 50 persons	24.0	24.5	24.2	13.6	14.4	14.2	21.4	17.4	19.4
Among those people, please try to estimate their number by their age group	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
Less than 15 years	11.6	16.3	12.9	2.3	7.6	6.2	9.2	10.2	9.7
15-20 years old	8.5	10.2	9.0	9.1	12.7	11.7	8.7	12.0	10.3
21-30 years old	54.3	55.1	54.5	63.6	62.7	63.0	56.6	60.5	58.5
31-40 years old	22.7	11.0	14.2	NA	NA	NA	22.5	12.0	17.4
above 41 years old	1.6	NA	1.1		1.7	1.2	1.2	1.2	1.2
don't know	1.6	2.0	1.7	2.3	4.2	3.7	1.7	3.6	2.6
No response	NA	2.0	.6	NA	NA	NA	NA	.6	.3
How are you related with the person who gave you the coupon for taking part in the survey	**N=129**	**N=49**	**N=178**	**N=44**	**N=118**	**N=162**	**N=173**	**N=167**	**N=340**
A friend	68.8	79.3	71.7	65.2	61.6	62.5	68.0	66.7	67.3
You sex partner	13.0	17.2	14.2	17.4	21.9	20.8	14.0	20.6	17.3
A relative	7.8	NA	5.7	4.3	1.4	2.1	7.0	1.0	4.0
A stranger	NA	3.4	.9	4.3	5.5	5.2	1.0	4.9	3.0
Other	9.1	NA	6.6	8.7	9.6	9.4	9.0	6.9	7.9
No response	1.3	NA	.9	NA	NA	NA	1.0	NA	.5

Table 45shows that 40.9%of MSM/TG knew 1-10 MSM/TG, which was little higher in MSW (34.8%). Furthermore, MSM/TG who were known by respondents estimating their number by their age group shows that majority are of age between 21-30 years (58.5% MSM/TG and 54.5% MSW).

In response to the question, how you are related with the person who gave you the coupon for taking part in the survey, 67.3% MSM/TG and 71.7% MSW replied it was given by their friends. It was also found that the coupon by a sex partner as well (17.3% MSM/TG and 14.2% MSW). In a few cases, for 3% MSM/TG coupon provider was a stranger.

CHAPTER FOUR: SUMMARY OF FINDINGS AND IMPLICATIONS

4.1 Summary of Findings

i. More than half (56%) of the MSM/TG represented the disadvantaged non-Dalit Terai community people. The age group 25 years and above has higher HIV prevalence (11.3%) than in age below 25 years (3.6%). Likewise, STI prevalence of age group 25 years and above is significantly higher (11.8%) than the prevalence in age group below 25 years (5.1%). Similarly, married people have high prevalence for both HIV (10%) and STI (10.8%) whereas in unmarried MSM/TGHIV prevalence is 7.3% and STI prevalence is 10%. The literate people have higher HIV prevalence (9.3 %).

ii. The overall prevalence of HIV in MSM/TG is 8.2 % and STI in MSM/TG is 6.9%. Geographically, there is high prevalence of HIV in western area (16.5 %), followed by eastern area (6.3%) and far western area (5.3%). Similarly, there is highest prevalence of STI in eastern area (11.1%) whereas STI prevalence in far-western area is (5.1 %), followed by western area (3.2%). Categorically, there is highest HIV prevalence among MSW in far western area (16.6%), followed by eastern area (11.2%) and western area (10.4%) respectively. In contrary to this STI prevalence of MSW in eastern area is highest (22.5%), followed by western area (13.3%) and far western (5.8%). Thus there is high HIV and STI prevalence among MSW than on non-MSW

iii. HIV and STI prevalence tends to be higher among alcohol users. HIV prevalence is also higher among drug users but STI prevalence was not prevalent in them.

iv. Majority of MSM/TG have their sexual debuts during teen age period (10 to 16 years).

v. MSM/TGs are involved in unsafe sex. About one-fifth of the MSM/TG tend not to use condom during anal sex while nearly one-third of the MSM/TG had sex even if their clients refused to use condom.

vi. Only one-third MSM/TG had comprehensive knowledge of ABC and BCDEF.

vii. Uptake of available services such as visit to VCT/HCT (16.1 % MSM/TG, 17.9% MSW had visited VCT/ HCT center in last 12 month.) .Similarly, MSM/TG have less exposure to DIC and outreach programs.

viii. Knowledge of condom use and confidential HIV testing was moderate as more than half of the MSM/TG were found aware about them.

ix. Personal experience of sexual violence and discriminationwas reported higher by the MSW and MSM/TG. Nearly one fifth of the MSW/MSM/TG were forced to have sex particularly by hooligans, clients and sex partners. One in ten of the respondents reported forced sex was made by police personnel while a small minority reported it by military personnel (5%)

x. Suicidal ideation, suicidal plan and effort to commit suicide tend to be higher among MSW and MSM/TG.

xi. Nearly one-fifth of the MSM/TG from Terai districts cross Nepal-India border for sex work or seeking clients. Therefore, cross-border HIV prevention programs is necessary for prevention from HIV.

xii. For comprehensive knowledge of ABC and BCDEF seems inadequate a total of 37.4% MSM/TG had knowledge of ABC while 38.8% MSM/TG had knowledge of BCDEF.

4.2 Implications

i. The majority of MSM/TG have their sexual debuts during their teenage (10 to 16 years). Therefore, the HIV prevention interventions should keep teenage groups in key consideration. HIV interventions should target on adolescents and young people focusing on delayed sex, consistent and correct condom use with regular, non-paying and paid sex partners including use of lubricants, HIV and STI prevention and partner reduction, among others.

ii. Targeted interventions are necessary for MSW, TG and Non-MSW as they tend to be engaged in risky sexual behaviors that lead to HIV transmission.

iii. Comprehensive knowledge of HIV prevention seems low in the recent IBBS survey and exposure to OE/PE, DIC and HCT and STI clinics low. Therefore outreach programs and services sites need to increase both coverage of their services.

iv. It is necessary to improve access and exposure of the MSM/TG population to structured HIV programs (Peer education, DIC, HCT/STI clinics). Given the low exposure to STI services and information and higher prevalence of STIs, special attention should be given to enhance exposure of MSM/TG populations to the STI services and information in future HIV interventions.

v. There is a need for advocacy and awareness on sexual violence, discrimination and stigma towards MSM/TG and legal and policy measures should be in place.

vi. Given the high motivation of the MSM/TG populations from Terai highway districts to participate in the survey, future IBBS surveys on MSM/TG should increase sample size and cover inner Terai districts.

vii. As the prevalence of suicidal tendency, plan and suicide attempts seem very high among the MSW and MSM/TG populations, further study to find more about this tendency as well as preventive measures should be adopted.

REFERENCES

DoHS/MoHP (2012).*Annual Report 2012*.Kathamndu, Department of Health Service/MOHP

http://www.nhs.uk/Conditions/Consent-to-treatment/Pages/Introduction.aspx

NCASC (2004).Integrated Biological and Behavioral Survey(IBBS) among Men Having Sex with Men(MSM/TG) and Transgender(TG) People in Kathmandu Valley, Nepal, Round 4, Ministry of Health and Population, NCASC, Teku, Kathmandu

NCASC (2007).Integrated Biological and Behavioral Survey(IBBS) among Men Having Sex with Men(MSM/TG) and Transgender(TG) People in Kathmandu Valley, Nepal, Round 4, Ministry of Health and Population, NCASC, Teku, Kathmandu

NCASC (2009).Integrated Biological and Behavioral Survey(IBBS) among Men Having Sex with Men(MSM/TG) and Transgender(TG) People in Kathmandu Valley, Nepal, Round 4, Ministry of Health and Population, NCASC, Teku, Kathmandu

NCASC (2011) Mapping & Size Estimation of Most-At-Risk-Population in Nepal–2011, Vol. 2 Injecting Drug Users, Teku, Kathmandu: HSCB/NCASC

NCASC (2015).Nepal Country Progress Report. Kathmandu

NCASC (2010). Nepal's National HIV/AIDS Strategy 2011–16, Kathmandu

NCASC (2012). *Nepal Country Progress Report*. Kathmandu

NCASC (2012).Integrated Biological and Behavioral Survey (IBBS) among Men Having Sex with Men (MSM/TG) and Transgender (TG) People in Kathmandu Valley, Nepal, Round 4, Ministry of Health and Population, NCASC, Teku, Kathmandu

NCASC (2015).Integrated Biological and Behavioral Survey (IBBS) among Men Having Sex with Men (MSM/TG) and Transgender (TG) People in Kathmandu Valley, Nepal, Round 5, Ministry of Health and Population, NCASC, Teku, Kathmandu

WHO (2010). *HIV/AIDS among men who have sex with men and transgender populations in South-East Asia: the current situation and National response*. *World Health Organization*, Areaal Office for South East Asia

ANNEXES

Annex 1: Formative assessment for IBBS survey among MSM/TG in of Terai Highway Districts

Background

Nepal's National HIV/AIDS Strategy 2011–16 recognizes the disproportional impact borne by men who have sex with men (MSM/TG) and includes principles of universal access and rights-based approach aligned with the 2011 Political Declaration on HIV/AIDS. IBBS survey among MSM/TG has started in 2002 in Nepal at Kathmandu Valley and since then five rounds of IBBS among MSM/TG have been completed. According IBBS Survey among MSM/TG in Kathmandu valley (round 5), the overall prevalence of HIV in MSM/TG is 2.4% (NCASC, 2015).

Eight districts of Terai highway (Jhapa, Morang, Sunsari, Nawalparasi, Rupandehi, Kapilbastu, Kailali and Kanchanpur) to be selected for the study.

The population size of MSM/TG has been estimated at 135,000 (68,000–202,000) in Nepal (WHO Areaal Office for South-East Asia, 2010). Of the six proposed epidemic areas in Nepal, Highway District area has the maximum number of Male Sex Workers, Transgender and their Clients (MTCs), that is, in the range of 34,941 to 45,997, followed by Kathmandu Valley where the MTC population is estimated to be between 30,498 and 35,234, followed by Western Hills where the MTC population is estimated to be between 132 and 360. The size of MTCs in Eastern Hills is estimated to be between 129 and 350. In the remaining hills area, MTCs are estimated to range between 105 and 229 and the Far-Western Hills area comprises the minimum number of MTCs, estimated number of MTCs ranges between 60 and 160.

Eight[12] districts in Highway Districts area have between 1,000 and 2,000 MTCs and these are **Jhapa,**Saptari, Parsa, Makwanpur, Chitwan, Dhading, **Rupandehi** and Dang. The districts **Sunsari,** Bara, **Nawalparasi**and Banke also have a very large number (more than 2,000) of MTCs. Thirteen districts of the highway have an estimated MTC population of over 1,000. Six districts, namely, Sarlahi, Kaski, Syangja, **Kapilbastu**, Bardiya and **Kanchanpur** have an

[12]*Mapping and Size Estimation of MARPs 2011-HSCB/Nielsen/UNAIDS/World Bank Field work done upto January 2011.*http://www.unodc.org/documents/southasia//reports/MTC_final_report.pdf

estimated MTC population of between 500 and1000 MTCs, whereas Siraha, Dhanusha, Mahottari, Rautahat, Palpa and **Kailali** have between100 and 500 MTCs.

On the basis of size estimation of MTCs, NCASC is going to conduct first time IBBS survey among the MSM/TG&TG in Terai highway districts with the technical support of Save the Children. First it was proposed only in three districts (Jhapa, Sunsari and Morang) of eastern Terai. Latter, Save the Children wished to go around Terain highway from east to west making three study centers (one at Itahari- covers Jhapa, Sunsari and Morang, Second one at Bhairahawa area covers Nawalparasi, Rupandehi and Kapilbastu, and third one at Dhangadi which covers Kailai and Kanchanpur). In this connection, NCASC and Save the Children wanted to know whether the sample size is sufficient or not, which method will be the best for study whether it is Respondent Driven Sampling (RDS) or Two Stage Cluster Sampling and where will be set up the study center. To full fill the these queries, National Institute for development and Research(NIDR) has conducted formative assessment adopting guidelines provided by Save the children, in three places Itahari, Bhairahawa and Dhangadi.

Objectives of Formative Assessment

The objectives of the formative assessment are as follows:

- Decide whether respondent driven sampling (RDS) is an appropriate sampling method for the population being studied (is the survey population socially networked?)
- Identify subpopulations of interest and help select subsets for seeds identify individual seeds. For example different subgroups of sexual minorities in Nepal are gay men, ta and meti etc.
- Define logistical issues (appropriate incentive, interview locations)
- Inform materials development e.g. coupons, survey questions

Benefit of Formative Assessment

The formative assessment helps to identify the following major factors to fulfill the objectives for the study of key population:

a. Social network properties
b. Acceptability of RDS to the survey population
c. Seed selection
d. Survey procedures

e.

Methodology and Methods

The qualitative methodology was applied for conducting formative assessment to identify major factors to collect quantitative data latter in the survey. The following methods were used to gather information to answer aforementioned concerns:

a. **In-depth Interviews with Possible Survey Population:** A total of eight in-depth interviews were taken from the perspective respondents of IBBS survey among MSM/TG of Terai highway Districts during the field visit for formative assessment by using semi-structured questionnaires. The interview were basically focussed on social network properties, survey procedures, acceptability of RDS to the survey population and seed selection.

b. **Key Informant Interviews:** Eight key informant interviews were taken one from each area- Eastern, Western and Far- Western with the program officer of BDS. A semi structured questionnaire was asked for the interviews regarding the collection of information on aforementioned objectives of the assessment.

c. **Social Mapping:** A social mapping was carried out in each perspective RDS centres (Itahari, Bhairahawa and Dhangadhi) in presence of 4 project staffs at Dhangadhi, 5 project officers at Bhairahawa and 10 project officers at Itahari. A group discussions was carried out to: identify the network strength, identify the distribution pattern of survey population, identify the transport system and cost of transportation from major population areas, outreach service management, location of RDS centre, seed selection, preventive measures for duplication of respondents and possible threats and challenges for the survey (strikes, transportation problem, reluctance of the survey population for participation etc.)

d. **Review of Existing Information:** Existing literatures regarding the survey procedures, sampling methods, seed selections and social network properties of survey population for the IBBS survey among MSM/TG of Terai Highway Districts were reviewed.

Findings of the Formative Assessment

The findings of in-depth interview and key informant interview is presented on the basis of following major four concerns for respondent driven sampling methods for recruitments samples of the study.

Social Network Properties

The formative assessment was carried out in three locations (Itahari, Bhairhawa and Dhangadi) of Terai Highway Districts, it was found that the survey population has strong social networks among the target population. More than a dozen of social organizations are working on various issues of MSM/TG through their networks and coordinating with Blue Diamond Society's. The BDS is one of the biggest NGO that is particularly working LGBTI rights and issues in Nepal. Most of MSM/TG spends time with their network and they know 4-200 members and have contact to each other in the past 3 months. Besides sexual activities, sharing of feelings at their network, helping each other's, and caring during illness were the major activities with the male partners and acquaintance

Acceptability RDS to the Survey Population

The survey population and key staffs of BDS and other local organization which are working in the issues of MSM/TG, informed us during KII and In-depth interview that they are contacted and provided services through their network because they all have good strong network. One of participant in Dhangadi said we can reach to them through their network for any service for them otherwise we cannot identified whether they are MSM/TG or not. So that they suggested that the targeted population can come in the survey center through their network. Hence the Respondent Driven Sampling (RDS) method will be appropriate and acceptable for the study. The cross recruitment of survey population can be also possible by RDS method in the adjoining districts. It is also noticed that most of them have various types of male sex partners in terms of age group, level of income and sexual orientation and will participate in IBBS survey. They recommend pink color is the most preferable coupon color, and if there are two types of coupon than blue is next preferable color for recruitment coupon and the size of the coupon with 3X2" will be appropriate for them. They want the coupon should have the information of respondent codes, date of issue, date of expiry, RDS location map, phone No. of RDS center, contact survey person from their community.

Seed Selection

RDS center	Itahari	Butwal	Dhangadi	Total

They were informed that the 3-5 seeds would be better to represent each	Sample size	120	120	100	340

survey district, but there was a demand of one seed from each CBOs of major location for example, eastern area. They have also demanded 5 seeds (Dharan, Itahari, Biratnagar, Pathari and Damak) at eastern area, 4 seeds from western area (Butwal, Bhirahawa, Parasi and Taulihawa) and 3 seeds from far western area (Tikapur, Dhangadhi and Mahendranagar). Again the selected seeds would be representative in terms sexual orientation/characteristic, age group, caste/ ethnicity, education and locality. The total sample size is 340(120 from eastern, 120 from western and 100 from far western area will be taken).

In addition that they were well known about the IBBS survey and some of them have already participated in IBBS survey. They also said that it is necessary to have more number of seeds because one two seeds cannot cover all kind of respondents and they can stop to come from their waves due lack of trust among peers though the persons having strong networking.

Survey Procedure

As the survey is being conducted by using RDS method, the survey procedure follows the RDS rule, like previous surveys of IBBS in Nepal. The proposed survey will follow the same procedures. There will be 4-4 seeds at Itahari and Bhairahawa center and 3 seeds will be in Dhangadi center. There will be one coupon for seed and three other coupons for pear recruitment from their network. The purposed incentive Rs 250 for seed and 200 per pear recruitment. They can recruit up to three pears (one respondent can take Rs 850 as inceptive) however they have demanded Rs 400 for seed and Rs 300 for reward per pear recruitment. They also demanded the survey site should be close to the bus station so that respondents can come easily to survey sites but the place should be spacious, peaceful, and secret.

Benefit of the Survey

They were found that they know the importance of IBBS survey. They told that the survey will inform about aware of own health conditions, telling peers about safe and confidential HIV and STI testing, benefits of being secured and reducing risks from unsafe sex were the ways of convincing reluctant friends. Moreover the HIV and STI test maintaining confidentiality are the most interesting part of IBBS while long interview and coupon systems are uninteresting part of IBBS. There is high diversity among survey population in terms of age, income, sexual orientation, interest, nature of jobs etc. All the local organizations related to MSM/TG

community are willing to work in the IBBS survey because they will be befitted after the findings of the survey by using its finding while developing the project for their communities.

Some Issues

After KII and in-depth interview, we found following issues:

RDS centers will be established at Itahari, Butwal and Dhangadi.

- Most of the MSM/TGs of survey area willing to participate on IBBS survey to know the HIV Status but few of them fears of being exposed
- Some of the peers of the participants are illiterate so that it may difficult to convince to participate in the survey.
- As majority of respondents involved on day to day labor on farm/ industries, they don't want to join the survey for less earnings
- There were no more groups/ NGOs working with the survey population so that have to wait only BDS. If the BDS has not program then they will not get any service.
- There were no any other outreach program to contact survey population
- They feel uncomfortable with female staffs to provide information and the male and MSM/TG community staff of are highly preferable.

Result of Social Mapping

- The survey population was found distributed all parts of the survey districts, though the population in urban areas has more exposed and involved on network than the population of countryside. The estimated population size of major areas of survey districts was found 2650 in eastern area, 1800 western area and 2600 far western area
- The three preferred RDS location will be in ***Itahari*** (Eastern Terai Highway- Jhapa, Morang and Sunsari), ***Bhairahawa*** (WeasternTerai- Nawalparasi, Rupandehi and Kapilbastu) and ***Dhangadhi*** (Far- western Terai Highway- Kailali and Kanchanpur) for survey on basis of travel access and center point for majority of survey population. But the participant from Jhapa has requested to establish one RDS center in Damak to cover the high risk population of many parts of Jhapa due to long journey up to Itahari (more than 3 hrs one way travel to Itahari) and more than two hrs of study process, it is very difficult to return home in the same day and it was argued that it wouldn't be fair to the survey population of Jhapa to travel Itahari. It was also suggested that most of the respondents have to use Riksaw/Safari to get

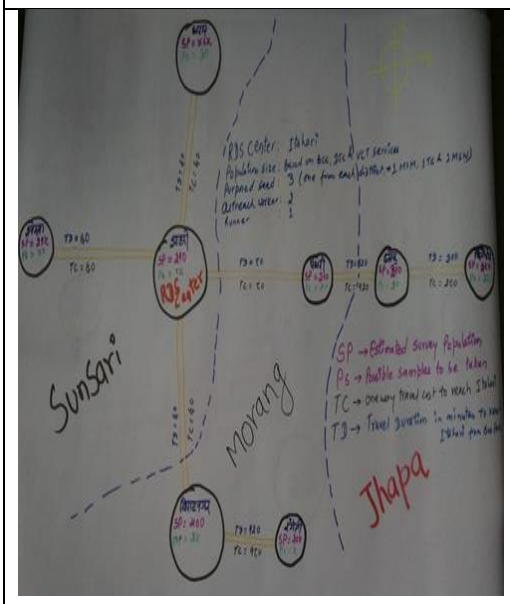
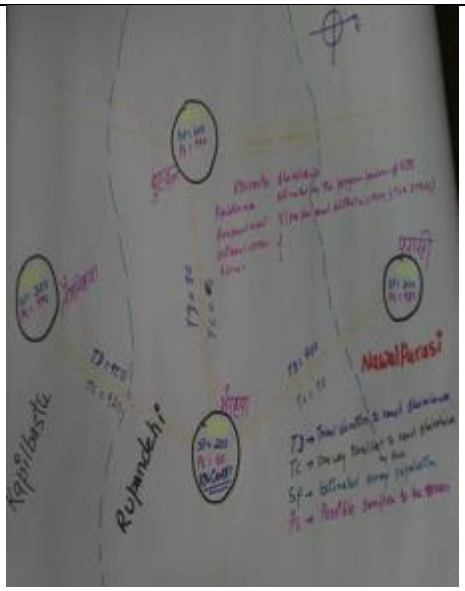
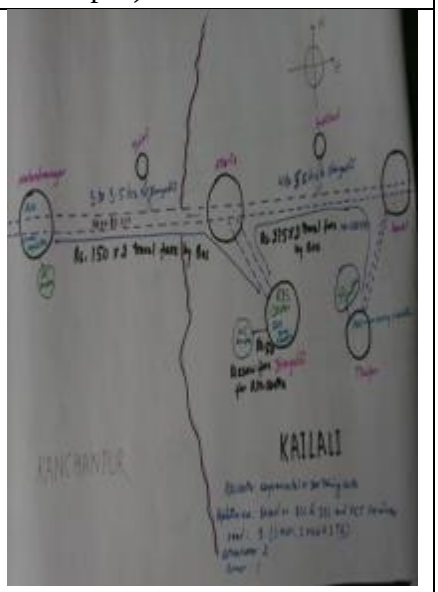
bus to RDS center. The below table shows the RDS center places to come, average time period to reach RDS center and two way bus fare:

RDS Center	Location	Estimated Respondents	Average Duration (Hrs)	Average cost (Public Bus- to and from) Rs	Estimated travel cost Rs.
Itahari (Sunsari) **Estimated Population= 2650**[13]	Itahari (Sunsari)	15	½ hr	40	600
	Inaruwa (Sunsari)	5	1hr	120	600
	Dharan (Sunsari)	20	1hr.	120	2400
	Duhabi (Sunsari)	8	½ hr	60	480
	Pathari (Morang)	12	1 ½.	160	1920
	Biratnagar (Morang)	20	1hr	120	2400
	Rangeli (Morang)	3	2 ½	360	1080
	Urlabari (Morang)	5	1 ½ hr	200	1000
	Damak (Jhapa)	12	2 hrs.	480	5760
	Birtamod (Jhapa)	8	3 ½	600	4800
	Bhadrapur (Jhapa)	5	4hrs	600	3000
	Kakadvitta (Jhapa)	7	4hrs	600	4200
Bhairahawa (Rupandehi) **Estimated Population= 1800**	Bhairahawa	30	½ hr	60	1800
	Butwal (Rupandehi)	40	1 ½ hrs	160	6400
	Parasi (Nawalparasi)	30	1 ½ hrs.	180	5400
	Taulihawa (Kapilbastu)	20	3 hrs	260	5200

[13] In verbal communication with project staffs

Dhangadhi (Kailali) **Estimated Population= 2650**	Tikapur (Kailali)	30	4 ½ hrs	550	16500
	Mahendranagar (Kanchanpur)	25	3 ½ hrs	300	7500
	Dhangadhi (Kailali)	45	½ hrs	80	3600
Total		**340**			**74640**

Social Map

Eastern Terai Highway Districts (Jhapa, Morang and Sunsari)	Western Terai Highway Districts (Nawalparasi, Rupandehi and Kapilbastu)	Far Western Terai Highway Districts (Kailali and Kanchpur)
		

Local level Perception

- All the local organizations willing to provide active support for the successful completion of the IBBS survey, the CBOs will provide outreach service on rotation basis, where two outreach staffs will be involved in each RDS center along with a runner also from the CBOs. Regarding the location of RDS center, it was suggested that the RDS center must be easy accessible by public bus, spacious and peaceful with sufficient rooms and furniture.
- In case of seed selection, it was suggested that as much more seed to be recruited to cover the districts proportionally (at least one seed from one district), and also would be more

effective if one CBO gets at least one seed so that all survey population could proportionally be represented. And it was also suggested that at least 1MSM/TG, 1 MSW and 1 TG to be selected as seed to cover all kind of survey population.

- Due to small population size and well-connected network the problem of duplication will not be occurred in the proposed survey areas. The outreach staffs and the program persons of CBOs will provide strong monitoring to control any misconduct during the survey period. It was suggested that the disturbance from the external factors like general strikes might be the expensive for the survey due to they could not come in the RDS center in the absence of public transportation.

Conclusions

After formative assessment before the conducting IBBS survey among MSM/TG in the Terai Highway Districts, we conclude that the survey population has a strong social network among them as well as the community base organizations (CBOs) and the fulfill the properties of Respondent Driven Sampling method . Thus, we can adopt RDS method to reach hard population for conduction IBBS survey among MSM/TG.

There will be 4-4 seeds in eastern (Itahari) and western (Butwal) and 3 seeds in Far west (Dhangadi) RDS center on the basis of sexual orientation/characteristics (MSM/TG/MSW/TG), age group, caste/ ethnicity, education and locality.

As the survey is being conducted by using RDS method, the survey procedure follows the RDS rule, like previous surveys of IBBS in Nepal the proposed survey will follow the same procedures.

However to establish three RDS centers in **Itahari** (covers Jhapa, Morang and Sunsari survey population), **Bhairahawa** (covers Rupandehi, Nawalparasi and Kapilbastu survey population), and **Dhangadi** (covers Kailali and Kanachanpur survey population) on basis of center from all locations will be highly expensive in terms of travel cost and time consuming to reach at the RDS center.

The demand of stakeholders of Jhapa was to establish a separate RDS center at Damak or Birtamod to make easy to come for survey in time. Majority of respondents are working in daily

wages in farm or industries, so that they might not participate in the survey due to less incentive than that daily wages they have been earning.

Annex 1.1: Formative assessment for IBBS survey among MSM/TG in of Terai

Method vs Questions Checklist

Methods	Questions	Participants
In-depth interviews	i. Do you know or spend time with other survey population members? ii. How many MSM/TGs do you know who also know you, who have been involved on sexual activities with man in past 3 months? How many of these MSM/TGs have you seen in the past month? ii. Please tell me about how your male partner friends and acquaintances interact with each other. What activities do they do together? v. Do you have male sex partner in other adjoining districts? If yes how many of them are in your network? v. Do you have male sex partners other than your age group, sexual orientation (Gay, ta meti, TG, etc.) vi. Would you (or your peers) be willing to participate in IBBS survey? ii. Why yes or why not? ii. Would you be willing to recruit your peers into IBBS survey? x. How many coupons out of three could you give to your peers that they would actually redeem? x. Do most of your peers read? xi. What might prevent your peers from participating in the survey? ii. Will you (or your peers) participate if the IBBS survey includes HIV/STI tests? ii. How would you encourage a friend to join the IBBS survey? Especially one who is reluctant?	3-5 (survey population)
KII	1. Do you have any idea about IBBS survey? 2. What seems most/least interesting about IBBS survey? 3. Can you think of any survey population members who would make good seeds (describe seeds)? 4. Do you know different types of survey population members (who are diverse in age, income, risk, sexual orientation etc.)? 5. What would be the best way to locate survey population members to be seeds for our survey? 6. Are there nongovernmental organizations or other groups	3-5(BDS , chairperson and programme coordinators, local and central)

	that work with survey population members? 7. Have other outreach programmes used survey population members to contact other survey population members? 8. Can you help us contact survey population members? 9. Do you think Rs…….. as a first incentive and Rs…….each for successful recruitment of peers is sufficient to encourage IBBS survey population members to participate in an IBBS survey? 10. About how much would transport cost would be require to get to the IBBS survey site from your location? (IBBS Survey sites Itahari, Butwal and Dhangadhi) 11. What hours/days are most convenient for survey population members to participate in an IBBS survey? 12. How can survey population members get to the IBBS survey site? 13. Is it easy for survey population members to get here on public transport? 14. Do you think survey population members are willing to be interviewed at the same survey site during the same hours as other members? 15. What type of survey site would be most comfortable for survey population members to go to? 16. Whom do you prefer men, women or transgender staff conducting the survey? 17. Describe the type of person with whom you would feel most comfortable answering personal questions? 18. Describe the type of person with whom you would feel most comfortable taking biological specimens from you (e.g. a rectal swab)? 19. Is there a local nongovernmental organization that you know of with people willing to work in this survey? 20. What colours are appropriate for the coupon? 21. Coupons are about the size of 3X2", do you think they should be smaller or larger? (display used coupon of past IBBS survey) 22. What kinds of information should be included on the coupons? 23. Do you think a map on the coupon is helpful for finding the survey site	
Social Mapping and group discussion	Social Mapping will be carried out in presence of key program personnel regarding following issues: 1. Identify the network strength 2. Identify the distribution pattern of survey population 3. Identify the transport system and cost of trasnportation from major population areas 4. Outreach service managent	5-8(BDS and its network staffs)

	5. Location of RDS center 6. Seed selection 7. Preventive measures for duplication of respondents 8. Possible threats and challenges for the survey (strikes, transportation problem, reluctance of the survey population for participation etc.)	
Secondary data	Anual reports , midterm reports or articles published in local and national medias	BDS and its network

Annex 2: Survey Questionnaire

Integrated Biological and Behavioral Surveillance Survey (IBBS) 2016 among Men who have Sex with Men/Transgender people in Terai Highway Districts

Would you like to participate?

1. Yes 2. No

Functional definition of respondent:

Inclusion definition for MSM/TG:*' biological males who have engaged in sexual relationship (oral and/or anal sex) with another biological male at least once within the past 12 months prior to the date of survey*'

Male Sex Workers (MSWs)/ TG who involved in sex work: "regardless of their identity or label if one male has had anal or oral sex to another male in exchange for money or any other commodities in the 12 months preceding the study".

Code Répondent: (Circle)

Sex worker: Yes.....1 TG : Yes.....1

No .....2 No 2

Seed **Yes.....1** No 2

Coupon number of Respondent ☐☐☐☐☐ **(If respondent is seed write "0")**

Given coupon number: 1) ☐☐☐☐☐ 2) ☐☐☐☐☐ 3) ☐☐☐☐☐

Name of Interviewer: _____ Code No. of Interviewer: ☐☐☐☐☐

Date of Interview: _____/ _____ / 2073

Has someone from ……. interviewed you with this questionnaire in last few weeks?

1. Yes 2. No **(Continue Interview)**

↓

When?

_____Days ago **(End Interview)**

Respondent's coupon No. ☐☐☐☐☐☐☐

1.0 PERSONAL INFORMATION

Q. N.	Questions	Coding Categories	Skip to
101	How old are you?	Age ..... ☐☐ ***(Write the completed years)***	
102	What is your caste/ethnicity?	Ethnicity/Caste_____ (Specify)	
103	Do you follow any religion?	Yes ..... 1 No ..... 2 →	104
103.1	What is your religion?	Hindu ..... 1 Buddhist..... 2 Muslim ..... 3 Christian ..... 4 Others (Specify) _____ 96 Don't remember/know ..... 98 No Response..... 99	
104	What is your educational status? (Circle '0' if illiterate, '19' for the literate without attending the school, and write exact number of the passed grade)	Illiterate..... 0 Literate..... 19 Grade ..... ☐☐ ***(Write the grade completed)***	
105	What kind of person do you get attracted to? **(Multiple answer possible)**	Dohori..... 1 Ta..... 2 Pinky ta..... 3 Man/mard ..... 4 Homosexual..... 5 Gay ..... 6 Meta/meti..... 7 Mougiya/mouga..... 8 Kothi/Panthi…….9 Nachaniya …… 10 Pinkey meta……11 Woman..……12 *Hijara* ..... 13 Trans gender(TG)……..14 Others (Specify) _____ 96 Don't remember/know ..... 98 No Response 99	
106	How would you identify yourself on the basis of your sexual behavior? **(Only one answer)**	Dohori..... 1 Ta..... 2 Mougiya/mouga……3 Kothi/Panthi…….4 Nachaniya……5 Pinky ta..... 6	

Q. N.	Questions	Coding Categories	Skip to
		Man/mard ..... 7 homosexual..... 8 Gay ..... 9 Meta/meti……10 Pinky meta……..11 Woman ..... 12 *Hijara* ..... 13 Others (Specify) _____ 96 Don't remember/know ..... 98 No Response 99	
106.1	How do you identify yourself on the basis of gender **(Only one answer)**	*TesroLingi*..... 1 Man..... 2 Woman ..... 3 Don't Know..... 98 No Response..... 99	
106.2	Which of the following best describes your current living situation? (Select only one option)	Homeless on the street……..1 Living in own home……..…2 Living in a residential hotel…..…..…3 Rented apartment/room……..4 Other (specify)_____.....96	107
106.3	How often your landlord or male partner forced you to vacate the rented room or apartment in the last 5 years?	Never……. ….1 0nce/twice……..…… ...2 Three to five times..……..…3 More than five times..…….……..4 Other ……96 Do not remember ……98	
107	Are you currently married?	Yes..... 1 No ..... 2 No response 99	107.2
107.1	Who is your married sex partner? **(Multiple answer possible)**	Male/Meti ..... 1 Female ..... 2 Others (Specify) _____ 96	

Q. N.	Questions	Coding Categories	Skip to
107.2	Does your family force you for marriage with female?	Yes……1 No……2 No response 99	
108	Are you currently living with a regular sexual partner?	Yes ..... 1 No ..... 2 No response 99	110
109	Is your regular sexual partner who you live with male or female? (If female, confirm if she is wife or other female partner)	Male/Meti ..... 1 Wife ..... 2 Other female ..... 3 Transgender (TG) ……4 No response 99	
110	In the last 12 months, have you been away from your home for more than one-month altogether?	Yes ..... 1 No ..... 2 Don't remember/know ..... 98 No response 99	
111	What is your main profession? **(Only one response)**	Student ..... 1 Driver ..... 2 Police ..... 3 Military ..... 4 Civil servant ..... 5 Businessman ..... 6 Private company staff ..... 7 Unemployed ..... 8 Laborer/wage labor ..... 9 Others (Specify) _____ 96 Don't know ..... 98 No response 99	
112	What was your total income in last month? (Write total income from one or more than one professions)	NRs _____ ☐☐☐☐☐ ***If response is "00" go to Q.201*** Don't remember/don't know 98 No response 99	115
113	Have you ever forced to leave or given pressure to leave home due to your sexual identity or behavior?	Yes ..... 1 No ..... 2 No response…… 99	
114	Is there anyone in your family to whom you can talk about your sexual behavior/identity?	Yes ..... 1 No…… …….2 No response ……99	

2.0 INFORMATION ON SEXUAL BEHAVIOR

Q. N.	Questions	Coding Categories	Skip to
201	At what age did you first have sexual intercourse? (I mean any type of anal and or vaginal sex even if you were forced to have it)	Age in years ..... ☐☐ (Completed years) Never had oral, vaginal or anal sex ..... 1 Don't know/Can't recall ..... 98 No response 99	**Stop interview**
202	Was your first sexual partner male or female?	Male/meti ..... 1 Female ..... 2 Don't know ..... 98 No response 99	
202.1	Was your first sexual contact on your decide or raped? (any type of sex; anal, vaginal, oral)	Raped ……1 Agree……2 Don't know/ Cann't recall…..…98 No response ……..99	
203	Have you had vaginal, anal or oral sex with a female in the last 12 months? **(Check with answer in Q No. 109)**	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	
204	Have you had anal/oral sex with a male/meti in the last 12 months?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	**Stop interview**
205	Have you ever had sex with a male/meti in exchange for money or any other commodities?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	211
206	In the last 12 months have had sex with a male/meti for money?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	
207	How old were you when you had sex with a male/meti for money for the first time? (**In Completed years)**	Year's old ..... ☐☐ Don't remember ..... 98 No response 99	
208	When did you have last sex with a male/meti for money? (I mean any kind of sex, including oral sex, etc.)	Days ..... ☐☐ Don't remember ..... 98 No response 99	

Q. N.	Questions	Coding Categories	Skip to
209	Have you had anal (receptive, 86inserted or both) sexual intercourse in the last six months with a male partner?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	211
210	Did you or your partner use a condom when you had last time anal (receptive, 86inserted or both) sexual intercourse in the last six months?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	
211	How many often did you cross the Nepal -India border for oral or anal sexual activities	Everyday……..1 Frequently……2 Often……3 No……4 Don't remember……98 No response……..99	

3.0 USE OF CONDOM ITH SEX PARTNERS CONDOM USE WITH NON-PAYING MALE SEX PARTNER

Non-paying male sex partner: Male partners with whom you may have had sex without paying any cash or without exchanging gifts. When answering these questions please think about your "meti" or "ta" as well as other male partners.

Q. N.	Questions	Coding Categories	Skip to
301	With many male/ Meti have you had sexual intercourse without any payment and receiving gift in last one month?	Number ..... ☐☐ No one ..... 0 Don't remember ..... 98 No response 99	306
302	With how many of those partners did you have anal sex?	Number ..... ☐☐ No one ..... 0 Don't remember ..... 98 No response 99	304
303	Did you use condom while you had anal sex with non-paying male sex partner in the last month?	Yes……1 No……. ……2 Don't remember……..…98 No response…….99	
304	The last month, when you had anal sex with a non-paying male/meti sex partner, did you use a condom?	Always ..... 1 Most of the time ..... 2 Sometimes ..... 3 Never……4 Don't remember……..…98 No response…….99	

Q. N.	Questions	Coding Categories	Skip to
305	Where did you meet your last non-paying male sex/meti partner?	Park..... 1 Discothèque ..... 2 Restaurant..... 3 Dance Restaurant..... 4 Massage Parlor ..... 5 Street..... 5 Pub/Café ..... 7 Temple..... 8 Bus Station..... 9 Public Toilets..... 10 Cinema Hall..... 11 Near Army barracks..... 12 Internet café..... 13 Sauna/Steam Bath..... 14 Swimming Pools/sports center ..... 15 Home ..... 16 *Bhatti Pasal* ..... 17 Forest ..... 18 Saloon ..... 19 Shopping center ..... 20 Others (Specify) _____ 96 Don't remember..... 98	

CONDOM USE WITH NON-PAYING FEMALE SEX PARTNER

Non-paying female sex partner: Female partners with whom you may have had sex without paying in cash or without exchanging any gifts.

If no in Q. 203 go to Q.N. 309

Q. N.	Questions	Coding Categories	Skip to
306	In the past one month, how many female sex partners have you had vaginal, anal or oral sex with where no money was paid? (Including your wife if married as well as other women)	Number..... ☐☐ No one ..... 0 Don't remember..... 98 No response 99	309
307	Did you use condom while you had vaginal, oral or anal sex with non-paying female sex partner in the last time?	Yes.....1 No .....2 Don't remember.....98 No response 99	
308	The last month, when you had vaginal, anal or oral sex with a non-paying female sex partner, did you use a condom?	Always ……..1 Most of the time……..……..2 Sometimes…….3 Never ……4	

Q. N.	Questions	Coding Categories	Skip to
		Don't remember……98 No response 99	

CONDOM USE WITH ONE-TIME MALE CLIENT

One-time male clients: Men who paid or gave other commodities to you for sex as client and you have never had sex with him before

Q. N.	Questions	Coding Categories	Skip to
309	In the last one month, how many male / meti clients have you had sex with only one time? **(Include oral, anal sex partner)**	Number ..... ☐☐ No one ..... 0 Don't remember ..... 98 No response 99	315
310	How many one-time male/meti clients did you have anal sex with in the last month?	Number ..... ☐☐ No-one .....0 Don't remember .....98 No response 99	314
311	Did you ask them to use condoms?	All of them.....1 Some of them.....2 None of them .....3 Don't remember .....98 No response 99	
312	Did one time meti/ male client use a condom when you have had anal sex with in the last time?	Always .....1 Most of the time .....2 Don't remember .....98 No response.....99	
313	In last month, how many often did one time meti/ male client use a condom when you have had anal sex with?	Yes.....1 No .....2 Don't remember.....98 No response 99	
314	How many one-time male clients did you have oral sex with in the last month?	Number ..... ☐☐ No-one .....0 Don't remember .....98 No response 99	

CONDOM USE WITH REGULAR MALE CLIENTS

Regular male clients: Men who paid or gave other commodities to you for sex as client and you have had sex with him more than once

Q. N.	Questions	Coding Categories	Skip to
315	In the past one month, how many regular male/meti clients had had sexual intercourse with you?	Number..... ☐☐ No one ..... 0 Don't remember 98	320

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
316	How many regular male/meti clients did you have anal sex with in the last month?	Number ..... ☐☐ No on .....0 Don't remember .....98 No response 99	319
317	How often did you use condom while you have had anal sex with regular male/meti client in the last month?	Always .....1 Most of the time .....2 Sometimes .....3 Never.....4 Don't remember .....98 No response 99	
318	The last time you had anal sex with a regular male/meti client, did he use a condom?	Yes.....1 No .....2 Don't remember.....98 No response 99	
319	How many regular male/meti clients did you have oral sex with in the last month?	Number ..... ☐☐ No-one .....0 Don't remember .....98 No response 99	
320	In the past month, had you sexually satisfied the male/meti client without anal sex? (**Any male client: Regular or one-time)**	Yes.....1 No .....2 Don't remember.....98 No response 99	
321	How much money did your last male/meti client pay you? (**Regular or one time client**)	Rs. ☐☐☐☐☐ Don't remember .....98 No response 99	
322	Where did you meet your last male/meti client?	Park.....1 Discotheque .....2 Restaurant.....3 Dance Restaurant.....4 Massage Parlor .....5 Street.....5 Pub/Café .....7 Temple.....8 Bus Station.....9 Public Toilets.....10 Cinema Hall.....11 Near Army barracks.....12 Internet /café 13	

Q. N.	Questions	Coding Categories	Skip to
		Sauna/Steam Bath.....14 Swimming Pools.....15 Home .....16 Bhatti Pasal.....17 Forest .....18 Saloon .....19 Shopping center .....20 Others (Specify) _____96 Don't remember.....98 No response 99	
323	What are the most common occupations among your clients? **(Do not read options. Probe for up to three)**	Student.....1 Police/Military.....2 Civil servant.....3 Businessman.....4 Laborer .....5 Unemployed .....6 Person who returned from India ..7 Others (Specify) _____.96 Don't know.....98 No response.....99	

CONDOM USE WITH PAID MALE/ METI SEX PARTNER

Paying male sex partner: Men to whom you have paid in cash or gave some commodities for sex

Q. N.	Questions	Coding Categories	Skip to
324	In the past one month, how many different men/meti did give you money or any other commodities so that they would have had sex with you?	Number..... ☐☐ No one ..... 0 Don't remember..... 98 No response 99	327.1
325	How many male/meti partners did y pay you to have anal sex with in the last month?	Number ..... ☐☐ Not paid.....0 Don't remember.....98 No response 99	327.1
326	The last time you had anal sex with a paid male sex partner, did you use a condom?	Yes.....1 No .....2 Don't remember.....98 No response 99	
327	Had you used condom while you have had anal sex with paying male sex partners in the last month?	Always .....1 Most of the time .....2 Sometimes .....3 Never.....4 Don't remember .....98 No response.....99	

Q. N.	Questions	Coding Categories	Skip to
327.1	If a client (regular or casual) refuses to use a condom, what do you usually do?	Refuses to have sex with the client……...1 Forces the client to use a condom…….……..2 Explains the advantages of condoms……..3 Still has sex with the client……...….4 Only takes medication/treatment after sex…….……5 Other (Specify) ..... 96 Don't know.....98	
327.2	How often did you have sex with regular and casual clients without condoms to make more money within 6 months?	Always……...……....1 Most of the time……..…2 Sometimes…….3 Never…….4 Don't know…….……98 No response……..…...99	

CONDOM USE WITH PAID FEMALE SEX PARTNER (FEMALE SEX WORKERS)

Paid female sex partner: Women to whom you have paid in cash or gave some gifts for sex

Q. N.	Questions	Coding Categories	Skip to
328	In the past one-month, how many time did you pay or give gift to the female sex workers for sexual contact?	Number ..... ☐☐ No one ..... 0 Don't remember..... 98 No response 99	331
329	The last time you had vaginal or anal sex with a paid female sex partner, did you use a condom?	Yes.....1 No .....2 Don't remember .....98 No response 99	
330	How often did you use condom while you have had vaginal or anal sex with paying female sex partners in the last month?	Always .....1 Most of the time .....2 Sometimes .....3 Never.....4 Don't remember.....98 No response.....99	
331	With whom did you have the last sexual intercourse (anal or vaginal)?	Non-paying male partner .....1 Non paying female partner .....2 Male client.....3 Female client .....4 Paid male sex worker.....5 Paid female sex worker (FSW).....6 Don't Know.....98	

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
332	Did you use a condom in the last sexual intercourse (anal or vaginal)?	Yes.....1 No .....2 Don't remember/don't know .....98 No response 99	
333	Who was your last male anal sexual partner? **(Check the answer given in Q 336)**	Non-paying male partner .....1 Male client.....2 Paid male sex worker.....3 No anal sexual intercourse in Last 12 months .....4 Don't Know.....98 No response 99	→401
334	Did you use a condom in the last anal sexual intercourse with male sex partner?	Yes.....1 No .....2 Don't remember/don't know .....98 No response 99	
335	How many different sex partners did you have in the last six months (count all types of partners: paid, not-paid, regular, one time among all male, female and *tesrolingis* also)	Number ..... ☐☐☐ No-one .....0 Don't remember.....98 No response 99	

4.0 SEXUAL PRACTICES AND VIOLENCE

Q. N.	Questions	Coding Categories	Skip to
401	In the past 12 months, were you ever beaten because of your sexual behavior?	Yes.....1 No .....2 Don't remember/don't know .....98 No response 99	403
402	Who was/were the people who beat you? **(Multiple answers possible don't read possible answer)**	Police.....1 Military.....2 Client .....3 Regular Partner.....4 Sexual Partner .....5 Hooligans group.....6 Others (Specify)_____96 Don't remember.....98 No response.....99	
403	In the past 12 months, were you forced to have sex with someone against your wishes?	Yes.....1 No .....2 Don't remember/don't know .....98 No response 99	→405
404	Who were these people who forced you to have sex against your will?	Police..... 1 Military..... 2 Client..... 3	

	(Multiple answer possible)	Regular Partner ..... 4 Sexual Partner ..... 5 Hooligans group..... 6 Others (Specify)_____96 Don't remember ..... 98 No response..... 99	
405	In the past 12 months, have you been cheated /threatened because of your sexual behavior?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response..... 99	
406	In the past 12 months, have you faced any kind of discrimination in your job or every day activities because of your sexual behavior?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	
406.1	Were you ever fired from the job or forced to leave the job due to your sexual orientation/ behaviour?	Yes…… …..1 No……..…… …2 Don't remember ..... 98 No Response……..……..99	
407	Have you ever faced any problems because of your sexual identity?	Yes ..... 1 No ..... 2 Don't remember ..... 98 No response 99	
408	Have you ever experienced discrimination, been prevented from doing something, or been hassled or made to feel inferior in any of the following situations because of your sexual orientation?		

Response/ frequency	**At school**	**Getting hired or getting a job**	**At work**	**Getting housing (renting or buying)**	**Getting medical care**	**Getting service in a store or restaurant**	**On a street or in a public setting (park)**	**From the police/ other security personnel**
Response	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3	Yes= 1 No= 2 Never= 3
If yes, How many times did this happen?	Times ……	Times ……	Times ……	Times ……	Times ……	Times ……	Times ……	Times ……
409	When you are treated unfairly because of your sexual orientation, what is your reaction? Accept it/keep to self= 0 Do something/keep to self= 1							

	Do something/talk to others= 2

Q. N.	Questions	Coding Categories	Skip to
410	Did you ever think of commit suicide because of hesitation feeling yourself?	Yes.....1 No .....2 No response.....99	→ 501
411	How often did you have any thoughts about ending your own life in last 12 months?	Many times……1 A few times……2 Once or twice……3 No response……99	
412	Have you ever made a plan to commit suicide?	Yes.....1 No.....2 No response.....99	
413	Did you ever attempt suicide?	Yes.....1 No .....2 No response.....99	

5.0 ACCESSIBILITY OF CONDOM AND LUBRICANT

Q. N.	Questions	Coding Categories	Skip to
501	Do you have condoms with you at this moment? Please show me	Can show condoms ..... 1 Cannot show a condom..... 2 No response..... 99	
502	In the last 12 months had you been given condoms by an outreach service, drop-in centre or sexual health clinic?	Yes ..... 1 No..... 2 Don't remember..... 98 No response..... 99	

Q. N.	Questions	Coding Categories	Skip to
503	How much did you pay for one piece of condom when you bought it last time?	NRS .....☐☐ Free.....1 Don't know .....98 No response 99	
504	Can you get a condom every time when you need it?	Yes.....1 No .....2 Don't need one.....3 Don't remember .....98 No response 99	→ 507 507

505	Why you can't get a condom every time when you need it? **(Multiple answers. DO NOT READ the possible answers)**	Cost too much.....1 Shop/pharmacy too far away.....2 Shops/pharmacies closed .....3 Shy to buy condom.....4 Don't know where to obtain .....5 Don't want to carry condom.....6 Other (Specify) _____96 Don't know .....98 No response.....99	
506	Have you ever used lubricant when you have anal sex? **(Lubricants: Something to make your or your partner's penis slippery so it is easier to insert without pain)**	Yes.....1 No .....2 Don't remember .....98 No response 99	
507	What types of lubricant did you use during last anal sexual activities?	Saliva .....1 Oil .....2 Water based lube .....3 Antiseptic/antibiotic cream .....4 Ghee.....5 Cream/lotion.....6 Other (Specify) _____..96 Don't know .....98 No response.....99	
508	Did you use a condom that time?	Yes.....1 No .....2 Don't know.....98 No response 99	
509	Some people use a lubricant product made especially for using with condom. Have you heard of such a lubricant?	Yes.....1 No .....2 Don't remember .....98 No response 99	514
510	In the past 30 days, how often have you used a special lubricant with condoms together while having anal sex?	Always .....1 Most of the time .....2 Sometimes .....3 Never.....4	→ 513
511	Why you don't use or sometimes only use, special lubricant with condom?	Cost too much.....1 Shy to buy lubricant.....2 Don't know where to obtain .....3 I do not need to use.....4 I use other cream .....5 Not aware of such products.....6 Other (Specify) _____..96 Don't remember .....98 No response.....99	

512	**If the respondent is 4 in Q.N. 510 go to Q.N. 513** Why do you use special lubricant with condom while having sexual intercourse? **(Multiple answers. DO NOT READ the possible answers)**	Decrease pain/inflammation .....1 Increase feeling/stamina.....2 Decrease risk of condom breakage 3 Prevent HIV/AIDS infection.....4 Other (Specify) _____96 Don't know .....98 No response.....99	
513	Have you faced any problems while using lubricants?	Condom slippage.....1 Irritation or burning sensation.....2 Condom breakage.....3 No problem .....4 Other (Specify) _____96 Don't know .....98 No response.....99	
514	In the last month, was the condom that you were using broken?	Yes.....1 No .....2 Condom never used/didn't use last month .....3 Don't know.....98 No response 99	

6.0 USE OF ALCOHOL AND DRUGS

Q. N.	Questions	Coding Categories	Skip to
601	Have you ever drunk any drinks containing alcohol?	Yes ..... 1 No..... 2 → No response..... 99	 604
602	During the last 4 weeks, how often did you drink alcohol?	Every day ..... 1 3-4 days a week..... 2 At least once a week ..... 3 Did not drink alcohol in the last week ..... 4 Don't know / remember ..... 98 No response..... 99	
603	How much alcohol had you drunk in your last sexual intercourse? **(Only one response)**	A lot (more than 6 small beers or 3 glass of local raw whisky) ..... 1 Some (3-4 small beers or 1-3 glasses of wine) ..... 2 A little (1-3 small beers or 1 glass of wine) ..... 3 No alcohol..... 4 Don't know / remember ..... 98 No response..... 99	
604	Some people have tried different types of drugs. Which of the following have you ever tried in the last 12	**Yes No** Ganja..... 1 2	

Q. N.	Questions	Coding Categories	Skip to
	months? **READ OUT ANSWERS**	Chares ..... 1 2 Tablets..... 1 2 Glue/dendrite ..... 1 2 Heroine..... 1 2 Other (Specify)_____..... 96	
605	Some people inject the drugs with a syringe. Have you ever injected such drugs in the last 12 months **DO NOT COUNT DRUGS INJECTED FOR MEDICAL PURPOSES OR TREATMENT OF AN ILLNESS**	Yes ..... 1 No..... 2 Don't remember/don't know..... 98 No response..... 99	

7.0 SEXUALLY TRANSMITTED INFECTIONS (STI)

Q.N.	Questions	Coding Categories	Skip to
701	Could you tell me about any symptoms of STIs in men? **DO NOT READ OUT** **(Multiple responses possible)**	Penis discharge ..... 1 Burning pain during urination..... 2 Genital ulcers/sores..... 3 Swellings in groin area..... 4 Anal discharge ..... 5 Anal ulcer/sores ..... 6 Other (Specify)_____..... 96 Don't know..... 98 No response..... 99	
702	Have you had genital ulcer / discharge / sore (penis and or anal) during the past 12 months	Yes ..... 1 No..... 2 Don't know..... 98 No response..... 99	→ 801
703	What was the **first** thing you did when you had those symptoms? **DO NOT READ OUT**	Sought treatment from hospital.... 1 Sought treatment from chemist.... 2 Sought treatment from private doctor/ clinician ..... 3 Sought treatment from BDS clinic4 Received treatment from friend..... 5 Took medicine available at Home..... 6 Nothing ..... 7 Other (Specify) _____ 96 Don't remember/know..... 98 No response..... 99	

8.0 HIV/AIDS KNOWLEDGE AND ATTITUDES

Q. N.	Questions	Coding Categories	Skip to

Q. N.	Questions	Coding Categories	Skip to
801	Have you ever heard of HIV or AIDS?	Yes ..... 1 No ..... 2 →	901
		No response ..... 99 Don't know 98	
802	Do you know anyone who is infected with HIV or has died of AIDS?	Yes ..... 1 No ..... 2 →	804
		No response 99	
803	Do you have a close relative or close friend who is infected with HIV or has died of AIDS?	Yes, a close relative ..... 1 Yes, a close friend ..... 2 No ..... 3 No response 99	
804	Can people reduce their risk of HIV by using a condom correctly every time they have sex?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
805	Can people reduce their risk of HIV by using a condom correctly every time they have anal sex?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
806	Can a person get the HIV virus from mosquito bites?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
807	Can people protect themselves from HIV by having one uninfected faithful sex partner?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
808	Can people protect themselves from HIV by abstaining from sexual intercourse? **(This means abstaining from anal as well as oral sex)**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
809	Can a person get the HIV virus by sharing meal with someone who is infected?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
810	Can a person get the HIV virus by using a needle that is used by someone else?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
811	Do you think that a healthy-looking person can be infected with HIV, the virus that causes AIDS?	Yes ..... 1 No ..... 2 Don't know 98	

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
812	Can a person get HIV by shaking hand with an HIV infected person?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
813	Can blood transfusion from an infected person to the other transmit HIV?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
814	Can a pregnant woman infected with HIV transmit the virus to her unborn child?	Yes ..... 1 No ..... 2 → Don't know ..... 98 → No response 99	 816 816
815	What can a pregnant woman do to protect her unborn child against the risk of HIV transmission?	Take medication ..... 1 Others (Specify) _____ .... 96 Don't know 98	
816	Can women with HIV transmit the virus to her newborn child through breast-feeding?	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
817	What have you done for yourself to avoid getting HIV? (**Multiple response possible)**	Take medicine ..... 1 Nothing ..... 2 Always use condoms ..... 3 Others (Specify) _____ .... 96 Don't know ..... 98 No response 99	
818	What medicine have you taken?	Name_____ .... 1 Don't know ..... 98 No response 99	
819	To what extent do you think that you are at risk of HIV infection?	High risk ..... 1 Some risk ..... 2 Little or no risk ..... 3 Don't know ..... 98 → No response 99	 822
820	Why do you think you are at risk of getting HIV? **Multiple answers possible** **(DO NOT READ OUT)**	High risk job ..... 1 Multiple sex partners ..... 2 Frequent and regular anal sex ..... 3 Don't use condoms ..... 4 Irregular condom use ..... 5 Needles sharing ..... 6 Other (Specify) _____ 96 Don't know 98	

Q. N.	Questions	Coding Categories	Skip to
		No response 99	
821	Why do you think you are at little or no risk of HIV? **Multiple answers possible** **(DO NOT READ OUT)**	Always use condoms ..... 1 Only one sex partner ..... 2 Partners are clean ..... 3 Partners are healthy ..... 4 Never share injections ..... 5 Share injections sometime only ..... 6 Other (Specify)_____ ..... 96 Don't know ..... 98 No response 99	
822	Apart from this study center, do you know any such place in Kathmandu valley where you could have a confidential HIV test? **By confidential, I mean that no one will know the result if you don't want them to know it.**	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
823	Have *you* ever had an HIV test?	Yes ..... 1 No ..... 2 →	901
		Don't know ..... 98 No response 99	
824	When did you have your HIV test?	Within past one year ..... 1 In between one to two year ..... 2 In between one to four year ..... 98 Before 4 year 99	
825	Did you yourself take the test or did someone else ask you to have the test?	Voluntarily ..... 1 I was asked ..... 2 Don't know / remember ..... 98 No response 99	
826	When you were tested for HIV, did you receive counseling? (I mean proper information about HIV infection and prevention, the reason for taking HIV test and post test counseling)	Yes ..... 1 No ..... 2 Don't know ..... 98 No response 99	
827	Did you get the result of your test during the time of test?	Yes ..... 1 No ..... 2 →	831
		Don't know ..... 98 No response 99	
828	What was your last result of test	Positive ……1 Negative ……2 Not clear……3 Don't find result ……..4 → Don't know……98 No answer……..99	901

Q. N.	Questions	Coding Categories	Skip to
829	After finding the positive result do you join in HTC service?	Yes ……1 No ……2 Don't know…….98 No answer ……..99	
830	What is the cause not to join HTC service?	Feeling healthy……..…1 Fear of other will know……..2 Cause of paid service……3 Due to behavior of health worker 4 Other (specify)……96 Don't know……98 No response…….99	
831	What is the reason of not taking /receiving HIV result?	Insure not to be infected……1 Fear of result…….2 No feeling need…….3 Forget to receive…….4 Other (specify)……96	

9.0 KNOWLEDGE AND PARTICIPATION IN STI AND HIV/AIDS PROGRAMS

Q. N.	Questions	Coding Categories	Skip to
901	Have you met or interacted with Peer Educators (PE) or Outreach Educators (OE) or Community Mobilisers (CM) or Community Educators (CE) in the last 12 months?	Yes .....1 No .....2 No response 99	→ 904
902	What kind of activities did you participate in with such PE /OE/CE/CM? **(Multiple answers. DO NOT READ the possible answers)**	Discussion on how HIV/AIDS Is/isn't transmitted. ..... 1 Discussion on how STI is/isn't Transmitted… ..... 2 Regular/non-regular use of Condom..... 3 Demonstration on using Condom correctly ..... 4 Others (Specify)_____96	
903	How many times did PE, OE, CM and/or CE meet you in the last 12 months?	Times	
904	Have you visited or been to any outreach center (DIC, IC or CC) in the last 12 months? **Drop-In Center (DIC), Information Center (IC), Counseling Center (CC)**	Yes .....1 No 2	→ 907
905	When you went to the outreach center (DIC, IC or CC), which activities did you take part in? **(Multiple answers. DO NOT READ the possible answers)**	Went to collect condoms..... 1 Went to learn the correct way Of using condom..... 2 Went to watch film on HIV/AIDS.3 Participated in discussion on HIV transmission… 4	

Q. N.	Questions	Coding Categories	Skip to
		Other (Specify)_____96	
906	How many times have you visited outreach centers (DIC, IC or CC) in the last 12 months?	Times	
907	Have you visited any STI clinic in the last 12 months?	Yes .....1 No .....2 →	910
908	When you visited such STI clinic, what activities were you involved in? **(Multiple answers. DO NOT READ the possible answers given below)**	Blood tested for STI..... 1 Physical examination conducted For STI identification..... 2 Discussed on how STI is/isn't transmitted ..... 3 Discussed on regular/non-regular use of condom ..... 4 Took a friend with me..... 5 Other (Specify)_____96	
909	How many times have you visited STI clinic in the last 12 months?	Times…….	
910	Have you visited any HTC center in the last 12 months?	Yes .....1 No .....2 →	1001
911	Why did you visit HTC center? **(Multiple answers. DO NOT READ the possible answers)**	Received pre-HIV/AIDS test counseling..... 1 Blood sample taken for HIV/AIDS test ..... 2 Received post HIV/AIDS test counseling..... 3 Received HIV/AIDS test result ..... 4 Received counseling on using condom correctly in each sexual intercourse..... 5 Took a friend with me..... 6 Received information on HIV/AIDS window period ..... 7 Other (Specify)_____96	
912	For how many times have you visited HTC center in the last 12 months?	Times ……	

10.0 GENERAL INFORMATION

Q. N.	Questions	Coding Categories	Skip to
1001	Where were you born?	District_____ VDC/Municipality_____	

Q. N.	Questions	Coding Categories	Skip to
1002	Where do you live now? **(Do not ask the exact address)**	Districts: _____ VDC/Municipality: _____ Don't remember/know ..... 98 No response 99	

11.0 INFORMATION ON BDS AND MSM/TG NETWORK

Q. N.	Questions	Coding Categories	Skip to
1101	Have you ever heard about MSM/TG related organization?	Yes.....1 No.....2 Don't know .....98 No response 99	 1103 1103 1103
1102	If yes, which organization is in your district?	Name…….	
1103	How many other MSM/TG do you know (who also knows you well)? (**Knowing someone is defined as being able to contact them, and having had contact with them in the past 12 months**)	Number: ..... ☐☐☐☐ Don't know.....98 No response 99	
1104	Among those people, please try to estimate their number by their age group:	Less than 15 years old ☐☐☐ 15-20 years old ..... ☐☐☐ 21-30 years old ..... ☐☐☐ 31-40 years old ..... ☐☐☐ > 41 years old ..... ☐☐☐ Don't know.....98 No response 99	
1105	How are you related with the person who gave you the coupon for taking part in the study? (**Do not ask this to the seed)**	A close friend .....1 A friend .....2 You sex partner .....3 A relative .....4 A stranger .....5 Other (Specify)_____96 Don't know.....98 No response 99	

1106	In the past 6 months, how often have you been to		Very Often	Often	Some-time	Never

Q. N.	Questions		Coding Categories			Skip to
	the following locations to meet male sexual partners: (Ask for all the items proposed and probe for other locations, as well)	Park	1	2	3	4
		Discotheque	1	2	3	4
		Dance Restaurant	1	2	3	4
		Massage parlor	1	2	3	4
		Street	1	2	3	4
		Pub/Cafe	1	2	3	4
		Temple	1	2	3	4
		Bus Station	1	2	3	4
		Public Toilets	1	2	3	4
		Cinema Hall	1	2	3	4
		Near Army barracks	1	2	3	4
		Internet (chat room)	1	2	3	4
		Personal Add (web site)	1	2	3	4
		Personal Add (magazine or other)	1	2	3	4
		Sauna/Steam bath	1	2	3	4
		Swimming Pools	1	2	3	4
		Home	1	2	3	4
		Telephone	1	2	3	4
		Other (Specify) _____	1	2	3	4

Thanks to respondent and refer to clinician for health examination.

Annex 3: Sample Size Formula

$$n = D\frac{\left[Z_{1-\propto}\sqrt{2\overline{P}(1-\overline{P})} + Z_{1-\beta}\sqrt{P_1(1-P_1)+P_2(1-P_2)}\right]^2}{(P_2-P_1)^2}$$

n = required minimum sample size

D = design effect (assumed in the following equations to be the default value of 2)

P1 = the estimated proportion at the time of the first survey.

P2 = the desired proportion at some future date.

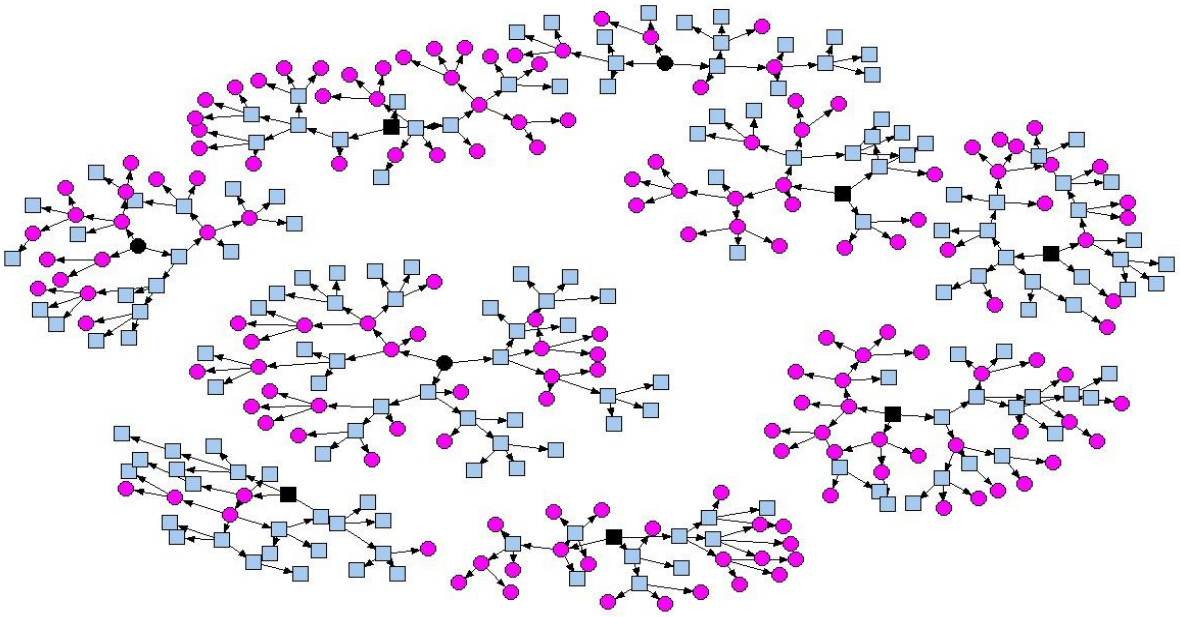
(P2-P1) is the magnitude of change of change you want to be able to detect.

P = (P1 + P2)/2

Z1-α = the Z-score corresponding to the level of significance

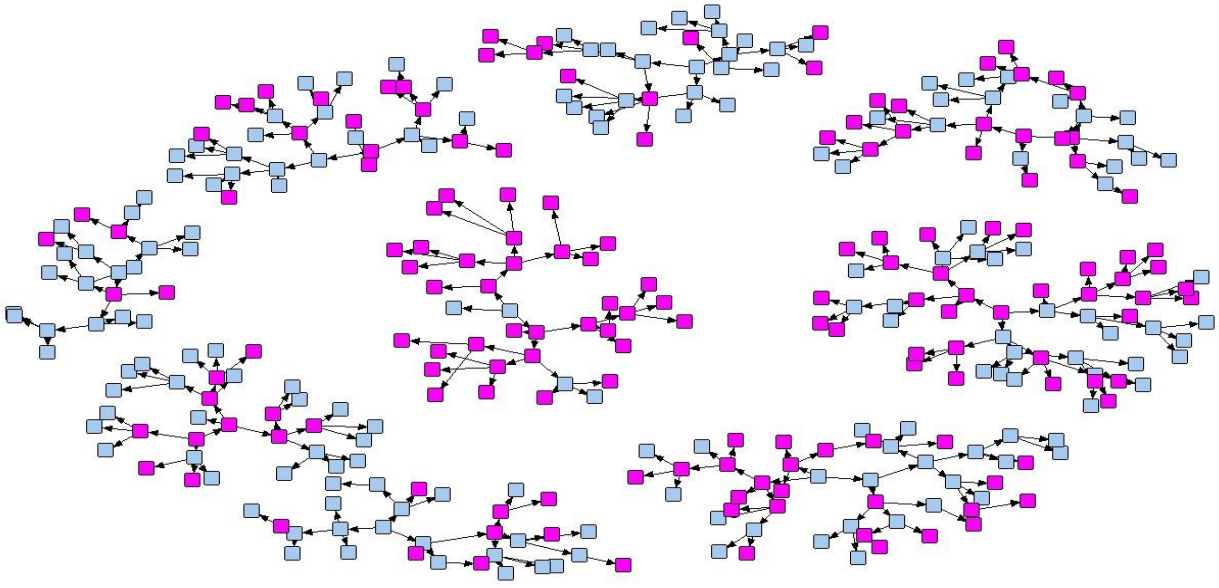
Z1-β = the Z-score corresponding to the level of power

Annex 4. Recruitment tree by attribute (MSM vs. TG).



Note: Pink circle: MSM, Light blue square: TG, Black: seed

Annex 5 Recruitment tree by attribute (sex workers vs. non sex workers



Note: Pink: Non sex workers, Light blue: Sex workers