KAUNTIM MI TU MT HAGEN 2018

Key findings from the Key Population Integrated Bio-Behavioural Survey, Mt Hagen, Papua New Guinea

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Kirby Institute
National AIDS Council Papua New Guinea
CDC
The Global Fund
Australian Government

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Kauntim mi tu
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ACRONYMS & ABBREVIATIONS

AIDS – Acquired Immune Deficiency Syndrome
ART – Antiretroviral Therapy
CAPI – Computer-Assisted Personal Interviews
FSW – Female sex worker
HBV – Hepatitis B Virus
HIV – Human Immunodeficiency Virus
IBBS – Integrated Bio-Behavioral Survey
MDS – Men of Diverse Sexualities
MSM – Men who have sex with men
NACS – National AIDS Council Secretariat
PLoS – Public Library of Science
PNG – Papua New Guinea
RDS – Respondent-Driven Sampling
STI – Sexually transmitted infection
SW – Sex worker
TB – Tuberculosis
TG – Transgender woman
UNAIDS – Joint United Nations Programme on HIV/AIDS
WHO – World Health Organization

PREFACE

Kauntim mi tu is without doubt a major landmark in the evolution of PNG's HIV response and represents the most comprehensive attempt to date, to better understand the nature and extent of the country's epidemic.

In my leadership role in the Papua New Guinea National Department of Health, I am delighted to introduce the third report from the Kauntim mi tu study. Like the first two reports from Port Moresby and Lae, the Mt Hagen Kauntim mi tu report is without doubt another major landmark in the evolution of Papua New Guinea's HIV response and represents the most comprehensive attempt to date to better understand the nature and extent of the country's epidemic. This study will contribute to the country's understanding of the national HIV and STI epidemics for years to come by providing more and better focussed information than previously available to policy makers, implementers, service providers, and financing agents, and by providing not only the first size estimation of women who sell and/or exchange sex and men who have sex with men, but also the most representative bio-behavioural data about these key populations to date.

The information that Kauntim mi tu provides comes at a critical time as we continue to shift our understanding of the country's HIV situation from long-held assumptions that we were addressing a generalised (or generalising) epidemic, to an understanding that we more likely have multiply concentrated and geographically situated epidemics most significantly affecting certain key populations. Without the crucial information provided by this study, it would remain difficult (if not impossible) to focus the national response on the places with the highest disease burdens and key population densities so as to ensure the access to prevention and treatment resources and services critical to stabilising (and hopefully reducing) HIV prevalence in the country. This is also of critical importance as the financing landscape for the nation's HIV and STI responses change and available financial resources decline.

UNAIDS calls on countries to "Fast-Track" their national responses and this requires a base of the best strategic information; innovation in service delivery, communication, development of new delivery paradigms, and in how we fund and resource our work; integration of the HIV and STI responses in the overall health and development agendas; strategic investments which find greater financial and implementation efficiencies; and finally putting the people most affected by HIV at the centre of our responses. None of these efficiencies are possible without the kind of information that Kauntim mi tu provides.

Kauntim mi tu has itself also represented an excellent example of exactly the sort of innovation, and investment efficiency which Fast-Track thinking calls for. The study has, in its design, included a number of firsts for PNG and also for the world in the conduct of integrated bio-behavioural surveys. The study provided up to nine separate point of care tests. In addition to tests for HIV, CD4 t-cell counts, syphilis and the hepatitis B virus, the study also tested for TB, Chlamydia trachomatis and Neisseria gonorrhoeae and provided same day results for HIV viral load.

In addition, the study has exemplified the UN's Fast-Track thinking by being a superb example of partnership between key players in the Papua New Guinea national HIV response – communities of key populations, the scientific and academic communities, Government and national institutions, civil society, service providers, bilateral/multilateral donors, public/private partnerships, technical assistance providers, and others, including the PNG Institute of Medical Research, the Kirby Institute, UNSW Sydney, Australia, the US Centers for Disease Control and Prevention, the Oil Search Foundation, the United Nations system, the Governments of Australia and the United States, The Global Fund for AIDS, TB and Malaria, and so many others. The design and delivery of this study has ensured the very highest quality input and management oversight from some of the finest minds in partnership with Papua New Guinea's Government mechanisms, government and civil society service providers, and end users and beneficiaries of services. So not only have these technical, management, design and delivery mechanisms made this study such a success, it has also contributed to building stronger partnerships and levels of trust between service providers and users, while leveraging the study's implementation to help address some of the unfortunate realities of responding to HIV - stigma, discrimination, depression, sexual violence, complex sexuality, and the many other factors which often keep key population-associated individuals away from the services they need to be able to access freely, respectfully, and comfortably.

UNAIDS Executive Director and United Nations Under Secretary General, Michel Sidibe, has noted that "....as we build on science and innovation, we need fresh thinking to get us over the obstacles to achieving success in ending AIDS by 2030." He noted that "....what got us HERE, won't get us THERE, because we continue to face persistent inequalities, the threat of fewer resources, a growing conspiracy of complacency... and a paucity of innovatively generated strategic information." We firmly believe that Kauntim mi tu addresses some of these obstacles and will significantly contribute to getting Papua New Guinea "there" – an HIV response based on strong strategic information, focused on the realities of the national epidemic which contributes to building a more equitable and just country.

Pascoe Kase

Secretary for Health

PNG National Department of Health

EXECUTIVE SUMMARY

BACKGROUND AND METHODS

Kauntim mi tu (KM2), an integrated bio-behavioural survey (IBBS) of women and girls who sell and exchange sex (FSW), and men who have sex with men and transgender women (MSM/TG), provides much needed information to support the scale -up of essential HIV prevention and treatment services for these populations. The Mount Hagen edition of KM2 was conducted in Mt. Hagen between September and December 2017 and used respondent-driven sampling (RDS) to recruit participants. *Kauntim mi tu* had two goals: 1) to conduct updated population size estimations of FSW and MSM/TG in Papua New Guinea; and 2) to collect representative bio-behavioural data about FSW and MSM/TG in order to inform HIV and STI prevention and treatment services and policy.

WOMEN AND GIRLS WHO SELL AND EXCHANGE SEX - RESULTS

In total, 709 women and girls involved in the selling and exchanging of sex for goods, services or money participated in the study. The median age of FSW in Mt. Hagen was 25 years, with 32.4% aged 20-24 years. Nearly all FSW (94.4%) in Mt. Hagen originated from the Highlands Region and half have been residing in Mt. Hagen for 15 or more years (50.0%). Almost half of FSW (40.2%) could not read or write, but almost half completed primary school (41.7%) and more than one in ten (13.3%) completed high school. While most FSW were separated or divorced (69.3%), 21.5% were never married and only 4.0% were currently married. Some FSW were unemployed (21.3%) and over half (51.4%) earned less than 500 Kina per month. Sex work was the primary income source for 51.0% of FSW. It is estimated that there are approximately 2,600 FSW in Mt. Hagen.

The median ages for first vaginal and anal sex were 16 and 20 years, respectively. One in five FSW (20.6%) received money or goods the first time they had sex and 18.7% were forced into their first vaginal experience, while the majority (53.8%) were forced into their first anal sex. The median age when FSW first sold or exchanged sex was 20 years. While most FSW (58.0%) had been selling or exchanging sex for less than five years, 11.4% had been doing so for ten or more years. The most common reason for beginning to sell and exchange sex was to provide money for the family or themselves (46.8%). Most FSW (67.1%) have had fiveor more clients who gave money in the past six months. Only 13.2% of FSW used condoms with all clients who gave money in the last six months.

One-quarter (25.3%) of FSW felt the need to hide that they sold or exchanged sex when accessing health services. An estimated 31.5% of FSW had given something to the police to avoid trouble in the last 12 months and 6.7% had been arrested because they sold or exchanged sex.

The majority of FSW (69.1%) have experienced physical violence and almost half (40.4%) have been forced to have sex. Of those experiencing physical violence in the last 12 months, 35.6% of survivors believed it was related to them selling and/or exchanging sex. Most FSW (77.7%) who experienced sexual violence never sought help after their last unwanted sexual encounter. Approximately one in five FSW (21.9%) experienced violence from their clients in the last six months.

An estimated 40.9% of FSW not trying to get pregnant were using modern family planning methods to prevent pregnancy. Among 67.0% of FSW who had been pregnant, 17.9% tried to induce an abortion at least once. Of the 27.4% of FSW who had a pregnancy that resulted in a live birth in the last three years, 85.0% attended an antenatal clinic at least once. Of the 88.6% of FSW who were offered an HIV test during an antenatal care visit, all (100.0%) tested for HIV and, of these, 9.2% tested positive.

Half of FSW (50.9%) had never been reached by a peer outreach worker in their lifetime. In the last three months, 21.8% were reached and 14.1% were reached 4-12 months ago. Approximately half (56.1%) of FSW had ever tested for HIV.

HIV prevalence among FSW in Mt. Hagen was 19.6%. Overall, PNG has not reached UNAIDS 90-90-90 targets among FSW. Under half (43.9%) of FSW were aware that they had HIV, 86.3% of these FSW were on ART, and 80.0% of them had achieved viral load suppression. Half of FSW living with HIV had been asked at their last HIV clinic appointment if they had any symptoms of TB (51.2%).

Prevalence of sexually transmitted infections (STI) was high and 53.4% of FSW had at least one STI (excluding HIV). Prevalence of the most common infection, urogenital and anorectal chlamydia, was roughly the same (32.5% and 32.0%, respectively). The next most common STI was gonorrhoea, with urogenital and anorectal having roughly the same prevalence (15.4% and 15.1%, respectively). Syphilis was also common with 10.9% of FSW having ever had syphilis and 3.0% having active syphilis infection. Almost one in ten FSW (10.8%) had the hepatitis B virus. Of the 186 FSW screened for tuberculosis in the study, one (0.7%) had tuberculosis. No FSW in the survey had drug resistant TB.

MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN – RESULTS

A total of 111 men who have sex with men and transgender women participated in the study in Mt. Hagen. Because we were not able to reach sufficient sample size for MSM and TG in Mt. Hagen, all the data here related only to the MSM and TG who participated; these data are not weighted. The median age of MSM/TG in the study in Mt. Hagen was 21 years, with 45.9% aged 20 to 24 years. Nearly two-thirds of MSM/TG in Mt Hagen originate from the Highlands Region (61.3%) and almost three-quarters (71.2%) have been residing in Mt. Hagen for 15 or more years. Almost all MSM/TG in the study (90.9%) could read and write, with 33.3% completing primary school (up to Grade 8) and 27.9% completing high school. Over half (52.4%) earned less than 500 kina per month, and almost half of MSM and TG in the study were unemployed (47.1%). It is estimated that there are 4,700 MSM/TG in Mt. Hagen.

The median age of first anal sex with a man or TG was 19 years. Almost all MSM/TG in the study (91.4%) chose to have anal sex the first time they did so with a man or transgender woman. About one in three MSM/TG in the study (36.1%) were given money, goods, or services the first time they had anal sex with a man or TGW. Of the 20 MSM/TG in the study with a main male partner, 13 did not use a condom at last anal sex with this partner. More than half (60.4%) identified their sexuality as a man who has sex with other men or a man of diverse sexualities, and most identified their gender as male (93.7%), with five being TG. Almost half of MSM/TG (44.1%) reported being attracted to mostly women, but sometimes men. Of the seven people who identified their gender as TG or a woman in the study, two had lived as a woman before. Most MSM/TG (93.5%) had not disclosed their gender, sexual identities, or sexual practices to their families.

One in three (33.3%) MSM/TG in the study felt the need to hide their sexual practices or gender identity when accessing health services. A similar proportion (30.2%) of MSM/TG felt ashamed of themselves based on their sexual practices or gender identity. Almost two in three MSM/TG (62.2%) had depression based on the Patient Health Questionnaire-2 screening tool.

Two in three MSM/TG in the study (59.4%) had experienced physical violence and 17 had been forced to have sex. Of the 16 MSM/TG who experienced physical violence in the last 12 months, only one survivor believed it was related to their sexual behaviours or gender identity. Of the 17 MSM/TG who had experienced sexual violence, 16 did not seek services after the experience. Two MSM/TG experienced violence from their sexual partner(s) in the last six months.

Penile modification was common among MSM/TG in the study, with 76.6% reporting that they had cut the foreskin of their penis. The most common reasons given by the 85 MSM/TG who had cut their foreskin were to prevent HIV and other STIs (47) and to improve cleanliness and genital hygiene (37). Fewer MSM/TG had ever inserted (5) or injected (16) something into their penis.

Approximately half of the MSM/TG in the study (49.5%) had never been reached by a peer outreach worker in their lifetime. Fewer MSM/TG had been reached in the last 6-12 months (18) or the last three months (15). Only one in four MSM/TG (26.1%) had ever tested for HIV.

HIV prevalence among MSM/TG in the study in Mt. Hagen was 1.8%; two MSM/TG had HIV. One of the two MSM/TG with HIV had accessed care and had been asked at their last HIV clinic appointment if they had any symptoms of TB.

Prevalence of sexually transmitted infections (STI) was high and 36.0% of MSM/TG in the study had at least one STI (syphilis, gonorrhea, chlamydia, hepatitis B). The most prevalent infection was genital chlamydia (16.4%); anorectal chlamydia was less common (7.5%). The next most common STI was the hepatitis B virus (13.5%), followed by anorectal gonorrhoea (6.5%), with genital gonorrhoea being less common (2.7%). Syphilis was less common, with 6.3% of MSM/TG in the study having ever had syphilis and 2.7% having active syphilis. Of the 21 MSM/TG screened for tuberculosis in the study, one had tuberculosis. No MSM/TG in the survey had drug resistant TB.

RECOMMENDATIONS

Kauntim mi tu **highlights the needs for enhanced HIV, health, and social services for FSW, MSM, and TG. Based on study findings, FSW, MSM, and TG in Mt Hagen recommend that the National Department of Health and other service providers:**

1. **The Government of Papua New Guinea and the Provincial Governments need to fund civil society organisations such as Kapul Champions, Friends Frangipani and Igat Hope so they continue to reach their own peers in the community to disseminate information on HIV/TB, risky behaviours and importance of condom usage and other services to their own peers.**
2. **There needs to be a continuous, uninterrupted supply of condoms available to all people, but particularly members of key populations.**
3. **Human resources are lacking to meet the increased demand placed on tem to meet the needs of key populations. Staffing increases in both urban and rural areas is needed to deliver sufficient health care to the community. These staff need to be skilled and qualified and sensitive to working with key populations.**
4. **Law enforcement agencies need to know their role in protecting key populations under the law. At the same time the government should increase its efforts to decriminalise the laws around sex work and same sex practices as an important step to stop violence and discrimination.**
5. **In the absence of Provincial AIDS Councils that used to coordinate the provincial HIV response, the provincial government should provide support to non-governmental organisations or others agencies which are already providing the services to oversee the coordination and management of HIV services in the province.**
6. **Point of care testing is the most effective way to move forward in addressing the rates of STIs in key populations, including the provision of HIV viral load testing.**
7. **The Provincial Government needs to facilitate sensitisation training/workshops to government staff across a number of agencies (e.g. police department, health department etc...) to improve understanding of the key populations and to provide a safer and conducive space for key populations.**
8. **Clinical settings in health care should be rearranged to cater for all services such as TB/HIV and all sexually transmitted infections in one setting and to increase the privacy of those waiting to be served.**
9. **Produce information, education and communication materials for awareness purposes and the importance of condom usage in the key populations or target groups.**

INTRODUCTION

Despite more than three decades of global efforts in the prevention and treatment of HIV/AIDS, there is still no cure for the disease. In 2015, more than 2.1 million adults and 150,000 children were infected with HIV (UNAIDS, 2016). In many countries, HIV is concentrated amongst those who already experience substantial societal stigma and exclusion, such as female sex workers (FSW) and men who have sex with men (MSM) (UNAIDS, 2016). Even in generalised epidemics, these populations are over represented in new HIV cases (UNAIDS, 2016). The sexual behaviours that place these populations at risk for HIV also place them at risk for other sexually transmitted infections (STIs).

Previously described as a generalised epidemic, the understanding of Papua New Guinea's (PNG) HIV epidemic has undergone substantial revision in recent years due to increased data availability, particularly the increase in reporting from antenatal clinics conducting provider initiated HIV counselling and testing. In 2005 there were only 17 ANC HIV testing sites, while in 2011 this increased to 280 (NACS, 2013). Data from ANC testing sites form the foundation of PNG's national and regional HIV estimates. The most recent estimates suggest that the national HIV prevalence is 0.9% among adults aged 15-49 years (Global AIDS Report, 2017). Higher rates of estimated adult prevalence are notable in particular regions and provinces (such as the National Capital District and the Highlands Region), as well as within key populations. With increasing evidence of heterogeneity of the epidemic, HIV has been increasingly referred to as a mixed HIV epidemic (see for example, Kelly, Rawstorne et al., 2014), neither concentrated nor generalised.

There is substantial evidence in Papua New Guinea to suggest that key populations such as sex workers (SWs), men who have sex with men (MSM), and transgender women (TG) are particularly at risk for HIV (Vallely, Page et al. 2010, Kelly, Kupul et al. 2011, Maibani, Ryan et al. 2011, NACS 2013). Multiple studies indicate that SW, MSM, and TG are at increased risk of HIV due to their engagement in high-risk sexual behaviours, including unprotected vaginal and anal intercourse, and experience increased vulnerability due to stigma, discrimination, and violence, particularly sexual violence (Maibani-Michie, Kavanamur et al. 2007, Kelly, Kupul et al. 2011, Maibani, Ryan et al. 2011). In addition, studies have indicated high HIV prevalence amongst FSW with the most recent studies reporting 19% in Port Moresby (Kelly, Kupul et al. 2011) and 2.7% in Eastern Highlands Province (Kelly, Kupul et al. 2011, Maibani, Ryan et al. 2011). FSW carry a higher burden of HIV than the general population and even within this group of women, prevalence of HIV varies across the country (Kelly, Rawstorne et al. 2014).

To date, no representative bio-behavioural data are available for men who have sex with other men (irrespective of sexual identity) and TG in PNG. HIV prevalence amongst male sex workers in Port Moresby, most selling sex to other men, was 8.8%, while among TG who sell sex it was 23.7% (Kelly, Kupul et al. 2011).

In light of this situation, greater attention in terms of policy, services and surveillance is being afforded to women who sell or exchange sex, men who have sex with men, and transgender women in PNG (NACS, 2013). Moreover, in order to ensure services are adequately reaching these populations, reliable size estimates of these populations is needed, which to date have not been available.

The Mid-Term Review of PNG's National HIV and AIDS Strategy undertaken in 2013 (Godwin and & the Mid Term Review Team, 2013) emphasised the importance of prioritising HIV services and interventions for key populations such FSW and MSM. Specifically, the review recommended that there needed to be substantial improvement in the uptake and retention of FSW and MSM in HIV clinical prevention, treatment and care services across their lifetime. The review also made a number of recommendations in relation to the importance of strengthening the link between the diagnosis and treatment of HIV, STIs and tuberculosis (TB). Specifically, the recommendations included for example: greater attention to the detection and treatment of asymptomatic STIs, scaling up HIV and STI combination prevention amongst MSM and FSW, and improving availability of and access to point-of-care (POC) HIV rapid testing, with an emphasis on provider-initiated counselling and testing (PICT), STI and TB services. Kauntim mi tu provides much needed information to improve the scaling up of combination prevention and improving access to POC services.

STUDY AIMS AND OBJECTIVES

Study Aims

(1) To conduct Papua New Guinea's first size estimation of females who sell and /or exchange sex (FSW) and men who have sex with men (MSM)/ transgender women (TG) and;

(2) To collect representative bio-behavioural data about these key populations in order to inform HIV/STI prevention, treatment and care programing and policy development.

Objectives

1. Estimate the size of each target population in each location.
2. Estimate the weighted prevalence of different risk behaviours among each target population in each location.
3. Estimate access to and uptake of HIV-related services among each target population in each location.
4. Develop an understanding of sexual networks including the roll of mobility among each target population in each location.
5. Estimate HIV, STI, TB and HBV weighted prevalence and associated risk factors for each target population in each location.
6. Develop a map of where FSW find clients in each location.
7. Develop a map of where MSM/TG socialize with other MSM/ TG.
8. Translate research outcomes into recommendations for policy and program development.
9. Strengthen capacity of Papua New Guineans to conduct bio-behavioural HIV research, specifically using respondent-driven sampling.

COMMUNITY ENGAGEMENT

Prior to the design of this study and throughout the preparation for implementation, community consultation was undertaken

with FSW and MSM/TG in Mt Hagen. Following the completion of field work in Mt Hagen, results from Kauntim mi tu were presented to members of the key populations and their civil society organisations. A separate meeting was held for other stakeholders and donors. Mt Hagen-specific recommendations were developed during the community consultation by members of Friends Frangipani, Kapul Champions and the wider stakeholder groups. Each population's list of recommendations is represented at the end of report under 'Recommendations'. A statement was also written and presented by Friends Frangipani and Kapul Champions to the stakeholders and donors and included at the end of the report providing the final reflection on the Mt Hagen study. In addition to this engagement with key population groups, members of these populations are employed in the Kauntim mi tu study team.

METHODOLOGY

This integrated bio-behavioural survey (IBBS) used respondent-driven sampling (RDS) to recruit participants. A smaller number of participants from the IBBS were recruited into a qualitative interview. The service multiplier and successive sampling methods were used to estimate the size of each population.

Integrated Bio-Behavioural Survey (IBBS)

Data collection in Mt Hagen, Western Highlands Province of Papua New Guinea, occurred between September and December 2017. The target populations were:

1. Women and girls who sell and exchange sex (from here on is written as FSW) and
2. Men who have sex with men, and transgender women (from here on is written as MSM and TG, respectively)

Inclusion criteria

To take part in this study, FSW participants must:

- Be born a biological woman;
- Be 12 years of age or older;
- Have sold or exchanged sex in the past six months;
- Speak English or Tok Pisin; and
- Be in possession of a valid study coupon.

To take part in this study, MSM/TG participants must:Be born a biological man

- Be born a biological man;
- Be 12 years of age or older;
- Have engaged in oral or anal sex with another man in the past six months;
- Speak English or Tok Pisin; and
- Be in possession of a valid study coupon.

Sample size

We proposed a sample size of 700 FSW and 700 MSM/TG in Mt Hagen. This took into account the RDS-related design effect of two (as proposed by Salganik, 2006).

Study recruitment

There were two types of participants: (a) IBBS participants recruited by study team (known as seeds) and (b) IBBS participants recruited by previous Kauntim mi tu participants. After completing study procedures, each of the seeds were given three coupons and asked to recruit up to three peers by giving each one a coupon. In the final weeks of data collection, MSM/TG received four coupons to speed recruitment. Peers who received a coupon were themselves given coupons to recruit others after participating in the study. This process of referral and coupons was repeated until sample size was reached.

Study reimbursements

REIMBURSEMENT ITEM		KINA
Primary	Transport to and from study site	5
	Interview and testing time at study site	40
	Subtotal	45
Secondary	Transport to and from study site, interview (on peer recruitment)	5
	Max. Recruitment (recruiting ≤3 peers, at K10 each	30
	Subtotal	35
	Total (Max)	**80**
Qualitative	Transport to and from study site (if interview does not occur during follow-up visits.)	5
	Qualitative interview	20
	Total (Max)	**25**

Table 1: Reimbursement schedule

Participants in Kauntim mi tu were reimbursed according to a schedule devised with the key population members and approved by the ethics committees (Table 1).

1.1 Behavioural Survey

EEligible and consenting participants undertook a researcher-administered survey. A trained researcher/ interviewer used a tablet to administer a questionnaire to participants that covered a number of key areas including: basic socio-demographic data, sexual history, current sexual practices with a variety of partners (clients and main and casual partners), HIV knowledge, access to support services and peer outreach, stigma and discrimination, sexual and physical violence, condom use, HIV testing, and HIV care and treatment. The questionnaire was administered in a language of the participants' choice - English or Tok Pisin. The questionnaire took approximately 1.5 hours to complete.

No personal identifiers were collected during the survey. Participants were able to refuse to answer any question during the survey or stop the survey at any time.

Condoms, lubricants and HIV-related information were provided free of charge to all Kauntim mi tu study participants.

Based on their clinical and social needs, all participants were provided with a written referral(s) to one or more services in Mt Hagen, which the community identified as being safe for FSW, MSM, and TG. Peer mentors were available to escort participants, as requested, to these services, and a study vehicle was available to facilitate transportation.

1.2 Biological testing

Kauntim mi tu study participants were offered POC tests (Table 2) and, if necessary, same day treatment for syphilis, chlamydia and gonorrhoea. Subsequent treatment for syphilis was provided by local STI services. No treatment for HIV, TB or hepatitis B virus was provided as part of the study; referrals were provided for

TARGET	TEST	SAMPLE
Syphilis	**Chembio DPP Syphilis Screen & Confirm Assay**	Venous blood
Hepatitis B virus	**Alere Determine HBsAg test**	Venous blood
Gonorrhoea (genital and anorectal)	**Xpert CT/NG Test**	Self-collected vaginal swab (female participants only) Urine specimen (male participants only) Self-collected anorectal swab (male and female)
Chlamydia (genital and anorectal)	**Xpert CT/NG Test**	Self-collected vaginal swab (female participants only) Urine specimen (male participants only) Self-collected anorectal swab (male and female)
Tuberculosis	**Xpert MTB/RIF Test**	Self-collected sputum
HIV	**Alere Determine HIV-1/2 Ag/Ab Combo followed by confirmatory Chembio HIV 1/2 Stat-Pak if Determine test is positive**	Venous blood
If HIV positive: CD4 T cell count	**Alere PIMA CD4 test**	Venous blood
If HIV positive: HIV Viral load	**Xpert HIV Viral Load Test**	Venous blood

Table 2: Biological testing

care and treatment of these diseases as needed. Participants were only required to provide written informed consent for HIV testing. Verbal informed consent was provided for the survey, all other tests and for storing remaining specimens and test them (including overseas if necessary) in the future.

Table 2 shows the type of tests and specimen types and tests performed.

Internal and external quality control

The study was enrolled in an external quality assurance (EQA) program with the Royal College of Pathologists of Australasia for HIV, hepatitis B virus and syphilis immunochromatographic testing.

Quality control (QC) for HIV was conducted by screening all HIV positive and inconclusive samples with a third HIV test - Geenius HIV-1/2 (Bio-Rad Mitry Mory, Switzerland). This testing was conducted at the PNGIMR Sexual and Reproductive Health Laboratory. In-house chlamydia, gonorrhoea, tuberculosis and HIV viral load QC were developed for this study and run monthly on GeneXpert (Xpert) NAAT devices (Cepheid, Sunnyvale, CA).

1.3 Qualitative interviews

Qualitative interviews were undertaken with a sub-sample of participants to better understand and describe issues surrounding HIV and HIV risk, including practices, perceptions, stigma, and violence. Qualitative interviews took approximately 40-60 minutes. Twenty-two FSW and ten MSM/TG participated in the qualitative interview. Participants for the qualitative interview were chosen based on a selection matrix that included, for example: age, place of origin, diverse experiences of acceptance, family life, stigma or violence, HIV negative and positive, as well as not having participated in a qualitative IMR study before.

No personal identifiers were collected during the qualitative interview. Participants were able to refuse to answer any question during the interview or stop the interview at any time. Interviews were conducted in English or Tok Pisin and digitally recorded. All interviews were transcribed verbatim and translated into English as appropriate. A separate, additional written informed consent was obtained from those who participated in the qualitative interview.

All names used in the report are pseudonyms.

1.4 Data management

All quantitative interview data were collected via computer-assisted personal interviews (CAPI) whereby data were "entered" during the time of interview by a study researcher, directly into a tablet. Each tablet was password protected. At the conclusion of each data collection day, data from each tablet was stored on a cloud server. All rapid test results were recorded in a paper-based laboratory test book. Individual test results were then transferred to a dedicated case record form and returned to the clinician for review and referral to a treatment service if required. Xpert results were automatically captured by the Xpert software and stored in an SQL database on the Xpert laptop computer. Each laptop has a secure password for entry, and test results

were backed up daily onto an external hard drive which was stored in a locked cupboard when not in use. Only authorised study personnel had access to the survey and test results.

The audio recording of qualitative interviews were downloaded daily into a study computer that was password protected and backed up daily at the study site to an external hard drive which was stored in a locked filing cabinet.

1.5. Size estimation

This study utilised the HIV testing service multiplier and successive sampling methods to estimate the number of FSW and MSM/TG in Mt Hagen, respectively. One organisation was able to provide key population-specific testing information for FSW, and participants were asked whether they accessed services at this organisation in 2016 during the survey interview. No organisations were able to provide key population-specific testing information for MSM/TG, so successive sampling method was used to calculate size estimation using routinely collected data in the survey interview such as self-reported network size, number of participant's recruits enrolled in the survey, and the date of survey enrolment.

Service multiplier method applying the formula:

n= (c1* c2)/m

Where:

n = population size

c1 = NGO membership size

c2 = Sample size

m = Number of recruits who report being a member of that NGO

The 95% confidence intervals will be computed as:
95% CI = n±1.96*√Var(n)

Variance (n) will be computed as: Var = [c1*c2*(c1-m)*(c2-m)]/m3

We also used RDSA to adjust *m* for the differing sampling probabilities using the individual sampling weights for the relevant variables. The adjusted proportion of the target population will thus be used, resulting in the following formula:

N = n / p

Where:

N = target population size,

n= number of target population receiving service or being a member

p= proportion of target population using the particular service

1.6. Ethics

This study was approved by the PNG National Department of Health's Medical Research Advisor Committee (MRAC), the Research Advisory Committee of the National AIDS Council Secretariat (RAC), the PNG Institute of Medical Research's Institutional Review Board (IRB), the Human Research Ethics Committee at UNSW Sydney and the Ethics Committee at the US Centers for Disease Control and Prevention in Atlanta. Friends Frangipani and Kapul Champions provided letter of endorsement.

LAYOUT OF REPORT

The study results for FSW and MSM/TG are presented in two parts, one per population, with population-specific recommendations at the end of each of the parts. Overall, non-population specific, study recommendations, are presented at the end of the report.

- Part 1: Women and girls who sell and exchange sex
- Part 2: Men who have sex with men and transgender women

A NOTE ON TERMINOLOGY

For women and girls who exchange sex for money, goods or services, we use the term 'female sex worker' (FSW) to reflect international reporting practices. This term however, was not used in the implementation of the study. We also note that women and girls in PNG move in and out of transactional relationships, often without referring to such practices as sex work.

The term 'men who have sex with men' (MSM) is derived by the public health community to describe a sexual behaviour engaged in by some people born male. Introduced into PNG by development partners, the term MSM has in some contexts become an identity. Kapul Champions, the Papua New Guinean peer-led civil society organisation representing males who engage in same-sex practices and individuals who identify as transgender originally referred to itself as representing MSM and TG. As the organisation matured, a collective decision was made to use a more inclusive and reflective term that addressed the diversity and complexity of sexuality, rather than focusing solely on behaviour. They employ the term 'men of diverse sexualities' (MDS).

While the term MDS may not be perfect, it is an important step forward for affected communities in PNG where they are making sense of local realities in their own terms. We, however, as authors of this report face the challenge that the international community report on IBBS data about MSM and TG.

We, therefore, use the term MSM/TG to refer to the behaviour being described, but in no way do we use this to reflect the identities of the men and transgender of Mt Hagen specifically, or PNG more generally. Indeed, the data presented in this report reflect the many identities embraced by MSM and TG in the country.

PART 1

WOMEN AND GIRLS WHO SELL AND EXCHANGE SEX

In Mt. Hagen, 709 women and girls involved in the selling and exchanging of sex for goods, services or money were eligible, provided informed consent and participated in the study. Results presented here are **weighted population proportions** representing the entire population of FSW in Mt. Hagen, as per the RDS method. Unless otherwise stated through reference to study participants and the specific number of people, all data here should be interpreted as weighted population proportions.

1. SOCIO-DEMOGRAPHIC INFORMATION

More than one in two (54.5%) FSW in Mt. Hagen were aged 25 years or older, with adolescents and young people accounting for 45.5% of FSW. The median age for FSW was 25 years. **See Figure 1.1**.

Nearly all (94.4%) women and girls self-identified as from the Highlands Region; 4.0% were mixed heritage from two or more regions. Almost none identified as originating from the Southern Region (0.8%), the Momase Region (0.7%) or the New Guinea Islands (0.1%), **See Figure 1.2**.

Of those who identified that they were from the Highlands Region, most were from the Western Highlands Province followed by Oro Province (46.1% and 25.0% respectively), (data not shown).

One in two FSW had lived in Mt. Hagen for 20 or more years (50.0%). One in four (25.8%) had lived there for less than five years. **See Figure 1.3**.

There was great diversity in religious affiliation among the women and girls engaged in transactional sex. The most common religious affiliations of FSW were the Catholic Church

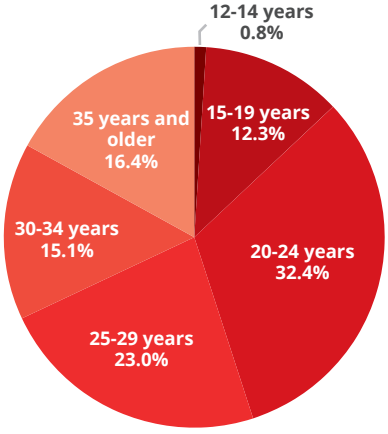

Figure 1.1: Distribution of age

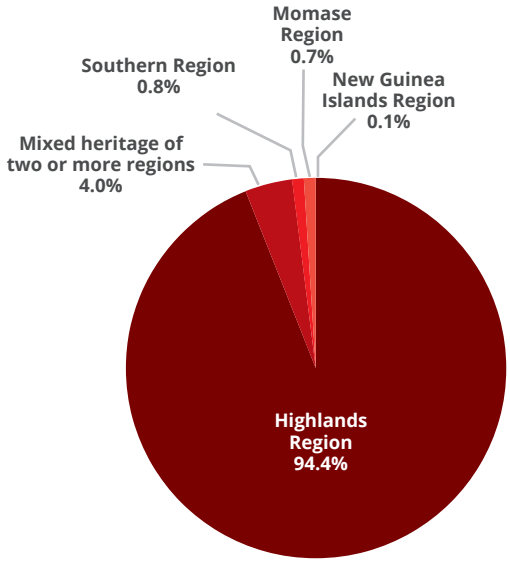

Figure 1.2: Region of origin

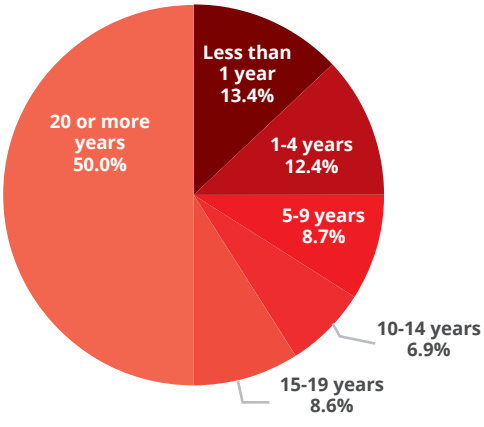

Figure 1.3: Years living in Mt Hagen

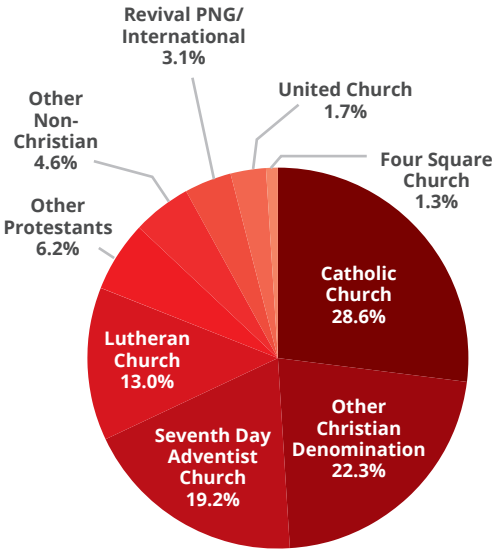

Figure 1.4: Religious affiliation

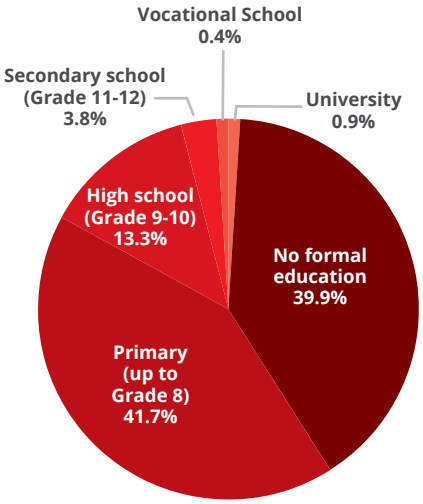

Figure 1.5: Educational level

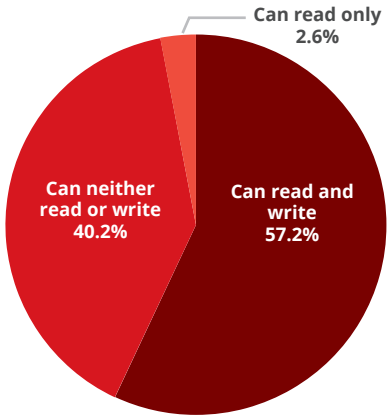

Figure 1.6: Literacy level

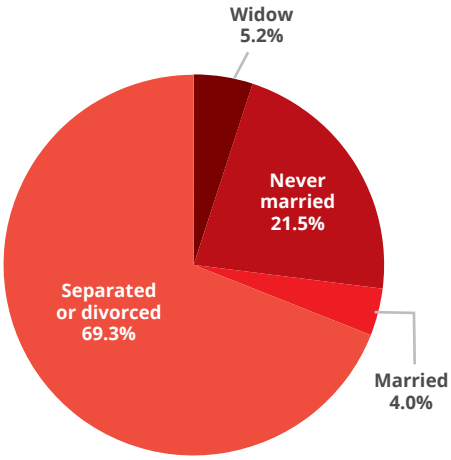

Figure 1.7: Marital Status of FSW in Mt Hagen

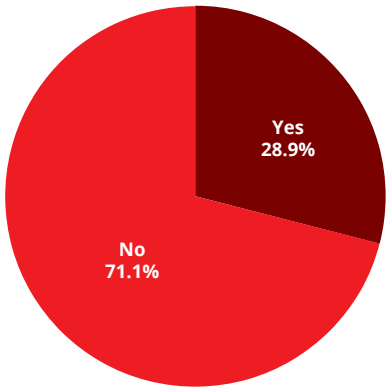

Figure 1.8: FSW spent more than one month outside of Mt Hagen in the last six months

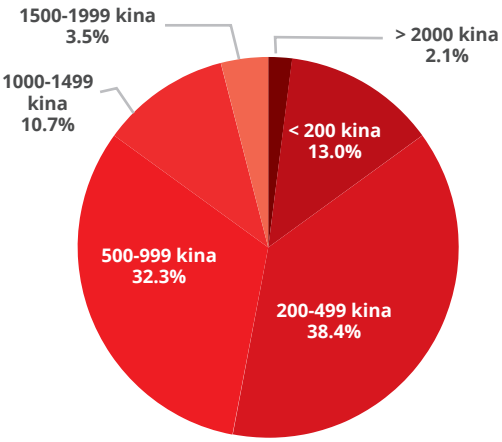

Figure 1.9: Average monthly income

(28.6%), other Christian denomination (22.3%), Seventh Day Adventist Church (19.2%), and Lutheran (13.0%). **See Figure 1.4**.

The level of educational attainment for FSW was low, with 39.9% having had no formal education and less than half (41.7%) having achieved some level of primary education. A small proportion of FSW had completed high school (13.3%). A smaller proportion had completed secondary school (3.8%). Very small proportions had gone on to complete vocational school or university (0.9% and 0.4% respectively). **See Figure 1.5**. Only 1.2% were currently in school (data not shown).

More than one in two FSW in Mt. Hagen could read and write (57.2%), with less than half (40.2%) being unable to read or write. **See Figure 1.6**.

1.1 Living arrangements and marital status

Over two in three FSW (69.3%) were separated or divorced. Few FSW were married (4.0%) or widowed (5.2%). Almost one in five women (21.5%) had never been married. **See Figure 1.7**.

Less than one in three FSW (28.9%) were mobile, spending more than a month away from Mt. Hagen in the last six months. **See Figure 1.8**.

1.2 Income and employment

Combining all income sources, one in two FSW (51.4%) earned less than 500 Kina per month. While one in three (32.3%) earned between 500-999 Kina per month, few (16.3%) earned 1,000 Kina or more per month. Half (51.0%) of FSW report sex work as their main source of employment/income, while one in four (24.1%) worked in the informal sector, one in five (21.3%) were unemployed, and only 3.6% were formally employed. **See Figure 1.10**.

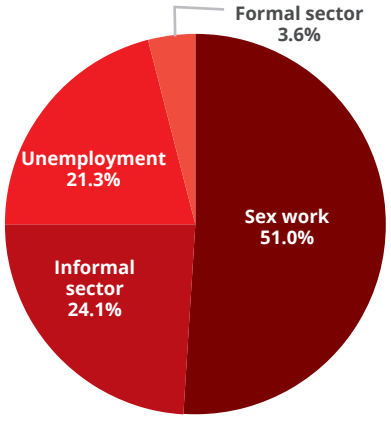

Figure 1.10: Main form of employment/income

2. SEXUAL DEBUT, INITIATION OF SEX WORK AND MOST RECENT SEX

2.1 Sexual debut

The median age of first vaginal sex was 16 years. The majority of FSW (69.7%) had vaginal sex for the first time between the ages of 15 and 19 years, with about one in five (18.4%) first having vaginal sex between the ages of 10 and 14 years. 11.9% had their sexual debut after the age of 20 years. **See Figure 2.1**.

The median age for first anal sex was 20 years. Of FSW who have had anal sex, 4.0% first did so between the ages of 10-14 years. Roughly two in five FSW had anal sex for the first time between the ages of 15-19 years (37.6%) or 20-24 years (33.0%). Two in five (41.6%) had anal sex for the first time as an adolescent (10-19 years). **See Figure 2.2**.

Most FSW (81.3%) had vaginal sex for the first time by choice whilst 18.7% were forced into their first vaginal sex. In contrast, about one in two FSW (53.8%) were forced into their first anal sex. **See Figure 2.3**.

The most common method of being forced to have vaginal sex and anal sex for the first time was being pressured (33.4%). Being physically forced (30.3%) and being coerced with payment (33.2%) were the second most common reasons for forced vaginal sex and anal sex, respectively. **See Figure 2.4**.

2.2 Vaginal and anal sex

The sexual behaviours of FSW varied. Two of three FSW (65.5%) engaged in both vaginal and anal sex, with 34.5% only ever having vaginal sex. **See Figure 2.5**.

2.3 Sexual attraction and history of same sex practices

Almost all FSW were attracted exclusively to men (97.6%), with 2.4% having some form of attraction to other women (data not shown). Most FSW had never had sex with another woman (94.6%), but 5.4% had (data not shown).

2.4 Initiation of sex work

The median age when FSW first sold or exchanged sex was 20 years. Most (55.3%) first sold or exchanged sex when they were aged 20 years or older. Two in five FSW (44.7%) first sold or exchanged sex between the ages of 10-19 years. **See Figure 2.6**.

I was living with my mother up until I was about 17 years or 18 years and I went out and slept with men...they said to give me money so I started to follow them and go. Tabitha, 21 years.

Most FSW (79.4%) did not receive money or goods the first time that they had sex, while 20.6% did. **See Figure 2.7**.

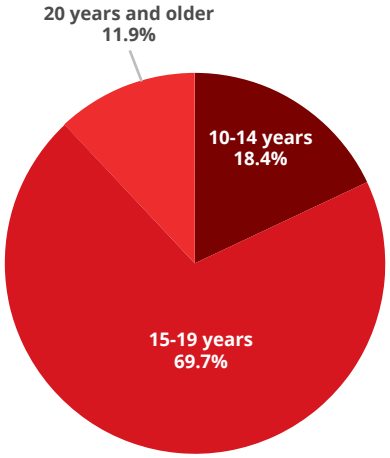

Figure 2.1: Age of first vaginal sex

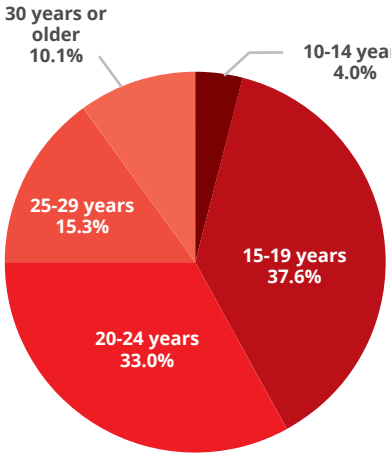

Figure 2.2: Age first had anal sex

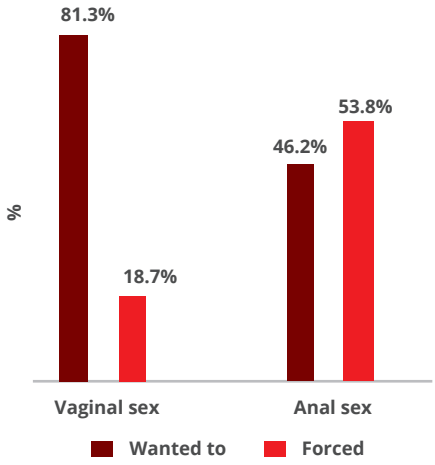

Figure 2.3: Proportion forced/coerced into first sex

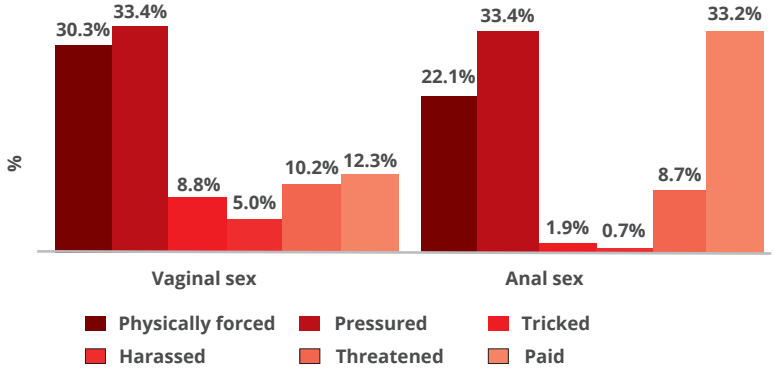

Figure 2.4: Means of being forced/coerced to have anal and vaginal sex for the first time

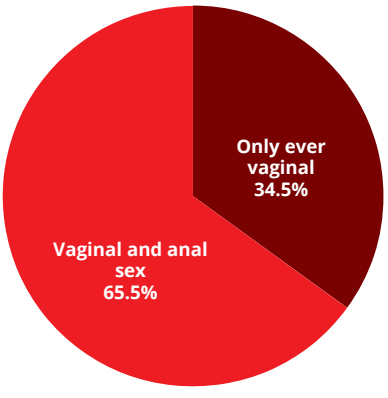

Figure 2.5: Sexual behaviour

While most FSW (58.0%) had been selling or exchanging sex for less than five years, 42.0% have been doing so for five or more years. **See Figure 2.8**.

The most common reason for beginning to sell and exchange sex was to provide money for the family or themselves (46.8%). Anger and revenge (18.5%), was the second most common reason. Very few FSW were forced, pressured or coerced to sell sex (1.2%). **See Figure 2.9**.

I left my husband and stayed away from him, and when I see what he was doing and seeing my children suffer, I felt bad. One time some women said, let us go into town to that Highlands pokies area... they set me up with this guy and I have no choice but to go with him. I felt bad but I just went and it was my first time but it's okay I must go and have sex. So we went and in the morning when I woke up, I was sober and my mind was clear. I felt ashamed for people to see me at the gate. I held my head and put the cold shirt and covered my face and came out of the gate. After that I do sex work and it is just normal. Edna, no age supplied. The first time that I started doing sex work was with an elderly man who had a lot of money. He came and picked us up at the village when I was with three other girls. He took us out and gave us beer and bought us lunch and he even brought us to his place in [Name of Town]. We went there and when we wanted to return, it was like their custom and they slaughtered a big pig and cooked it in the earth oven and gave it to us. On top of that they also gave us money and we brought it with us. Gretel, 26 years.

I haven't had the opportunity of going to high school. I just left school in grade eight. And when I left school, I started socializing with the women who go out and sell sex. And from what I was experiencing it was a big influence to me. And so they have asked me to join them and went out to sell sex, enjoy the beer together, going out together seeing their boyfriends so I agreed and followed them. Fiona, no age supplied.

I apologised and said to her that I do not feel it was right however, the girl said it won't be a problem and said it was a chance for us to have money. So I agreed. Then the Tari men booked the room at [Name removed] and already had access to the keys which I was not aware of so how would I know. They already planned with the girl. So we went out and slept... He gave me somewhere around 110 Kina. Joyce, aged 24 years.

We were drunk so we had sex and mind you, it was my first time to experience sex. Early in the morning around 5am my cousin came. I had never had sex, drank beer or tasted smoke, but it was through my cousin that I have had these experiences in the night. My partner asked me if I had a phone and I said no and he gave me a K100 and another K120 in the room and had advised me to buy one so that we could contact. Edna, 24 years.

Selling and exchanging sex was the primary income source for 76.8% of FSW. **See Figure 2.10**.

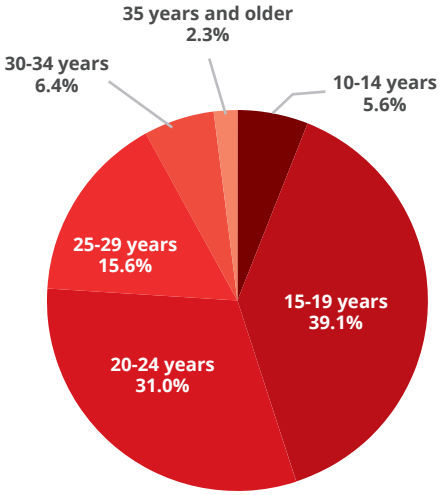

Figure 2.6: Age first sold or exchanged sex

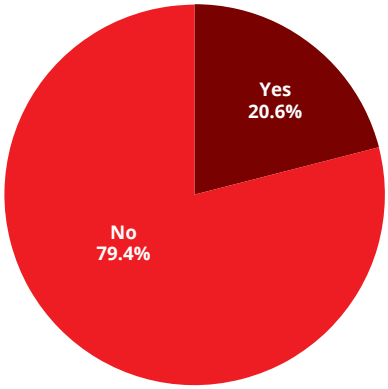

Figure 2.7: Sexual debut with men who gave money or goods

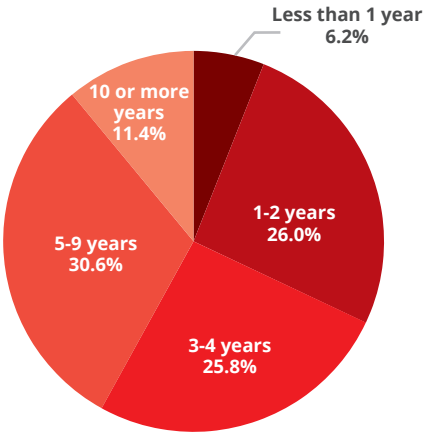

Figure 2.8: Time selling or exchanging sex

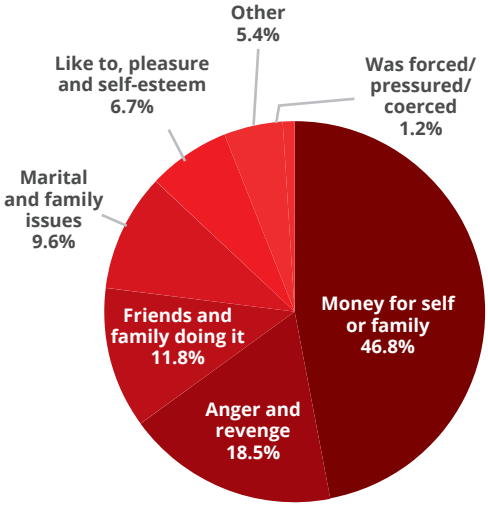

Figure 2.9: Reasons for starting to sell or exchange sex

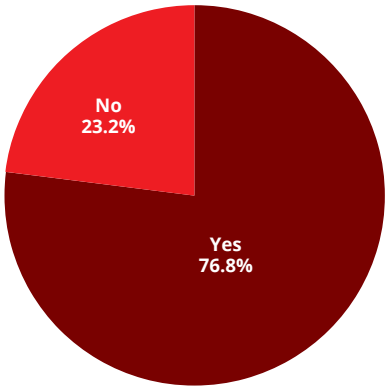

Figure 2.10: Sex work main source of income

2.5 Condom use and most recent sex

The four most common reasons (**See Figure 2.11**) for not using a condom during vaginal or anal sex were:

- "When my partner refuses" (69.7% and 70.2%, respectively).
- "When I'm drunk or stoned" (53.5% and 56.3% respectively).
- "When I cannot find one" (51.7% and 40.4% respectively).
- "When having sex with a regular partner" (46.0% and 45.4% respectively).

When I am normal, I usually tell the men to use condom. Without condom, I usually refuse it. When I am drunk, then we just do it without condom. Tabitha, 21 years.

People are such so they might say, the woman came and got the condoms and went had sex like such and such would be said, so I used to think about that and I usually feel afraid so I don't come and get the condoms. Philippa, no age supplied

Sometimes I can say that if I knew that guy very much, we don't use condom. Regina, 40 years

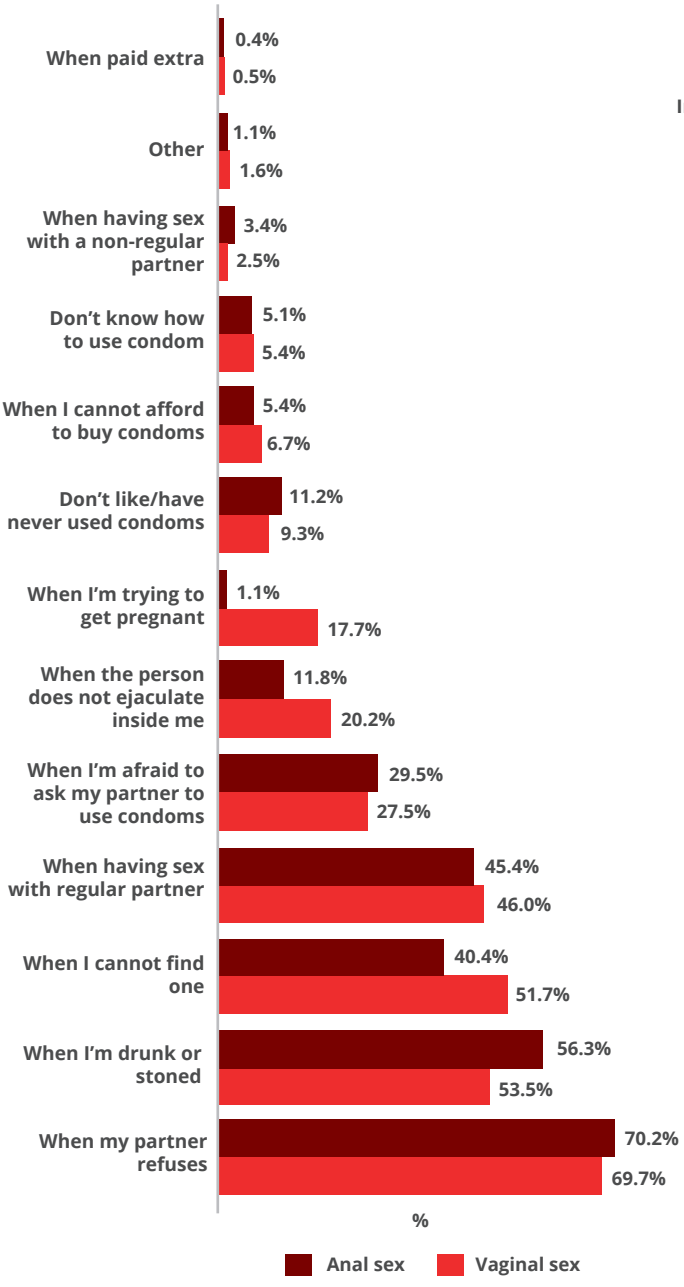

Figure 2.11: Reasons why condom not used during type of sex

3. CURRENT SEX WORK PRACTICES

3.1 Meeting clients and sex work areas

FSW met their clients in a number of different ways, including at public areas such as streets and parks (81.9%), through friends (64.2%), through phones (64.0%) or at bars and clubs (57.2%). **See Figure 3.1**. When asked specifically if they used mobile phone applications and the internet to meet clients in the last six months, 17.5% of FSW reported they did (data not shown). Three in five FSW (64.8%) sold or exchanged sex for goods, money or services only in and around Mt. Hagen in the last 12 months. Nearly one in five (19.5%) also sold sex elsewhere in Western Highlands province and one quarter (28.6%) also sold sex in other provinces of PNG. **See Figure 3.2**.

3.2 Methods of payment and income earned

Almost all FSW (99.4%) received money in return for sex, with two in three (61.7%) reporting that they also received goods in exchange for sex. Approximately one in five (17.3%) received

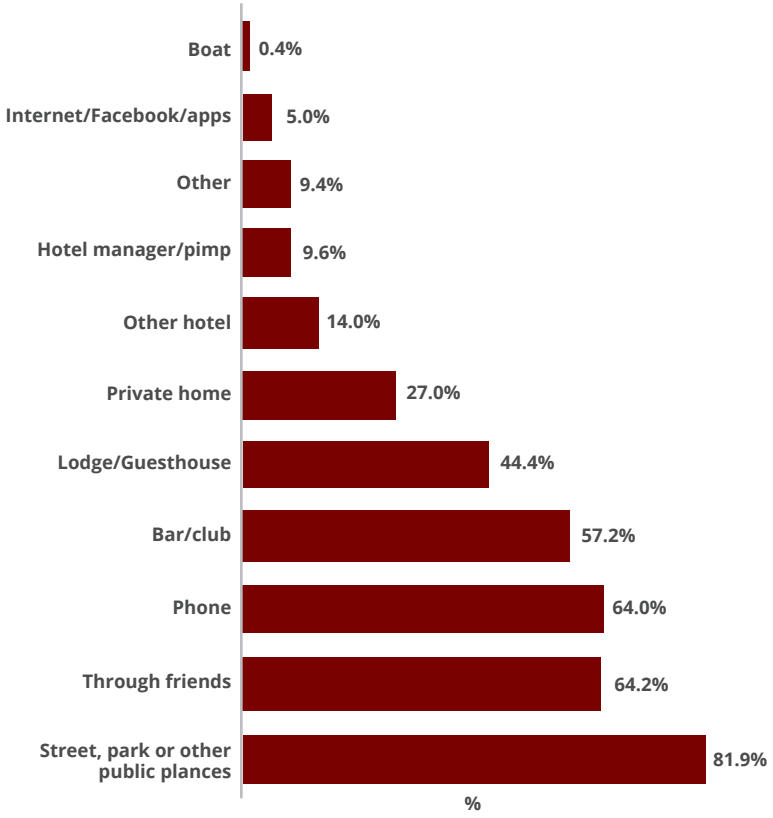

Figure 3.1: Venues where clients are usually found*
***Multiple responses possible**

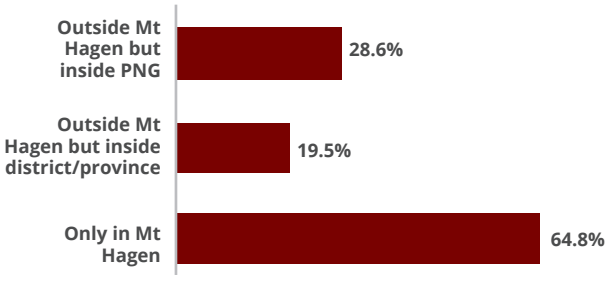

Figure 3.2: Sex sold or exchanged in Lae and elsewhere

services in return for sex. **See Figure 3.3**.

FSW received more money for anal sex than they did for vaginal sex. Only 14.5% FSW received 200 Kina or more for vaginal sex while 22.7% received 200 Kina or more for anal sex. Roughly equal proportions of FSW earned between 100 and 199 Kina for vaginal (35.9%) and anal sex (33.3%). **See Figure 3.4**. The median amount earned for vaginal and anal sex were similar, 100 Kina.

If they want vaginal sex then I normally charge them K100, for oral sex I would charge them K150 and for anal sex, it's usually K150. For vaginal sex, put K100 and if I propose to play with it to make sure they release then they would say, 'if you want it that way then we will pay K50.' For anal and vaginal sex, I usually tell them to wear condom. However, if they insist then I normally tell them to release outside, like I usually push them out. Linda, 27 years

3.3 Number and type of clients

Most FSW (67.1%) have had five or more clients who gave money in the past six months, with the remaining 32.9% having four or fewer clients in the last six months. **See Figure 3.5**.

Most FSW (56.4%) had at least one regular client in the last two weeks with whom they had vaginal or anal sex. **See Figure 3.6**. Of those who had a regular client during this period, 29.8% had vaginal sex with three or more regular clients. **See Figure 3.7**.

One in two FSW (50.1%) had a one-time client in the last two weeks. **See Figure 3.8**. Of FSW who had a one-time client during this period, more than one in two (55.2%) FSW sold or exchanged vaginal sex with three or more one-time clients. **See Figure 3.9**.

3.4 Condom use with clients

Only 13.2% of FSW used condoms with all clients who gave money in the last six months. The majority of FSW (86.8%) have had at least one client with whom they did not use a condom. **See Figure 3.10**.

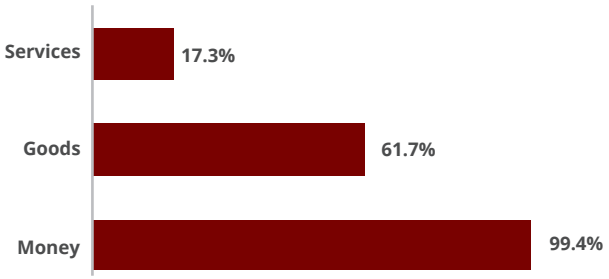

Figure 3.3: Method's of payment and exchange*

*Multiple responses possible

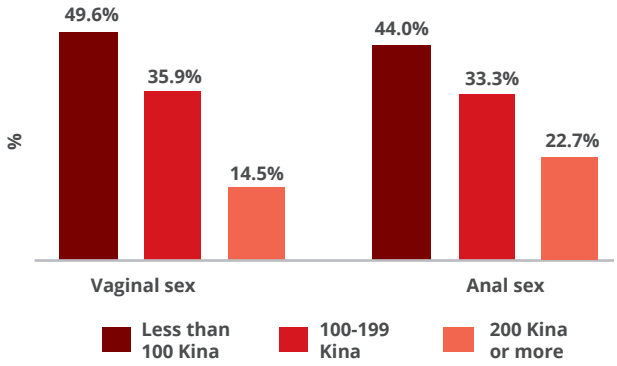

Figure 3.4: Income earned by selling anal or vaginal sex

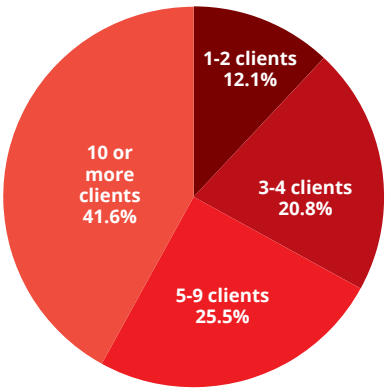

Figure 3.5: Number of clients who gave money for sex in the last six months

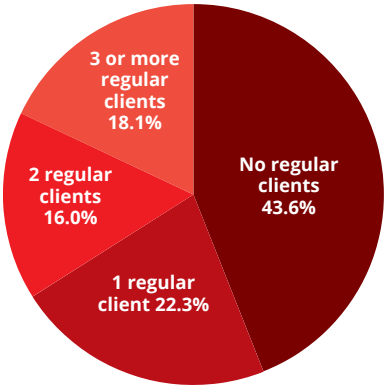

Figure 3.6: Number of regular clients with whom sold or exchanged vaginal or anal sex in the last two weeks

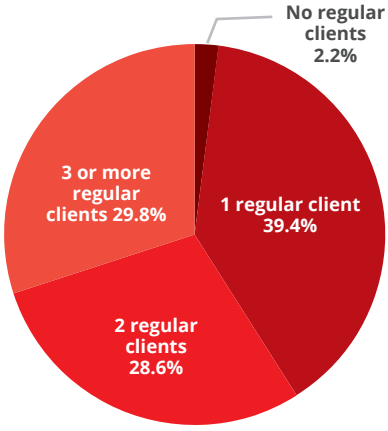

Figure 3.7: Number of regular clients with who sold or exchanged vaginal sex in the last two weeks

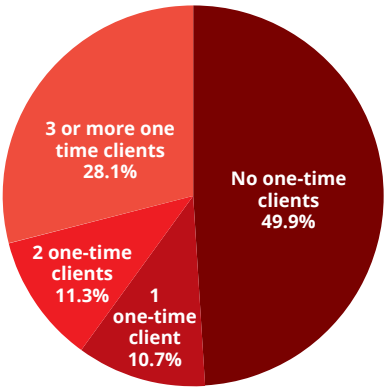

Figure 3.8: Number of one-time clients with whom sold or exchanged vaginal or anal sex in the last two weeks

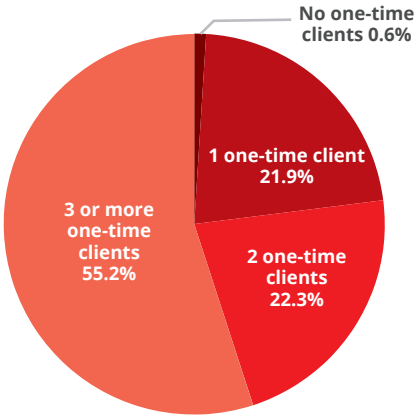

Figure 3.9: Number of one-time clients with whom had vaginal sex with in the last two weeks

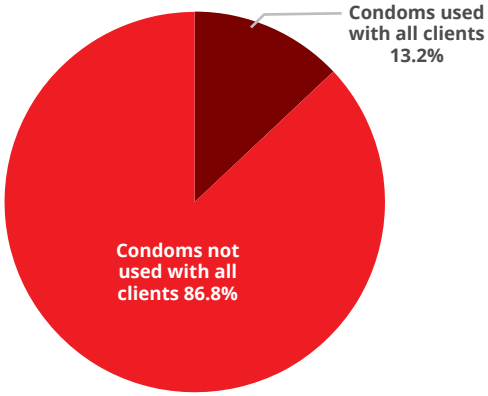

Figure 3.10: Condom use by clients who gave money in the last six months

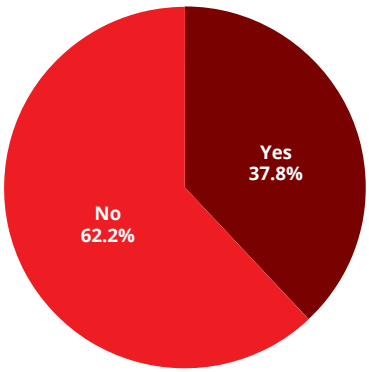

Figure 3.11: Condom use at last vaginal sex with one-time client in the last two weeks

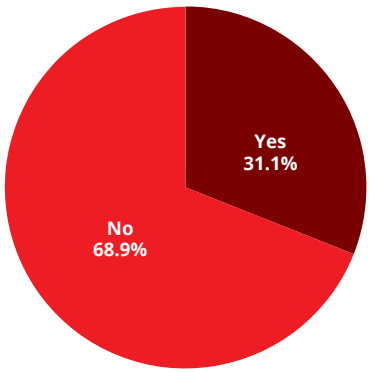

Figure 3.12: Condom use at last vaginal sex with a regular client in the last two weeks

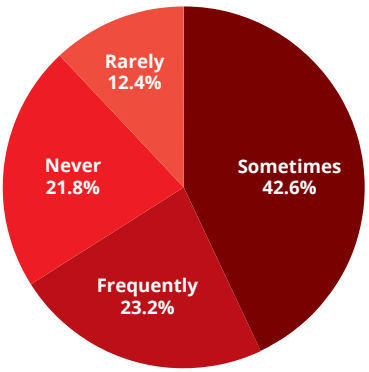

Figure 3.13: Ability to negotiate condom use with any client who refuses a condom in the last six months

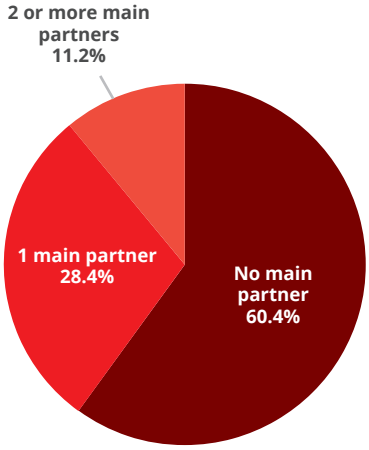

Figure 4.1: Number of main partners in the last six months

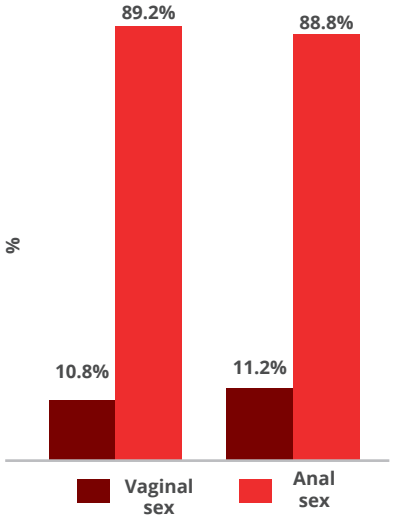

Figure 4.2: Condom use last vaginal and anal sex with a main partner

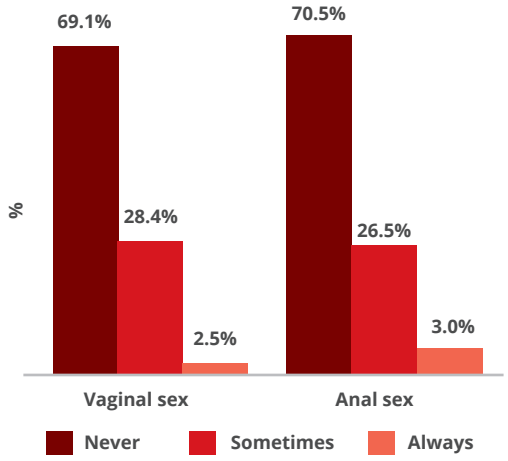

Figure 4.3: Frequency of condom use during vaginal and anal sex with a main partner in the last six months

Of FSW who had a one-time client in the last 2 weeks, only one in three (37.8%) used a condom during last vaginal sex with a one-time client during this period. **See Figure 3.11**. Of those with a regular client in the last two weeks, only 31.1% used a condom at last vaginal sex with a regular client. **See Figure 3.12**.

One in four FSW (23.2%) could 'frequently' negotiate condom use with a client who refused to use one, while 34.2% could 'never' or 'rarely' do so. **See Figure 3.13**.

These days are not days where you can just have unsafe sex. You must use condoms to have sex with these days. Back then we simply had unsafe sex around. Whether I have HIV or you have HIV both of us will use condoms to have sex with. Because of that I experienced this black eye. Pamela, 35 years

Sometimes it depends when men decide for us to use condoms... if they don't want to use condoms but if I ask them to use it then they'll say 'Then we'll pay you K20,' or 'Forget it, let's go back,' they'll say. So I usually turn around and say 'anyway', and then accept whatever they say. So sometimes we use condoms and sometimes we don't use condoms. Julie, 18 years

When I go out with men, they do not resist on using a condom. I used to tell them to use condom for they do not know who I am and what kind of a woman am I and where I used to go. Edna, no age supplied.

4. SEX WITH NON-PAYING PARTNERS

4.1 Main partners

More than half of FSW in Mt. Hagen (60.4%) had no main non-paying sexual partners in the last six months. **See Figure 4.1**.

Condom use with a main non-paying partner was similar during last vaginal (10.8%) and anal sex (11.2%). Most FSW did not use a condom at last sex with main partners for either vaginal (89.2%) or anal sex (88.8%). **See Figure 4.2**.

Condom use with a main partner in the last six months was low, with more than two in three FSW reporting never using a condom during vaginal or anal sex (69.1% and 70.5% respectively). **See Figure 4.3**.

Nearly two in three (65.7%) FSW with a main partner could ask

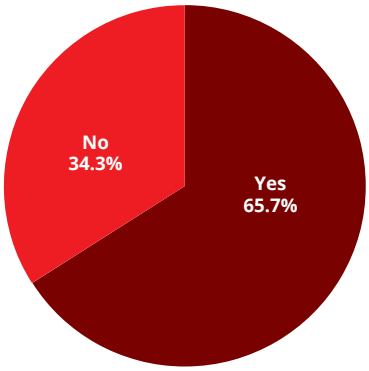

Figure 4.4: Could ask a main partner to use a condom

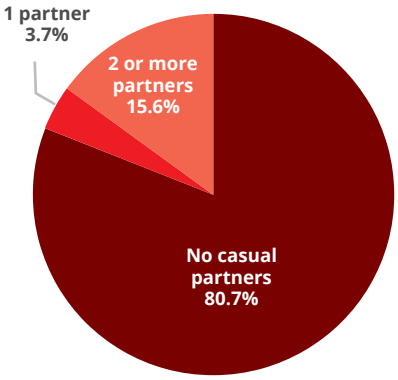

Figure 4.5: Number of casual partners in the last six months

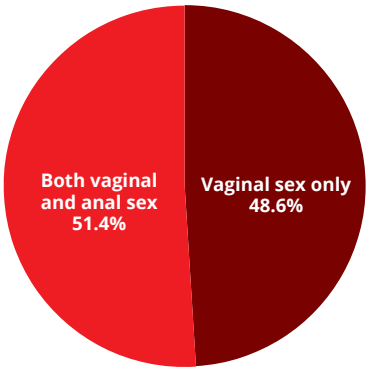

Figure 4.6: Type of sex with casual partners in the last six months

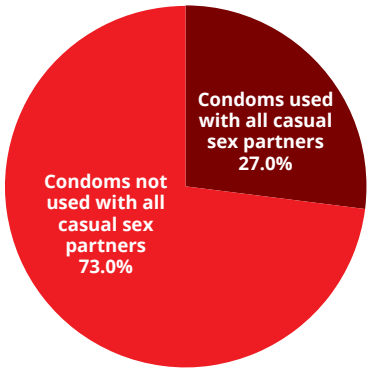

Figure 4.7: Condom use and casual partners

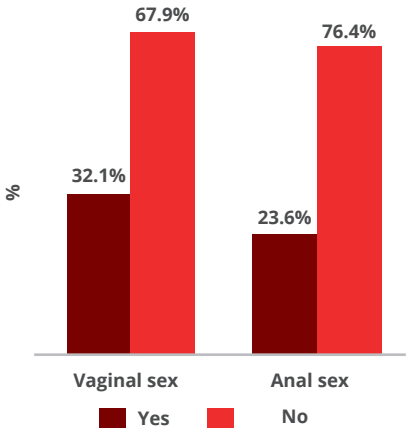

Figure 4.8: Condom use at last vaginal and anal sex with a casual partner

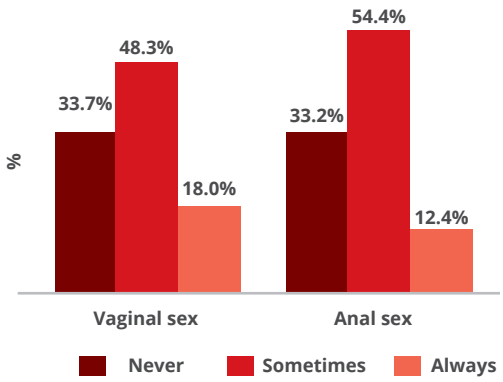

Figure 4.9: Frequency of condom use during vaginal and anal sex with a casual partner in the last six months

their main partner to use a condom. **See Figure 4.4**.

4.2 Casual partners

Most FSW (80.7%) had no casual partners in the last six months. **See Figure 4.5**.

Of those FSW with a casual partner in the last six months, one in two (51.4%) FSW had both vaginal and anal sex with their casual partners, with less than half (48.6%) having only vaginal sex. **See Figure 4.6**.

About one in four FSW (27.0%) used condoms with all of their casual partners in the last six months. **See Figure 4.7**.

FSW had slightly higher condom use at last sex with a casual partner during vaginal sex than during anal sex (32.1% versus 23.6%, respectively). **See Figure 4.8**.

Approximately one in three FSW never used a condom during vaginal or anal sex (33.7% and 33.2%, respectively) in the last six months. However, slightly more FSW always used condoms during vaginal sex than for anal sex (18.0% and 12.4% respectively) in the last six months. **See Figure 4.9**.

5. SOCIAL SUPPORT, MENTAL HEALTH AND STIGMA AND DISCRIMINATION

5.1 Social support

Almost the entire population of FSW had supported a peer in the last 12 months by negotiating or standing up to a pimp/madam/broker (92.7%) or police (80.4%). Approximately three in four FSW were readily able to rely on another FSW to accompany them to see a doctor (72.6%). **See Figure 5.1**.

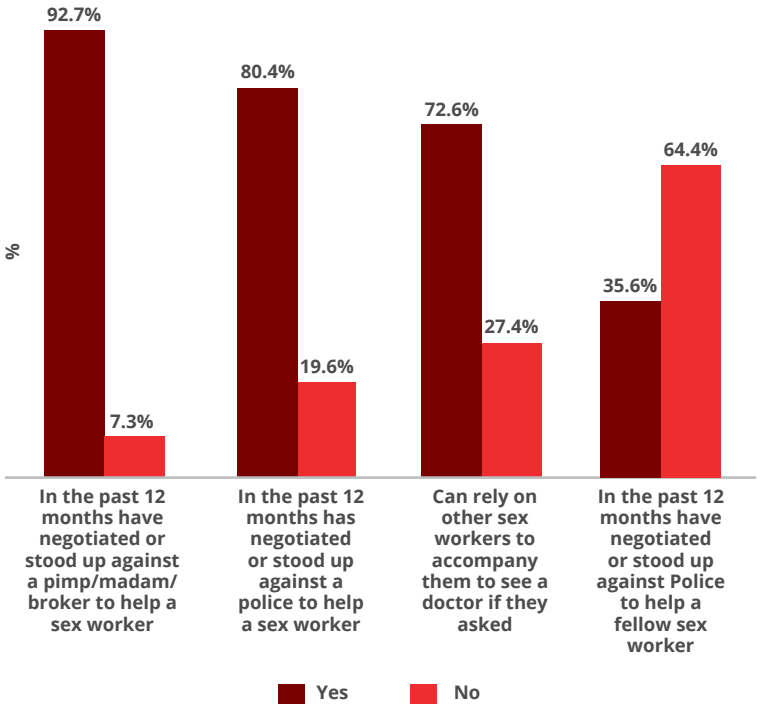

Figure 5.1: Social support

5.2 Depression

Based on the two-item Patient Health Questionnaire-2 screening tool for depression, more than one in two FSW (53.2%) experienced depression. **See Figure 5.2**.

5.3 Stigma and discrimination

One in four FSW (25.3%) felt the need to hide that they sold or exchanged sex when accessing health services. **See Figure 5.3**.

Most FSW were not denied healthcare because they sold or exchanged sex (80.1%), but another 18.3% did not disclose that they sold sex and, therefore, were not denied health services. **See Figure 5.4**.

One in four FSW (26.8%) experienced some form of blackmail because they sold or exchanged sex. **See Figure 5.5**.

While most FSW had not experienced discriminatory practices by the police, one in three (31.5%) had given something to the police to avoid trouble in the last 12 months. A small proportion of FSW (6.7%) had been arrested because of their involvement in the selling or exchanging of sex and 2.3% had been sent to prison because of this. **See Figure 5.6**.

Of the one in three (31.5%) FSW who had given something to the police to avoid trouble in the last 12 months, more than three in four (77.2%) gave money. Another 16.6% exchanged sex with the police in order to avoid trouble. **See Figure 5.7**.

5.4 Drug use

Drug use was very low among FSW. Only 0.6% of FSW had ever taken illegal drugs. Of the five people in the survey who had ever taken illegal drugs, two used illegal drugs in the last six months (data not shown).

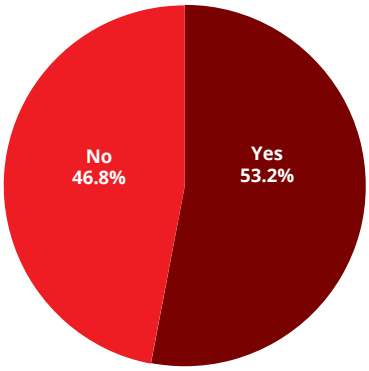

Figure 5.2: Depression

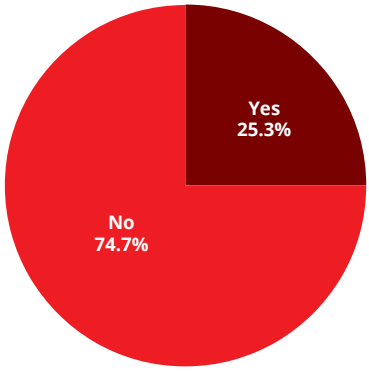

Figure 5.3: When accessing health services, they feel the need to hide that they sell and exchange sex

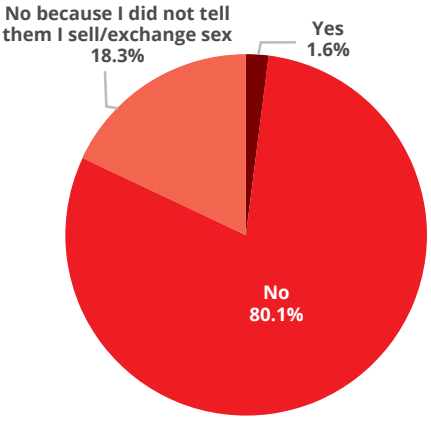

Figure 5.4: Denied health care because they sell or exchange sex

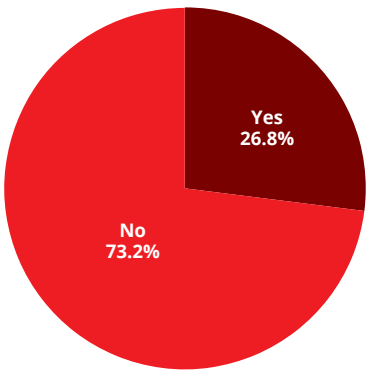

Figure 5.5: Blackmailed by someone because you sell or exchange sex

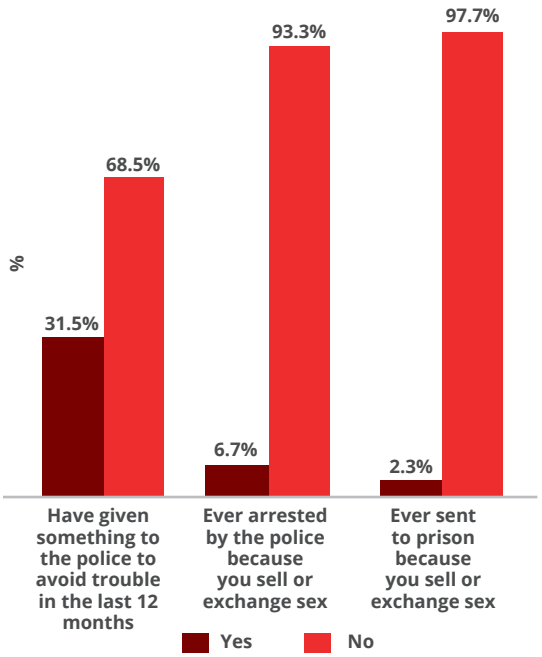

Figure 5.6: Experience with the police

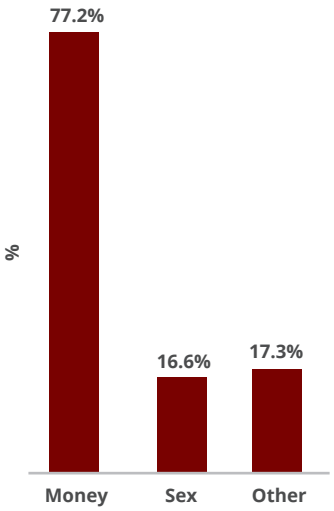

Figure 5.7: Things given to police to avoid trouble in the last 12 months

6. VIOLENCE

6.1 Physical violence

More than two in three FSW (69.1%) had ever experienced physical violence, with one in three (36.2%) of these survivors believing that the first time this happened was directly related to them selling or exchanging sex. Of those FSW who had ever experienced physical violence, one in four (26.3%) experienced it in the last 12 months, with three in four (73.5%) survivors believing that this violence was related to being involved in the selling and exchanging of sex. **See Figure 6.1**.

While three in four (74.7%) FSW did not try to seek support after any experience of physical violence in the past 12 months, 15.4% sought support from police or other security personnel. A small proportion (7.2%) sought the professional support of healthcare professionals and 6.0% sought the support of a social worker, counsellor or non-government organisation. **See Figure 6.2**.

6.2 Sexual violence

Two in five (40.4%) FSW had ever been forced to have sex. Of these survivors, 30.9% had been forced to have sex with two or more people at the same time. The perpetrator was known to the FSW in 59.3% of first cases of sexual violence. **See Figure 6.3**.

Among FSW who experienced sexual violence, 55.0% were abused for the first time before the age of 20 years, with 45.1% experiencing it between the ages 15-19 years. **See Figure 6.4**.

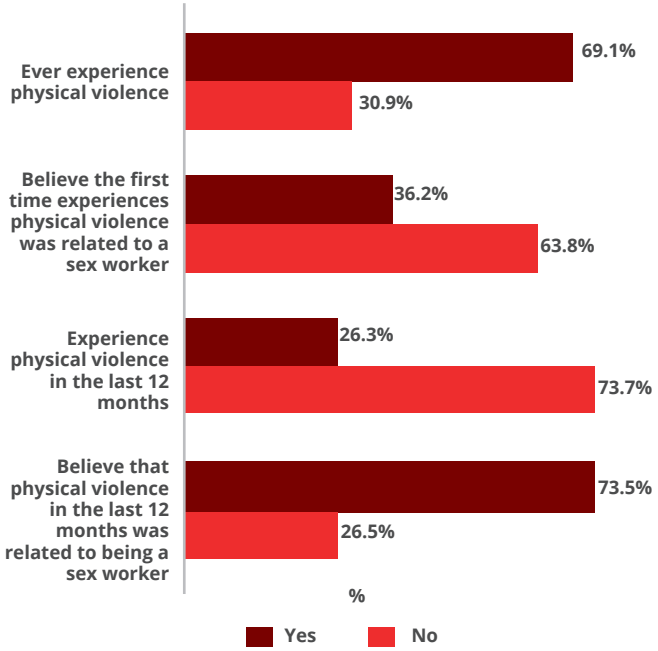

Figure 6.1: Experience of violence

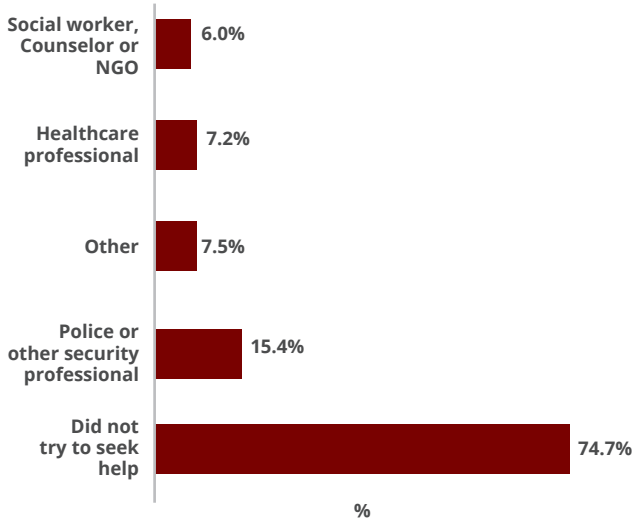

Figure 6.2: Access to support services after any physical violence*

*Multiple responses responsible

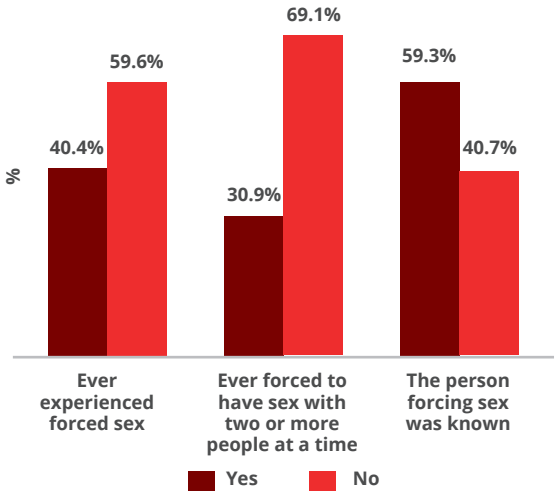

Figure 6.3: History of sexual violence

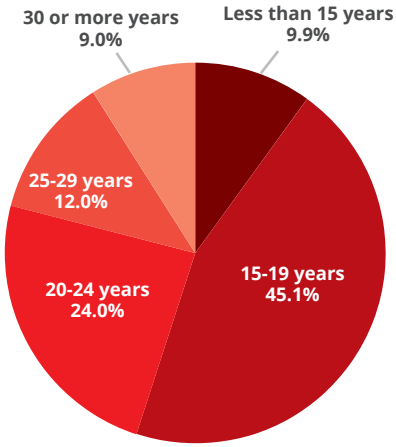

Figure 6.4: Age of first experience of sexual violence

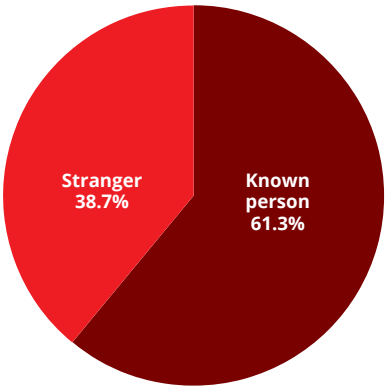

Figure 6.5: Identity of last perpetrator

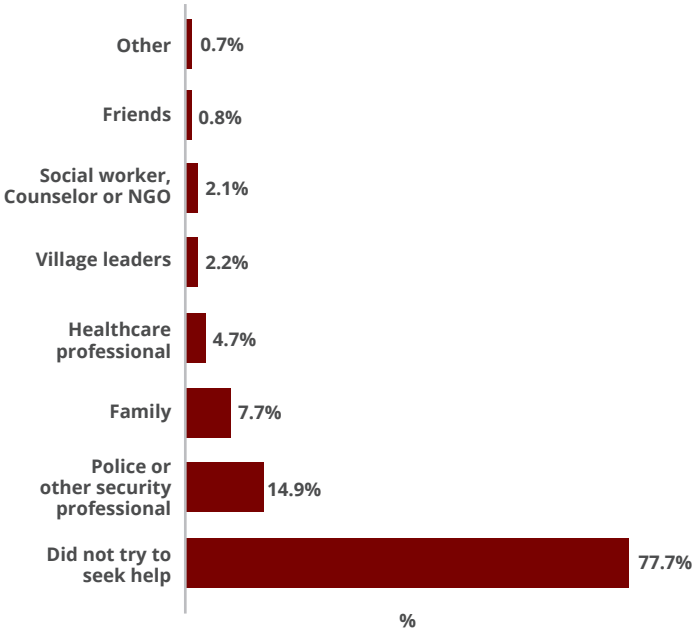

Figure 6.6: Source of help after last sexual violence

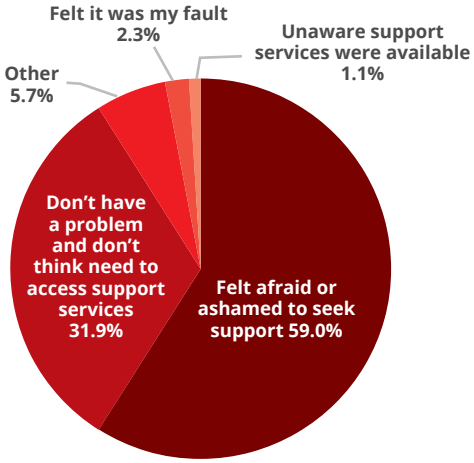

Figure 6.7: Reasons for not seeking support after most recent experience of sexual violence

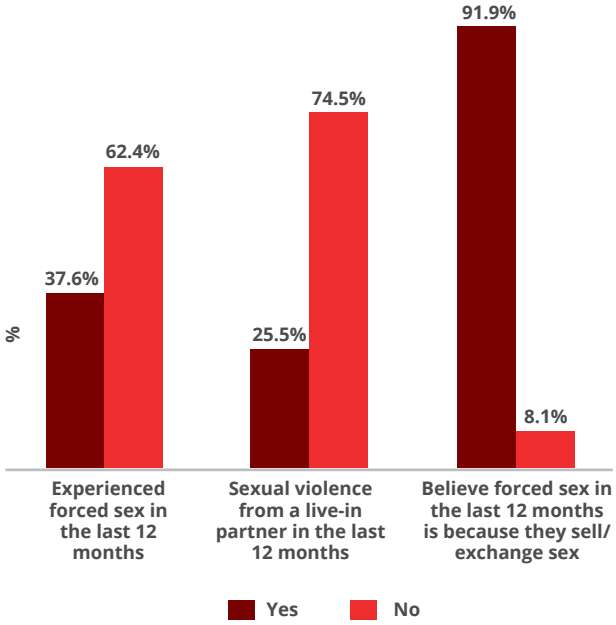

Figure 6.8: Sexual violence in the last 12 months

6.3 Last experience of sexual violence

On the most recent incident of sexual violence, three in five (61.3%) FSW in Mt. Hagen were sexually abused by a known perpetrator. **See Figure 6.5**.

Most FSW who experienced sexual violence never sought help after their last unwanted sexual encounter (77.7%). Common sources of help include police and other security personnel (14.9%) and family (7.7%). Very few sought help from healthcare professionals (4.7%) or social workers, counsellors, or NGOs (2.1%). **See Figure 6.6**.

The two most common reasons for FSW not accessing support services after the most recent experience of sexual violence was because they felt ashamed or afraid to access these services (59.0%) or they felt that they did not have a problem and therefore did not require support services (31.9%). **See Figure 6.7**.

6.4 Sexual violence in the last 12 months

Of FSW who had ever experienced sexual violence, almost two in five (37.6%) were physically forced to have sex in the last 12 months. Among FSW who had been forced to have sex in the last 12 months and had a live-in partner, 25.5% were forced to do so by a live-in sexual partner. Of these women, most (91.9%) believed it was because they were involved in the selling and exchanging of sex. **See Figure 6.8**.

6.5 Violence from a client in the last 6 months

About one in five FSW (21.9%) experienced any form of violence from their clients in the last six months. **See Figure 6.9**. The

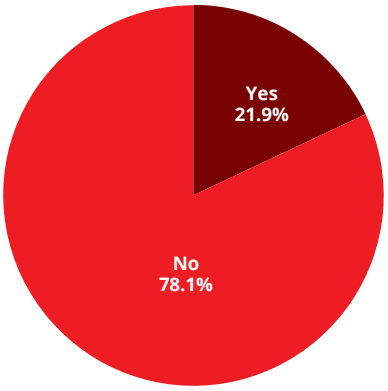

Figure 6.9: Any violence by client in the last six months

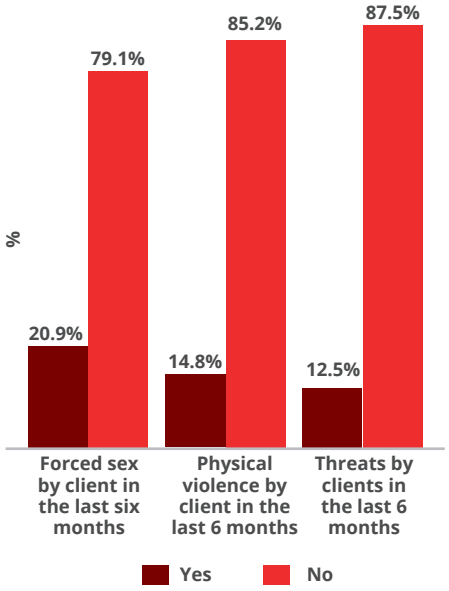

Figure 6.10: Type of violence perpetrated by a client in the last six months

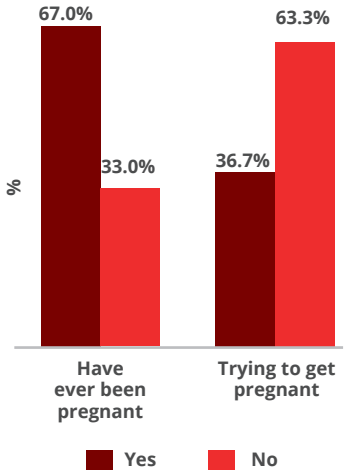

Figure 7.1: Pregnancy history

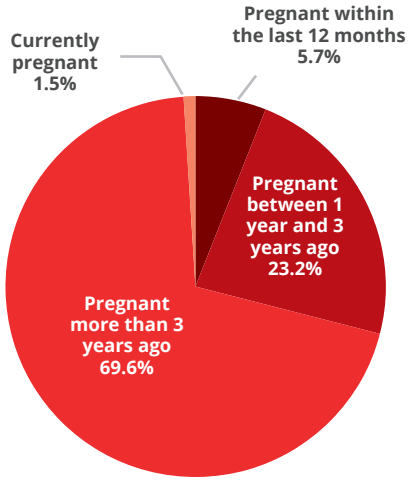

Figure 7.2: Time of most recent pregnancy

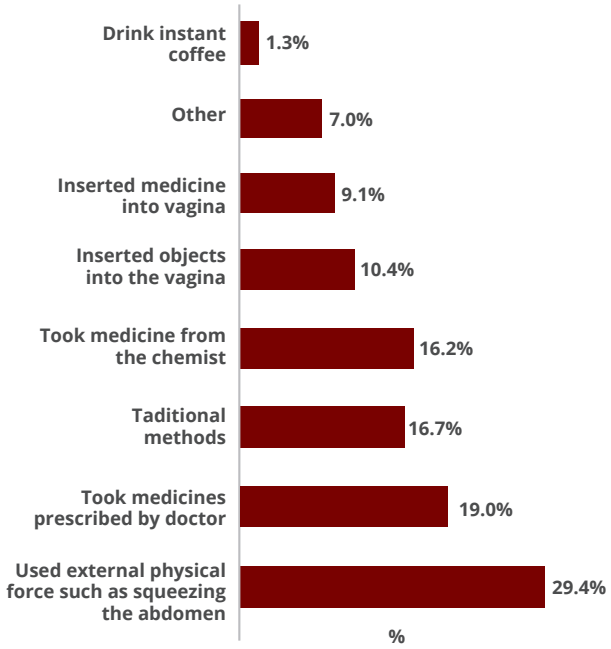

Figure 7.3: Methods of inducing an abortion*

*Multiple responses responsible

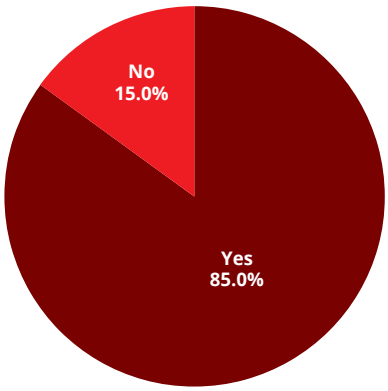

Figure 7.4: ANC attendance during last pregnancy

most common form of client-perpetrated violence in the last six months was forced sex (20.9%) followed by physical abuse (14.8%) and threats (12.5%). **See Figure 6.10**.

7. REPRODUCTIVE HEALTH

7.1 History of pregnancy

Two in three (67.0%) FSW had ever been pregnant. One in three (36.7%) FSW were trying to conceive. **See Figure 7.1**.

Among FSW who had been pregnant, 69.6% had their last pregnancy more than three years ago. A small proportion of FSW were either currently pregnant (1.5%) or had been pregnant in the past 12 months (5.7%). **See Figure 7.2**.

7.2 Induced abortion

Among FSW who had been pregnant, 17.9% tried to induce an abortion at least once (data not shown). Among these women, the most commonly used methods were: 1) applying external physical force to the abdomen (29.4%); 2) taking medicine prescribed by a doctor (19.0%); 3) using traditional methods (16.7%) and 4) taking medicine from the chemist (16.2%). **See Figure 7.3**.

7.3 Antenatal attendance

Of the 27.4% of FSW who had a pregnancy that resulted in a live birth in the last three years (data not shown), 85.0% attended an antenatal clinic at least once. **See Figure 7.4**.

7.4 HIV and syphilis testing during pregnancy

Of those FSW who attended an antenatal clinic during the last pregnancy that resulted in a live birth in the last three years, 88.6% were offered an HIV test, and of them 100.0% tested for HIV (data not shown). Of those who tested for HIV and ANC, 9.2%

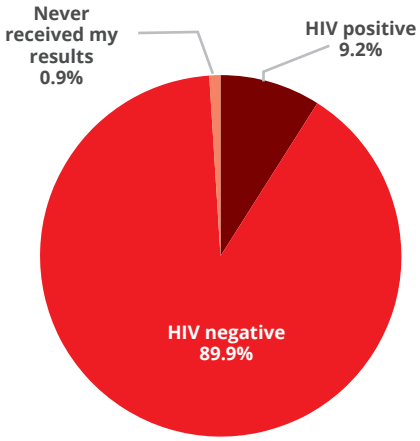

Figure 7.5: Results from HIV test during last pregnancy

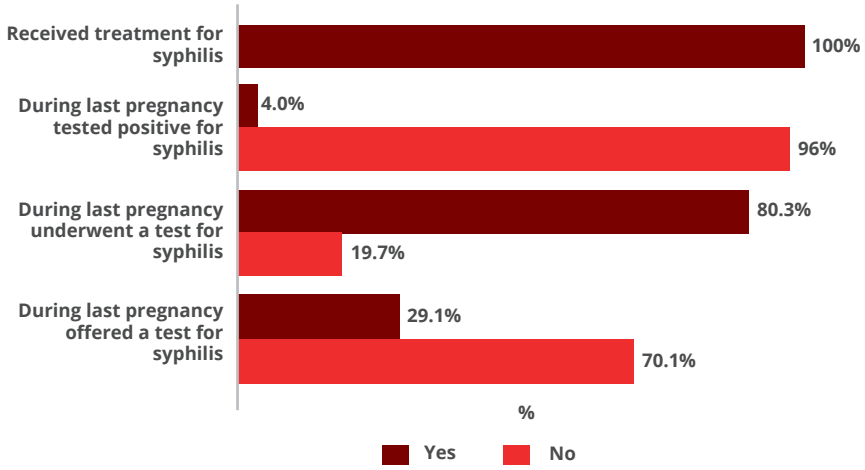

Figure 7.6: Syphilis testing and treatment during last pregnancy

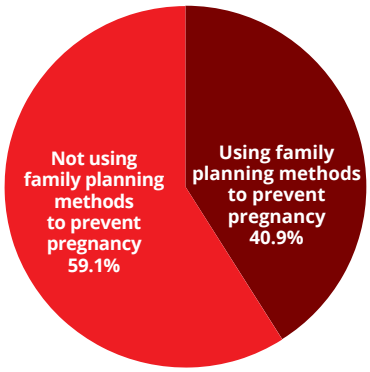

Figure 7.7: Family planning

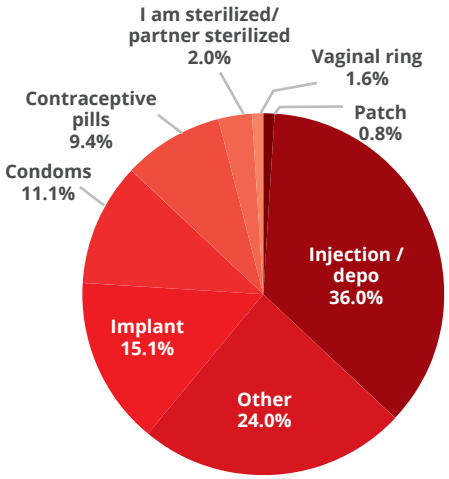

Figure 7.8: Main contraceptive method used

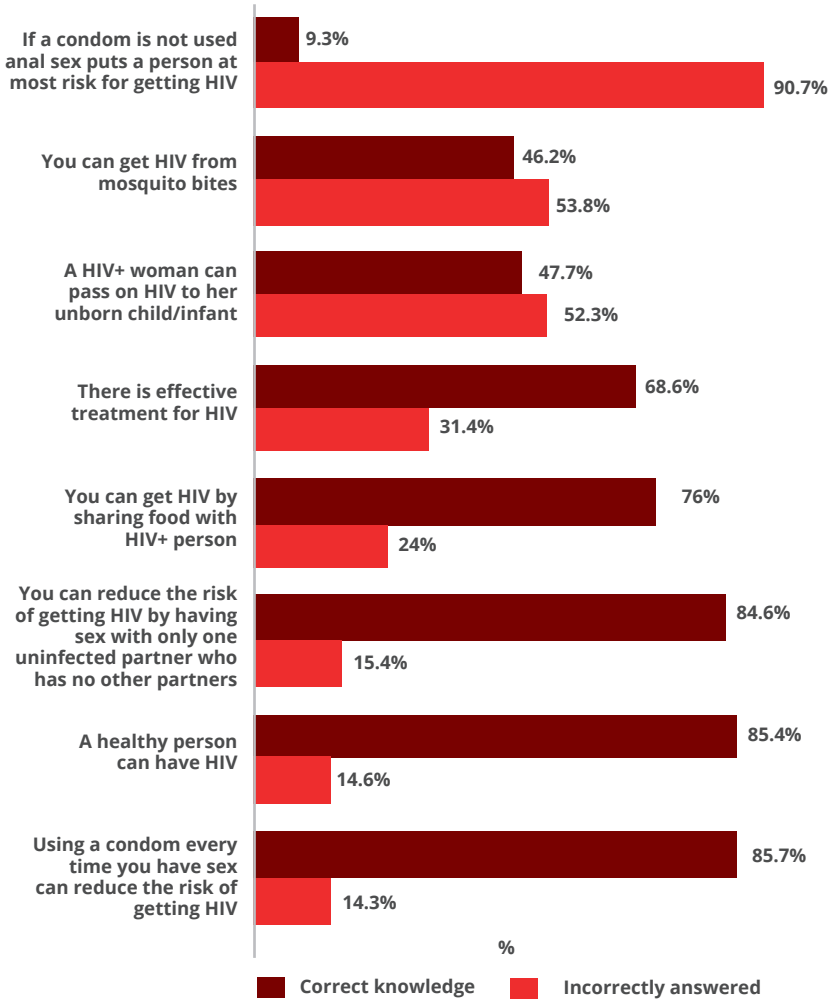

Figure 8.1: HIV knowledge

tested HIV positive. **See Figure 7.5**.

At last pregnancy that resulted in a live birth in the last three years, 80.3% of FSW were tested for syphilis. Among those tested, 4.0% tested positive. Of the two people in the survey who tested positive for syphilis during the ANC visit, both received treatment. **See Figure 7.6**.

7.5 Family planning

Only two in five FSW (40.9%) were using family planning. **See Figure 7.7**.

Of FSW using family planning methods, the most commonly used method was injection/Depo (36.0%) followed by implant (15.1%) and condoms (11.1%). Other methods were also used. **See Figure 7.8**.

8. KNOWLEDGE OF HIV AND ACCESS TO OUTREACH AND HIV PREVENTION SERVICES, INCLUDING PROPHYLACTIC TREATMENT

8.1 Knowledge of HIV

HIV knowledge (**See Figure 8.1**) was greatest for knowing that:

- Using a condom every time you have sex can reduce the risk of getting HIV (85.7% correctly answered).

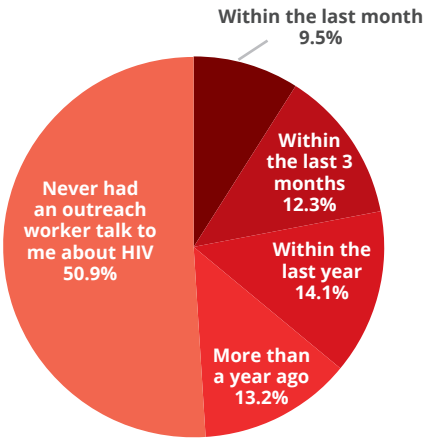

Figure 8.2: Last contact with peer outreach worker

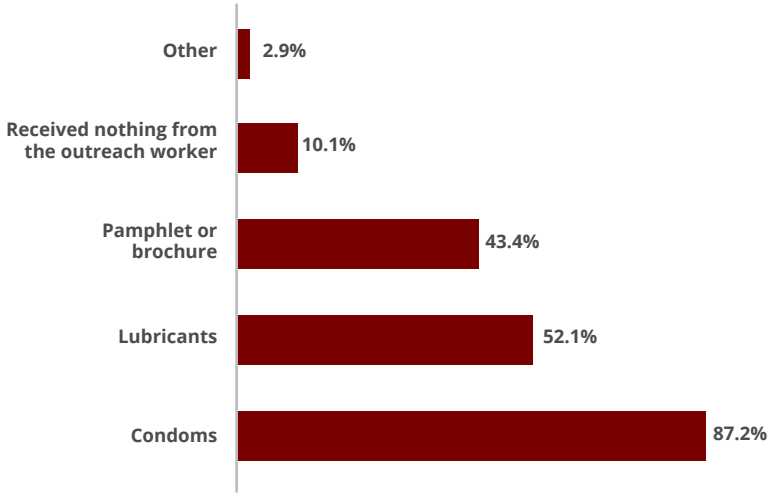

Figure 8.3: Products received at last peer outreach contact*

*Multiple responses responsible

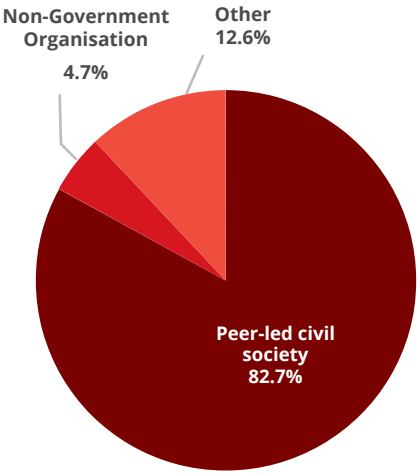

Figure 8.4: Organisation from where peer outreach worker comes from

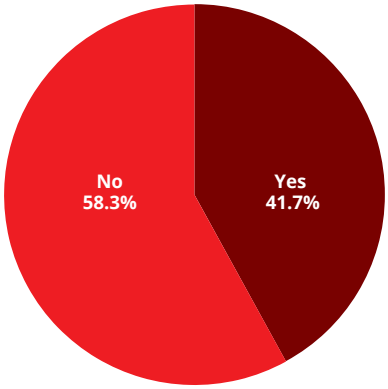

Figure 8.5: In the last 12 months received information on condom use and safer sex

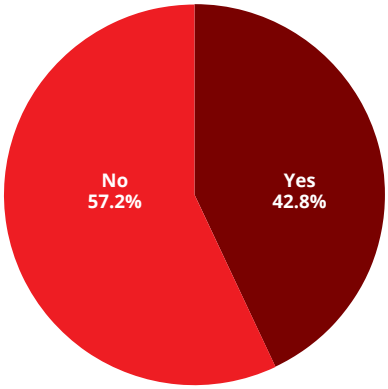

Figure 8.6: In the last 12 months been given condoms for free

- A healthy looking person can have HIV (85.4% correctly answered).
- You can reduce the risk of getting HIV by having sex with only one uninfected partner who has no other partners (84.6% correctly answered).

HIV knowledge (**See Figure 8.1**) was poorest for knowing that:

- If a condom is not used, anal sex puts a person at greatest risk for getting HIV (9.3% correctly answered).
- You can get HIV from mosquito bites (46.2% correctly answered).
- HIV positive women can pass HIV to unborn child (47.7% correctly answered).

8.2 Peer outreach

One in two (50.9%) FSW had never been reached by a peer outreach worker in their lifetime. Less than one in ten (9.5%) had been reached within the last month. **See Figure 8.2**.

Of those reached by a peer outreach worker (49.1%), condoms (87.2%), lubricants (52.1%), and pamphlets or brochures (43.4%) were the most common items received. See Figure 8.3. A large proportion of peer outreach workers belonged to peer-led civil society organisations (82.7%). **See Figure 8.4**.

8.3 Free condoms

Only two in five (41.7%) FSW received information on condom use and safer sex in the last 12 months. **See Figure 8.5**. A similar proportion (42.8%) received free condoms. **See Figure 8.6**.

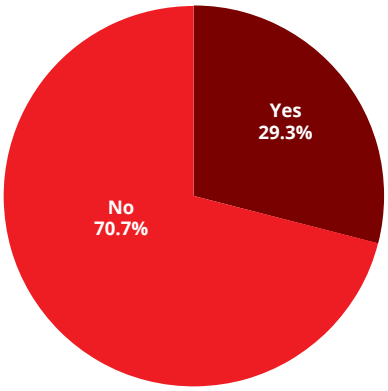

Figure 8.7: In the last 12 months given free packets of lubricant

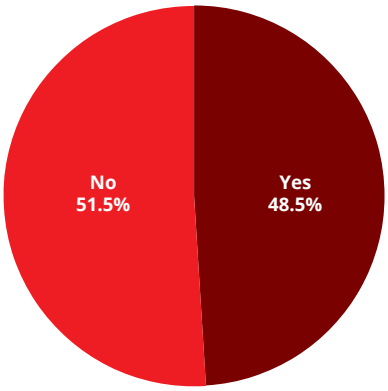

Figure 8.8: Used lubricant in the last six months for vaginal or anal sex

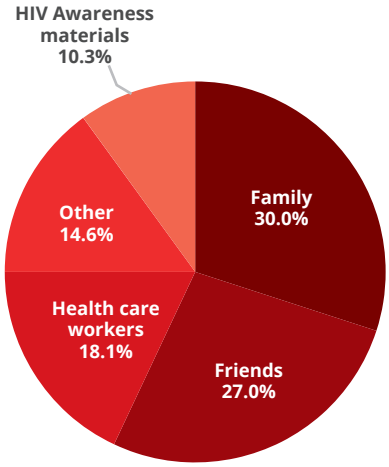

Figure 8.10: Sources of influences to protect self and others from HIV

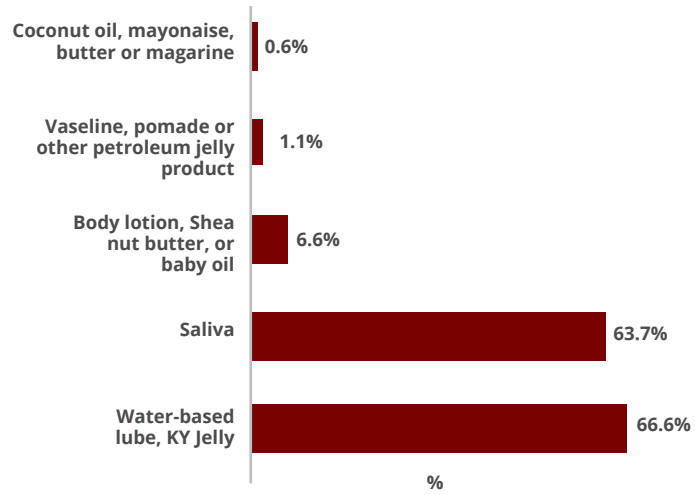

Figure 8.9: Type of lubricants used*

*Multiple responses responsible

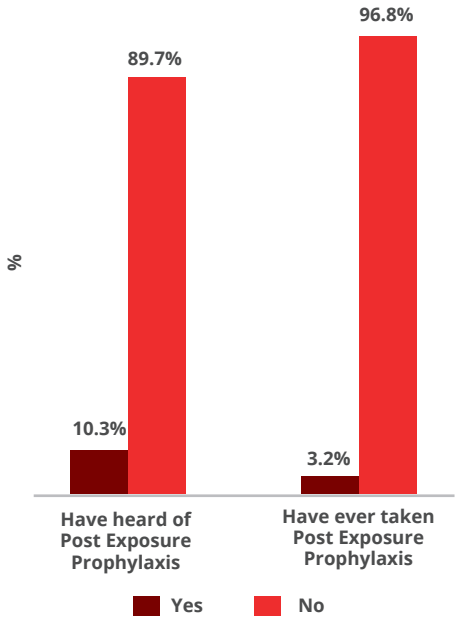

Figure 8.11: Post-exposure prophylaxis - knowledge and uptake

8.4 Free lubricant and lubricant use

Less than one in three FSW (29.3%) received free packets of lubricants in the last 12 months. **See Figure 8.7**. One in two (51.5%) did not use lubricants in the last six months for either vaginal or anal sex. **See Figure 8.8**.

Of FSW who used lubricants in the last six months, almost similar proportions used water-based lubricants such as KY Jelly (66.6%) and saliva (63.7%). Other lubricants used included body lotion/hair conditioner/cream/baby oil (6.6%) and coconut oil/mayonnaise/butter/margarine (1.1%). **See Figure 8.9**.

8.5 Sources of influence

The most common sources of influence on FSW to protect oneself and others from HIV were: 1) family (30.0%); 2) friends (27.0%); and 3) healthcare workers (18.1%). **See Figure 8.10**.

8.6 Post-Exposure and Pre-Exposure Prophylaxis

Only one in ten (10.3%) FSW had heard of post-exposure prophylaxis. Of these, few had ever taken post-exposure prophylaxis (3.2%). Of the four people in the survey who had taken post-exposure prophylaxis, one had done so in the last six months. **See Figure 8.11**.

Very few FSW had heard of pre-exposure prophylaxis (3.6%) yet theoretical acceptability of pre-exposure prophylaxis was high (75.7%). **See Figure 8.12**.

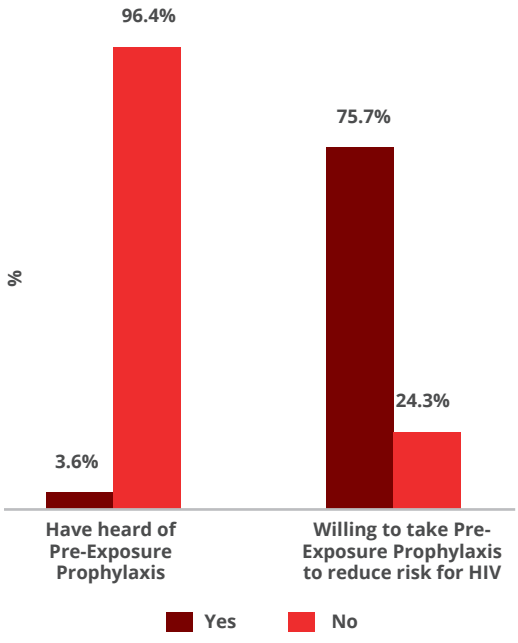

Figure 8.12: Pre-exposure prophylaxis - knowledge and acceptability

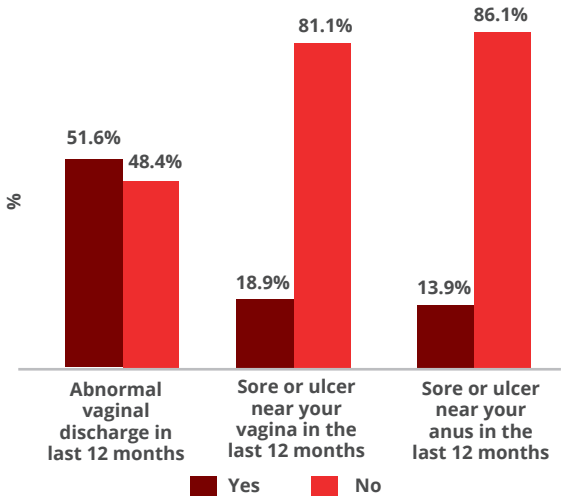

Figure 9.1: Symptoms of STIs in the past 12 months

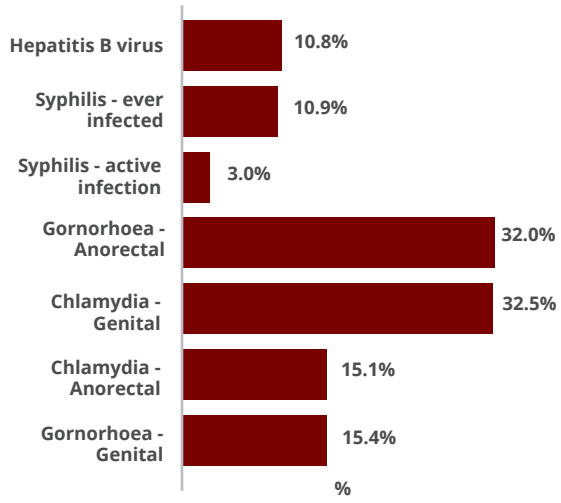

Figure 9.3: STI test results

9. SEXUALLY TRANSMITTED INFECTIONS

9.1 Self-reported STI symptoms and health seeking behaviours

More FSW experienced abnormal vaginal discharge (51.6%) in the last 12 months than experienced vaginal or anal sores or ulcers in the same period (18.9% and 13.9% respectively). **See Figure 9.1**. Of FSW with any of these symptoms, only two in five saw a healthcare worker (40.1%) for treatment (data not shown).

9.2 Prevalence of STI

Sexually transmitted infections (STI) were common with over half of FSW (53.4%) experiencing one or more sexually transmitted infections (excluding HIV). **See Figure 9.2**.

Chlamydia was the most common sexually transmitted infection among FSW. Prevalence of urogenital and anorectal infections were 32.5% and 32.0%, respectively. The next most common STI was urogenital gonorrhoea (15.4%) and anorectal gonorrhoea (15.1%). Syphilis was less common with 10.9% of FSW ever infected with syphilis and 3.0% having active syphilis infection. About one in ten FSW (10.8%) had Hepatitis B Virus. **See Figure 9.3**.

10. HIV TESTING, CARE AND TREATMENT

10.1 HIV testing prior to *Kauntim mi tu*

Three in five FSW (60.0%) had ever tested for HIV. Of those who had tested, one in three (35.1%) disclosed during their last test for HIV that they sold and/or exchanged sex. Among women who had tested for HIV and had a main partner, 6.6% tested with their partner. **See Figure 10.1**.

Of FSW who had never tested for HIV, 28.0% had not tested because they had no time. The feeling of not being at risk for HIV and the fear of testing positive were barriers to testing for one in five (21.1% and 18.2%, respectively). Few FSW did not know where they could go to be tested (7.9%)or feared people seeing them attending a centre for HIV testing (6.6%). **See Figure 10.2**.

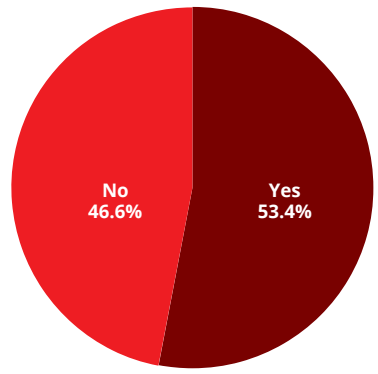

Figure 9.2: Proportion of FSW with one or more STIs

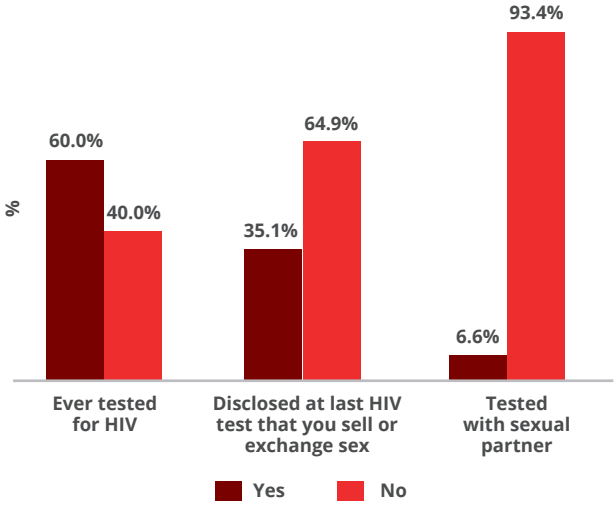

Figure 10.1: HIV testing history

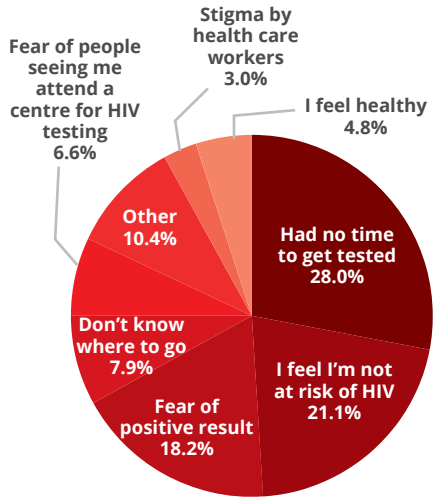

Figure 10.2: Reasons for never testing for HIV

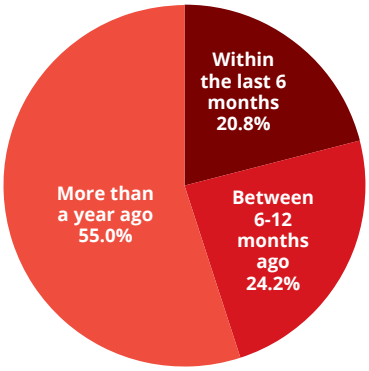

Figure 10.3: Timing of last HIV test

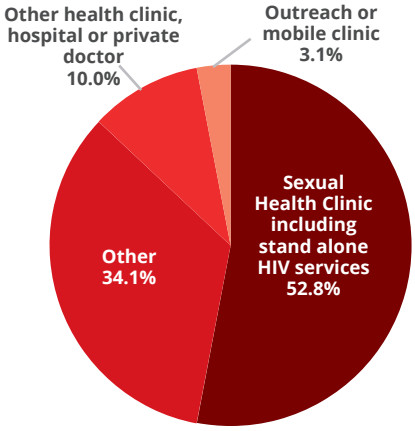

Figure 10.4: Location of last HIV test

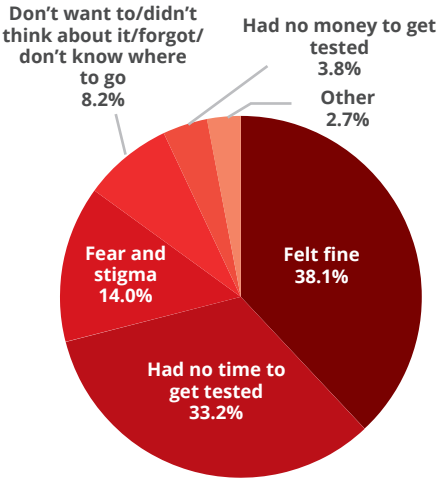

Figure 10.5: Reason for not testing in the last 12 months

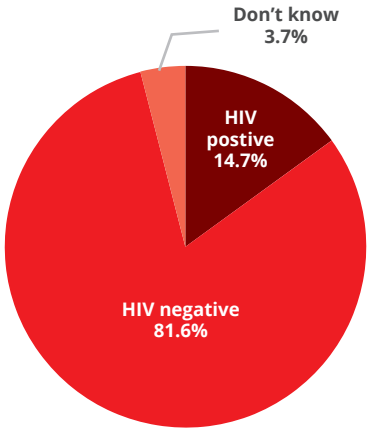

Figure 10.6: Result of last HIV test prior to *Kauntim mi tu*

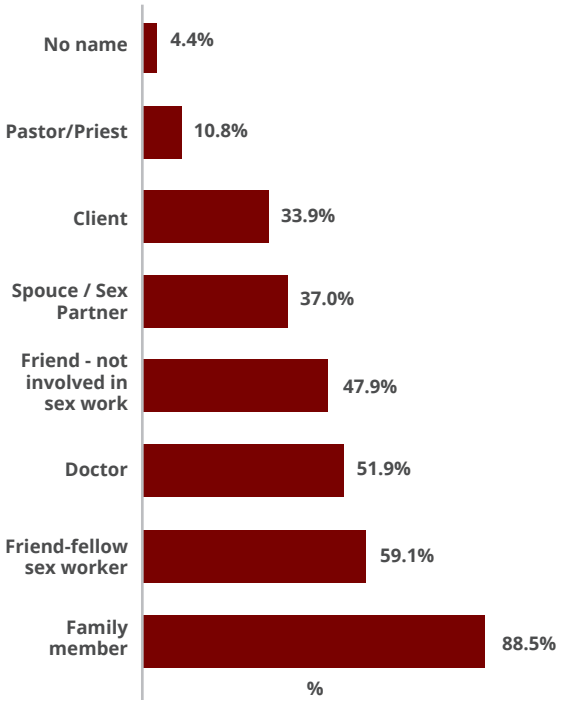

Figure 10.7: HIV disclosure

*Multiple responses possible

Of FSW who had ever tested for HIV, one in five (20.8%) tested within the last six months with one in two tested at a sexual health service (52.8%). **See Figures 10.3 and 10.4**.

Excluding those who knew that they were HIV positive, the most common reasons for not testing for HIV in the last 12 months were feeling fine (38.1%), having no time to go get tested (33.3%), and fear and stigma (14.0%). **See Figure 10.5**.

Of those who tested for HIV prior to the study, 14.7% tested HIV positive and 3.7% did not know their result. **See Figure 10.6**.

While 4.4% of HIV positive FSW had not disclosed their HIV status to anyone, 88.5% disclosed it to a family member, 59.1% disclosed to a fellow sex worker, and 51.9% disclosed to a doctor. **See Figure 10.7**.

All my husband's relatives brought me there, therefore they themselves held it and looked at it and that was what they did. Marceline, 19 years.

I told one girl only, she is dead, she died before last year. I told her, she died of HIV…I felt ashamed and I didn't want to tell. Amber, 24 years.

One of the good things that happened in my life was that I went out and disclosed my status. At first when the people heard of it they said, 'Oh this lady is already dead' whilst some were sad by putting up a mourning shelter. However, since then, just because of me disclosing my status, many people in the community started to respect me. I normally conduct awareness at the airport and market. Veronica, 34 years.

10.2 HIV care and treatment

Almost all FSW who had previously been diagnosed with HIV had accessed HIV medical care (96.3%) (data not shown). The majority of FSW who were aware of their HIV infection and linked to care have taken ART (96.4%). Of them, 93.3% were currently on treatment. **See Figure 10.8**.

My brother brought me to Mt. Hagen hospital and we were confused as to where we should go to access the services as I was the first person in the family to contract the HIV virus. So from there we were referred to [Clinic name] clinic and there I started my treatment

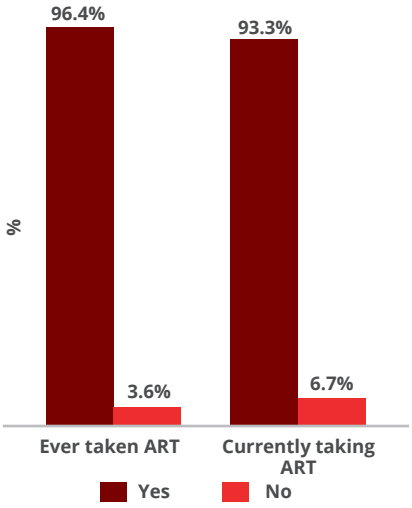

Figure 10.8: History of ART

from then onwards. Fiona, no age supplied.

Up until now (since diagnosis in 2013), I have not drunk any medicine, nothing. Stay until Monday only, this Kauntim mi tu took me to [Clinic name] and they started me with ART. Amber, 24 years.

I went down to Madang in August this year that's why I am not taking it. This is why I am no longer on treatment....I actually left my health card behind, and I also thought that the doctors would get on me that was why I stopped going there (Clinic name).Marceline, 19 years.

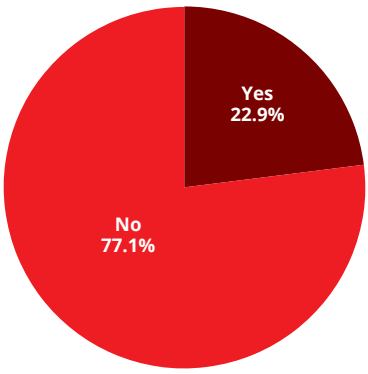

Figure 10.9: Use of IPT among HIV positive to prevent TB

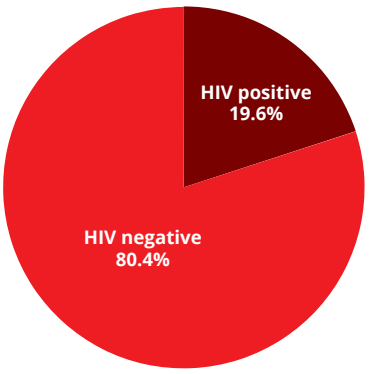

Figure 10.10: HIV prevalence

Among FSW who knew they were HIV positive and had been linked to care, 35.4% had ever undergone a CD4 T-cell count test. Of those women, less than one in two (45.6%) had undergone a CD4 T-cell count test in the last six months, 28.6% had been tested between seven and 12 months ago and 25.8% had a CD4 T-cell test more than 12 months ago (data not shown).

Of those women who already knew that they had HIV prior to enrolment in *Kauntim mi tu*, less than one in two (45.8%) had a CD4 T-cell count equal to or greater than 500 CD4 T cells/μL as measured during the study (data not shown).

Of women who already knew that they had HIV and accessed HIV care, about one in three (32.6%) reported that they had experienced at least one of four symptoms of TB in the last 12 months.

Of the women in the study who indicated that they had been diagnosed with HIV previously and had accessed HIV care (96.3%), one in two (50.9%) were asked if they had symptoms of TB by the service provider in the last 12 months. Of these women who were asked about TB symptoms, 19.0% had been told by a healthcare worker that they have TB. Of the nine women diagnosed with HIV who also had TB, all had taken TB treatment.

Of women in the study who were aware of their HIV status and had never had TB, 22.9% had taken intermittent prophylactic therapy to prevent TB while 77.1% had not. **See Figure 10.9.**

10.3 Prevalence of HIV

HIV prevalence among FSW was 19.6%. **See Figure 10.10**.

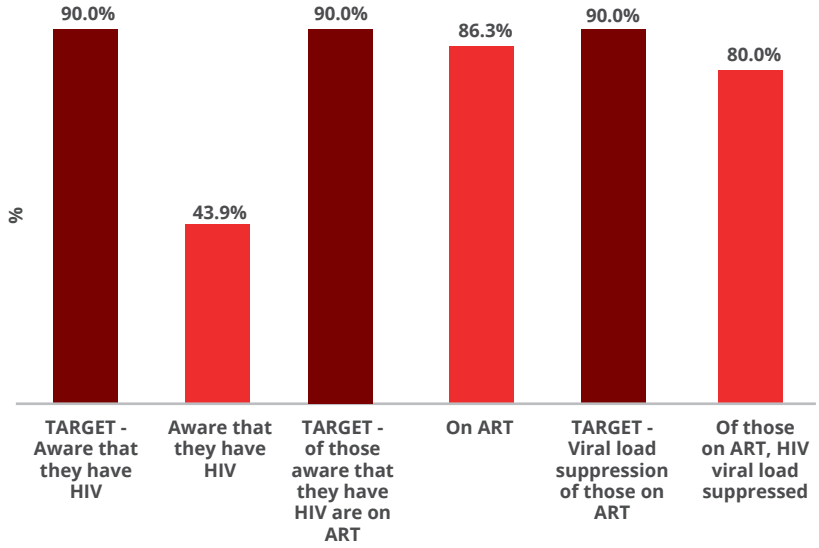

Figure 12.1: HIV cascade among FSW in Mt Hagen

11. TUBERCULOSIS

In order to be eligible for TB testing in Kauntim mi tu, we applied the WHO screening for people with HIV, which is more sensitive than the algorithm for people without HIV. As a key population with a higher burden of HIV, this screening algorithm was decided upon to ensure that those with HIV who presented TB symptoms during study recruitment were tested for TB. Of all FSW:

- 37.3% had unexplained weight loss in the last two weeks.
- 25.4% had a cough in the last two weeks.
- 24.6% had a fever in the last two weeks.
- 29.8% had night sweats in the last two weeks.

About half (52.9%) of FSW experienced one or more of these symptoms of TB in the last two weeks. Of them, 47.0% were tested for TB in Kauntim mi tu.

Of FSW screened for tuberculosis, 0.7% had tuberculosis. Of the FSW in the study who had tuberculosis, none had a drug-resistant form.

Of all FSW screened for TB, none had HIV/TB co-infection.

Of the FSW with HIV (19.6%), 66.3% had at least one symptom of TB in the last two weeks. Among HIV positive FSW, none were co-infected with TB.

12. GLOBAL TARGETS: 90-90-90

In Mt. Hagen, PNG is not reaching the first of the global targets where 90% of people with HIV are aware of their status. In 2017, only 43.9% of HIV positive FSW were aware that they had HIV which is far below the target of 90%. In Mt. Hagen, PNG is on track with the second and third target of being on treatment and HIV viral load suppression amongst FSW, where most (86.3%) FSW who know they are HIV positive are on treatment. Of those on treatment, 80.0% were virally suppressed. **See Figure 12.1**.

13. SIZE ESTIMATION

In Mt. Hagen, we estimated the population of women and girls who sell or exchange sex by utilizing the service multiplier method and, more specifically, the number of women and girls tested for HIV by local service providers. This yielded an estimate of 2,600 FSW in Mt. Hagen.

PART 2

MEN WHO HAVE SEX WITH MEN, AND TRANSGENDER WOMEN

In Mt. Hagen, 111 MSM and TG were eligible, provided informed consent and participated in the study. Because we were not able to reach sufficient sample size for MSM and TG in Mt Hagen, all the data here relate only to the MSM and TG who participated; these data are not weighted. This is in contrast to the Port Moresby and Lae results, which are weighted and reflect the wider population of MSM and TG in the cities.

Where there are 50 or less respondents to a question and represented in a figure, we report the number of respondents in the study for each variable, rather than a percentage. Where a figure includes 51 or more respondents, we report percentages of the sample in the study.

1. SOCIO-DEMOGRAPHIC INFORMATION

Three in four (74.8%) MSM and TG in the study were aged 15-24 years. Approximately equal proportions were aged 25-29 years, 30-34 years and 35 or more years. The median age was 21 years. **See Figure 1.1.**

The Highlands Region was the single largest region of origin among MSM and TG in the study (61.3%), followed by the Momase Region (13.5%) and New Guinea Islands Region (6.3%). Almost one in five (18.0%) MSM and TG reported that they had mixed heritage of two or more regions. **See Figure 1.2.**

Most MSM and TG were long-term residents of Mt. Hagen, with more than three in four (77.4%) residing there for ten or more years. Almost one in four (22.5%) had lived in Mt. Hagen for less than ten years. **See Figure 1.3.**

The most common religious affiliations of MSM and TG in the study were Seventh Day Adventist Church (37.0%), Lutheran Church (18.9%), other Christian churches (15.3%) and the Catholic Church (13.5%). Equal proportions of MSM and TG were affiliated to the Four-Square Church (4.5%), other Protestant churches

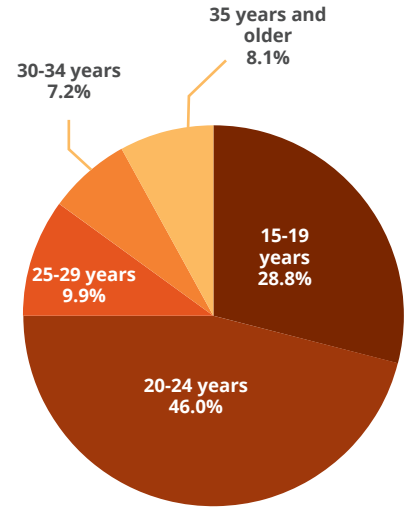

Figure 1.1: Distribution of age

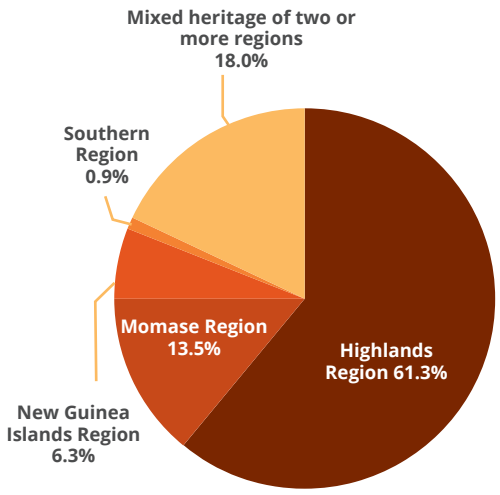

Figure 1.2: Region of origin

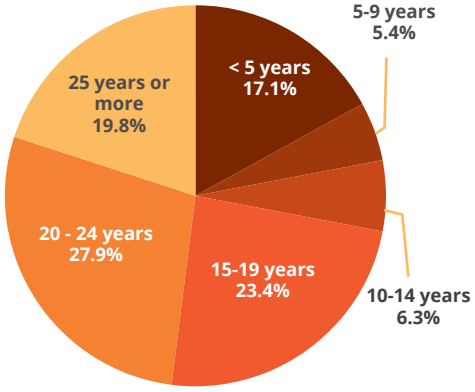

Figure 1.3: Years living in Mt Hagen

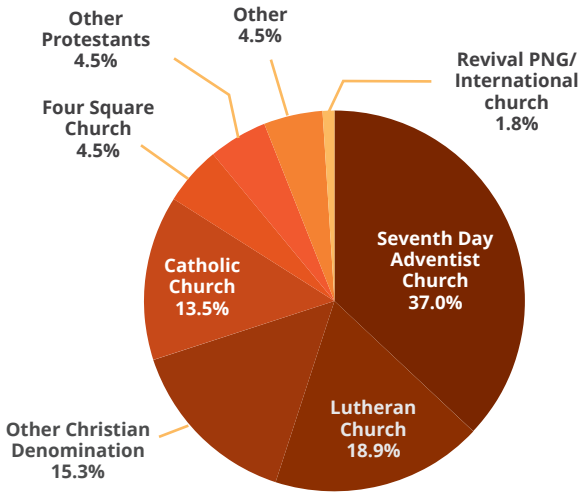

Figure 1.4: Religious affiliation

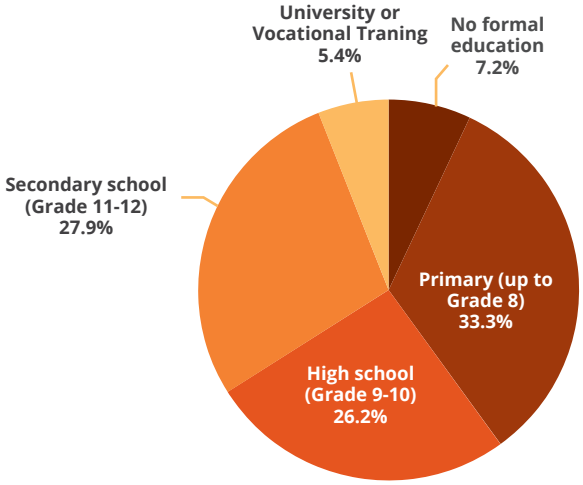

Figure 1.5: Educational level

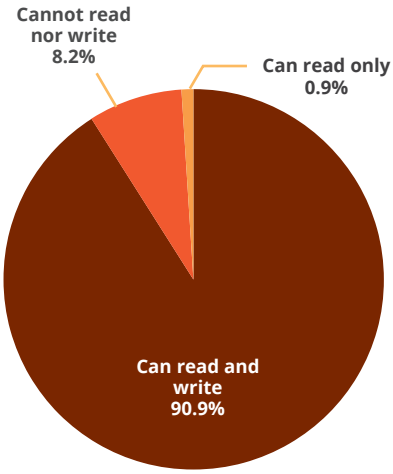

Figure 1.6: Literacy level

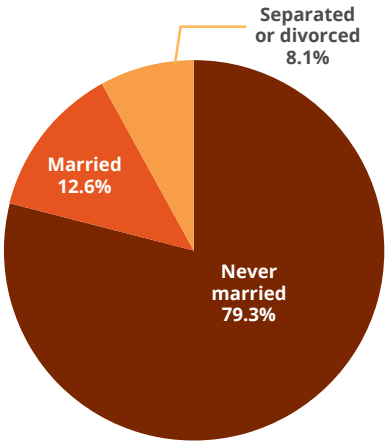

Figure 1.7: Marital Status of MSM and TG in Mt Hagen

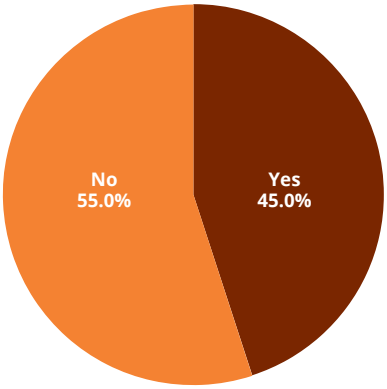

Figure 1.8: Spent more than one month away from Mt Hagen in the last six months

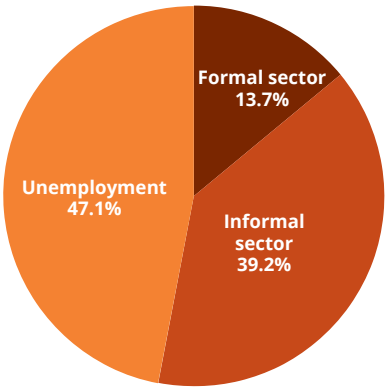

Figure 1.9: Main form of employment/income

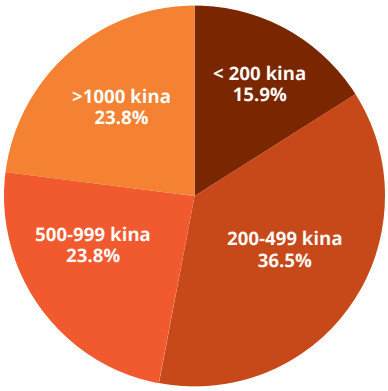

Figure 1.10: Average monthly income

(4.5%), and other religions (4.5%). Less than 2% (1.8%) were affiliated to the PNG Revival Church/International. **See Figure 1.4.**

About one in three (33.3%) MSM and TG in the study had only a primary school education while 7.2% had no formal education at all. Almost similar proportions completed high school (26.2%) and secondary school (27.9%). Three people completed college, two completed vocational training and one completed university. **See Figure 1.5**. Of the MSM and TG in the study, 31 were currently in school (data not shown).

The majority of MSM and TG in the study could read and write (90.9%). **See Figure 1.6**.

1.1 Living arrangements and marital status

Most MSM and TG in the study had never been married (79.3%). Of the rest, 12.6% were currently married and 8.1% were separated or divorced. **See Figure 1.7.**

More than one in two MSM and TG (55.0%) in the study had not spent more than a month away from Mt Hagen in the last six months while 45.0% did. **See Figure 1.8.**

1.2 Income and employment

More than one in ten (13.7%) MSM and TG in the study were employed in the formal sector while almost two in five (39.2%) worked in the informal sector. Almost half (48 people) were unemployed. **See Figure 1.9**. Over half of MSM and TG (52.4%) lived on less than 500 Kina per month. The same proportions of MSM and TG earned between 500 and 999 Kina (23.8%) and 1000 Kina or more (23.8%) per month. **See Figure 1.10.**

2. IDENTITY AND SEXUAL ATTRACTION

2.1 Sexual identity

Three in five (60.4%) MSM and TG in the study identified themselves as a man of diverse sexualities or, as a man who has sex with other men. One in four identified as heterosexual (26.4%), 8.5% as bisexual and 4.7% as transgender. **See Figure 2.1.**

I usually go down and explain to them [the community] about the three groups [of people]. I explain it very well about the transgender, the gay, transgender and bisexual and I give educational talks which I get as a Peer Educator and share notes as well. Then they understand me, and they take me as a woman and not as a man. Justin, 22 years

2.2 Gender identity

The most common gender identity, as opposed to sex assigned at birth, among MSM and TG in the study, was a man (93.7%), with 4.5% identifying as transgender, which is defined in this context as being born male, but currently identifying as a woman and 1.8% identified as 'other'. **See Figure 2.2.**

I was born like this, transgender, and I am a TG, my sister girl name is [removed to maintain confidentiality]. Stanley, 18

2.3 Sexual attraction

The largest share of MSM and TG in the study reported being 'mostly attracted to women, but sometimes men' (44.1%) followed by 'equally men and women' (22.5%) and 'only women' (20.7%). Those who were 'exclusively attracted to men' (6.3%) or 'mostly attracted to men but sometimes women' (6.3%) constituted the smallest proportions of MSM and TG in the study. **See Figure 2.3.**

It was only through phone that I started building my relationships with both gay men and women. Justin, 22 years

We used to joke about that person. We would jokingly speak to him, 'Sister', give him all kinds of names. There are men who criticise them, but many of these men are involved as well. They are usually involved in that, but they are usually hidden. I am one of them, I am hidden as well. Martin, 22 years

To have sex with a woman is normal, but to have sex with a man is something else which you will never forget. And if you are going around with a gay...the desire to have sex with him will increase so you are going to be addicted. Kosen, 20 years

2.4 Living as a woman

Of the seven participants in the study who self-identified as TG, two had lived openly as a woman in the last six months (data not shown).

I feel that I am a woman and I tell them that and they understand me and say, "Stanley is telling the truth. It's true he is a transgender, so you don't say all sorts of things to him." Stanley, 18 years

2.5 Familial acceptance

The majority of MSM and TG in the study had not disclosed to their families their gender or sexual identities or sexual practices (93.5%). Of the seven MSM and TG who had disclosed to their family, four of them were rejected by their families and three were accepted by them. **See Figure 2.4.**

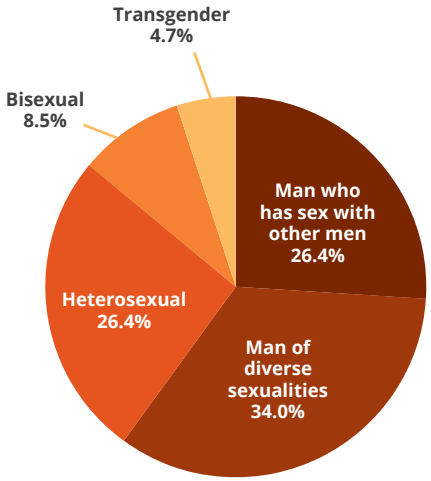

Figure 2.1: Sexual identity

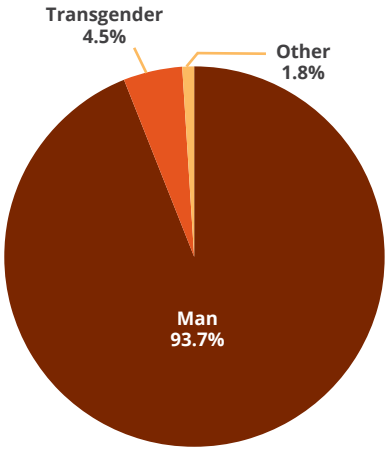

Figure 2.2: Gender identity

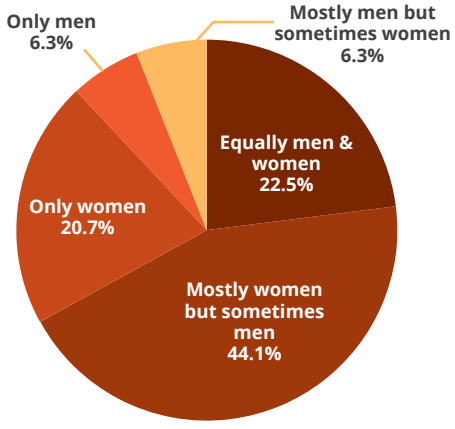

Figure 2.3: Sexual attraction

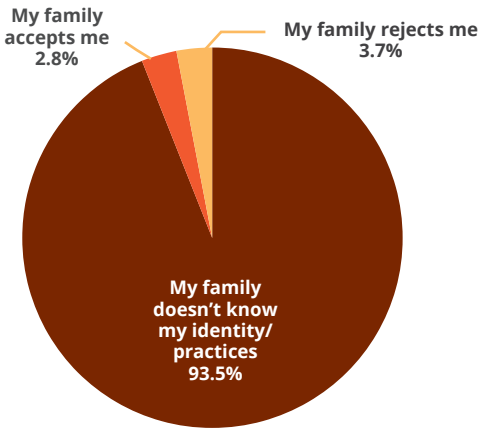

Figure 2.4: Family acceptance

I told my mother because I was confident in myself and that I am her son and she would respect me when I told her that I had relationships with both males and females. Justin, 22 years

2.6 Use of hormones to change the body

Of the seven self-identified TG, none had used hormones (data not shown).

3. SEXUAL HISTORY AND MOST RECENT SEX

3.1 History of anal sex

Almost all MSM and TG in the study (97.3%) had had anal sex with another man or TG. **See Figure 3.1**. Of those who had anal sex with a man or TG, almost all (95.4%) had done so in the last six months. **See Figure 3.2.**

Of all MSM and TG in the study, more than three in five (64.0%) had had anal sex with a woman (not including transgender women). **See Figure 3.3.**

...with a girlfriend while we were in school, when we get cross for a while and if we don't see each other for at least a week, we end up having frustrated (aggressive) sex, be it oral, anal or any other type. Martin, 22 years

3.2 Sexual debut

The median age for first anal sex with a man or TG was 19 years (data not shown). One in two MSM and TG (50.0%) had anal sex the first time with a man or transgender woman between the ages of 15 and 19 years. Less than 2% (two people) did so prior to the age of 15 years. One third had anal sex for the first time with another male at age 20-24 years and the remainder first had anal sex with a male at age 25 years or older (14.8%). **See Figure 3.4.** More than one in three (36.1%) MSM and TG in the. Mt Hagen study received money, goods or services the first time they had anal sex with a man or TG**. See Figure 3.5.**

Almost all MSM and TG in the study (91.4%) chose to have anal sex the first time they did so with a man or transgender woman. **See Figure 3.6.**

Of the nine MSM and TG in the study who first had anal sex

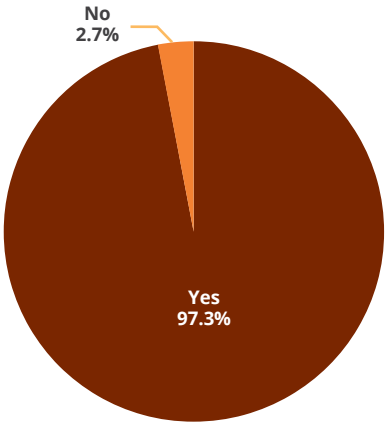

Figure 3.1: Ever had anal sex with a man or TG

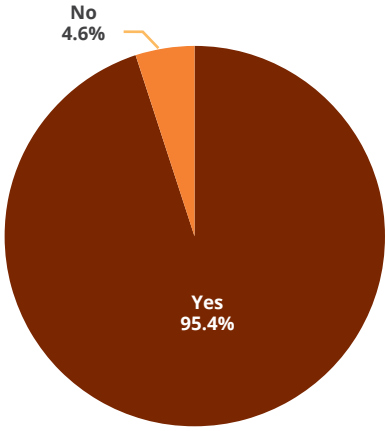

Figure 3.2: Had anal sex with a man or TG in the last six months

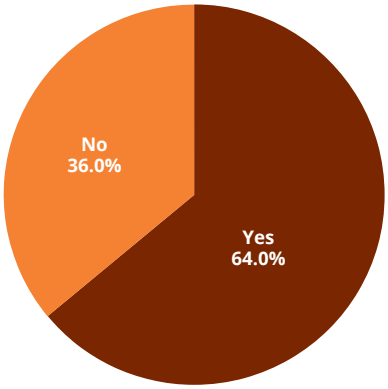

Figure 3.3: Had anal sex with a woman (not transgender)

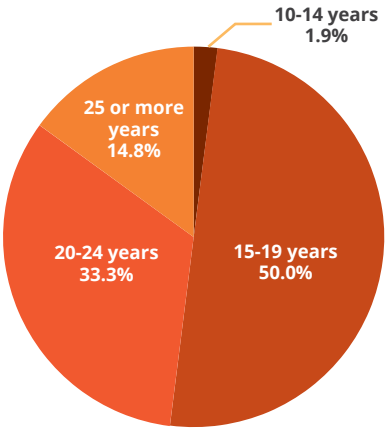

Figure 3.4: Age first had sex with a man or TG

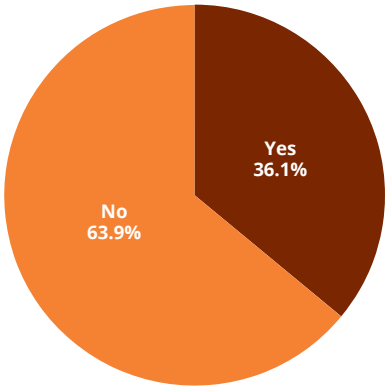

Figure 3.5: Received money, good or services the first time had sex with a man or TG

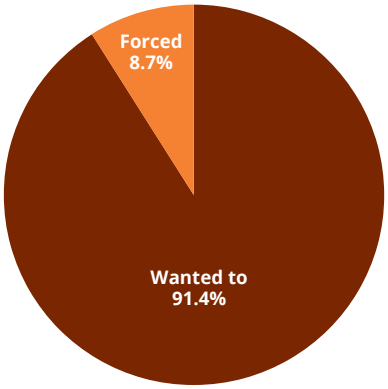

Figure 3.6: Reason for first having anal sex with a man or TG

because they were forced/coerced to, the means by which they were forced included being paid (three people), pressured (three people), tricked (two people) and physically forced (one person). (Data not shown).

3.3 Number of lifetime male or transgender partners

Most MSM and TG in the study had four or fewer male or TG sexual partners (87.9%) in their lifetime, with 5.6% having 5-9 partners and 6.5% having ten or more. **See Figure 3.7**.

3.4 Meeting sexual partners

While almost three in five (59.5%) MSM and TG in the study did not use the internet or mobile phone applications to meet sexual partners, two in five (40.5%) did. **See Figure 3.8.**

3.5 Sex with female partners

Most MSM and TG (89.6%) in the study had sex with a female in the last six months. **See Figure 3.9.**

Among MSM and TG in the study who had sex with a female in the last six months (89.6%) (**See Figure 3.10** above), approximately two in three (64.3%) had only one main female partner during this period. **See Figure 3.10.**

I was just staying like this, but then my parents took a woman from our place and gave her to me. Now we are still together for seventeen years. I was only married to one woman for seventeen years. Rodney, no age supplied

3.6 Condom use

Almost four in five MSM and TG (80.0%) in Mt. Hagen were more likely to use a condom during anal sex when they were the insertive partner, while 13.7% were equally likely to use condoms when they were an insertive or receptive partner. Few MSM and TG (6.3%) were most likely to use a condom when they are the receptive partner. **See Figure 3.11.** Over half of the MSM and TG in the study reported not using condoms during anal sex for the reason being they were drunk or stoned (53.5%). Other reasons included the lack of condom availability (45.2%) when having sex with a main partner (33.8%), or when they were the insertive partner (26.8%). **See Figure 3.12.**

We never use a condom... I normally view him as a trusted partner. Charles, 21 years

Some of these ladies are full blown already [with AIDS] and it's hard for us to stop them and it's hard to tell when we are drunk so how we go about, we would just have sex anyhow. However, one very important thing that we always remember is condom. When having sex with men or women, we would always use condoms. Gordon, 36 years

I used to go to the women that are in the village and like we know each other. I don't just pick up women on the streets or like that. And some of them that I do not really trust, I used a condom. But many of them whom I know really well, I don't think about using a condom. And some of them they resist using a condom and they used to say no tousing a condom. They used to say that condoms will not satisfy their sexual feelings and we used to have skin to skin sex. Rodney, no age supplied

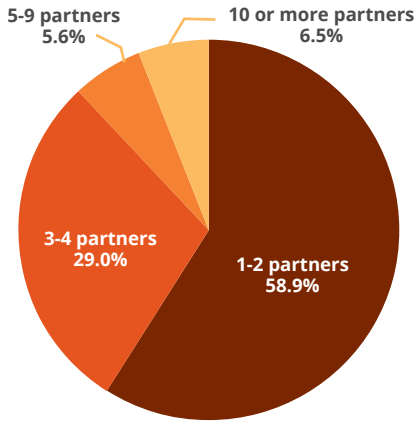

Figure 3.7: Number of lifetime male or TG partners

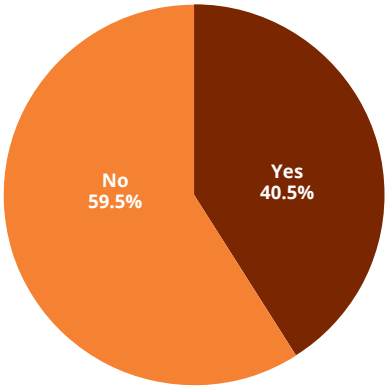

Figure 3.8: Internet or mobile phone applications used to meet partners

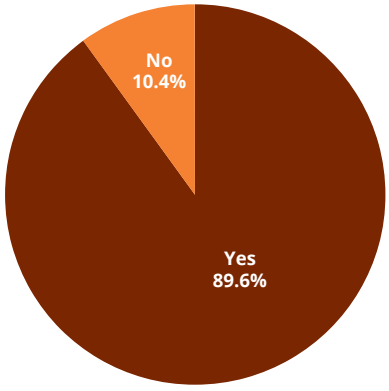

Figure 3.9: Sex with a female in the last six months

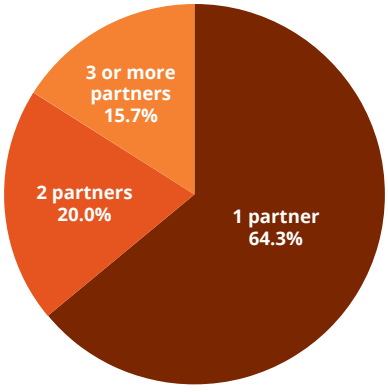

Figure 3.10: Number of main female partners in the last six months

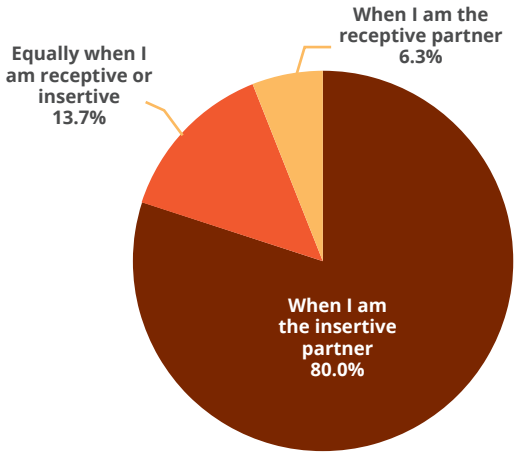

Figure 3.11: Most likely to use a condom in which sexual position

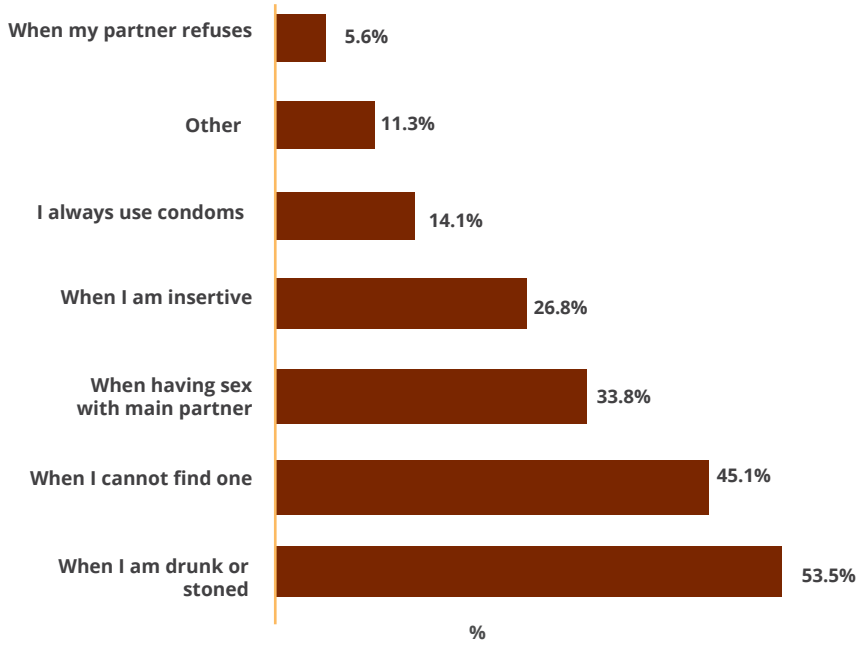

Figure 3.12: Reasons for not using a condom

I was thinking that you won't be infected during anal and oral sex. I was thinking that you will only be infected if you have vaginal sex with a woman. That was the reason why I never used condoms with these gays. Lucas, 21 years

Oral sex is always applied without condoms. We never use condoms unless when we have normal sex, condom is used for that. Jacob, 21 years

4. MAIN NON-PAYING MALE AND TRANSGENDER PARTNER/S IN THE LAST SIX MONTHS

4.1 Number partners in the last six months

Most MSM and TG in the study did not have a main male or TG partner (80.6%) in the last six months, while 10.7% had one main partner, and 8.7% had two or more. Only 20 MSM and TG had a main male or TG partner in the last six months. **See Figure 4.1**.

4.2 Sexual positioning

Among the 20 MSM and TG in the study who had a main male or TG partner in the last six months, 12 were an insertive partner, five both insertive and receptive, and three receptive (data not shown).

4.3 Condom use

Of these 20 MSM and TG in the study with a main male or TG partner, six always used a condom with their partner, nine never used one and five varied in their use from most of the time to rarely (data not shown).

More than half of the MSM and TG in the study agreed that they could ask a main male or TG partner to use a condom (64.1%), while 35.9% could not. **See Figure 4.2.**

I often decide because in the past we were ok but now I am moving around with others, and so is he, that is why we are unsure, you know. It's like that, so since I am concerned about my safety, I am now using condoms to have sex with him. Gordon, 36 years

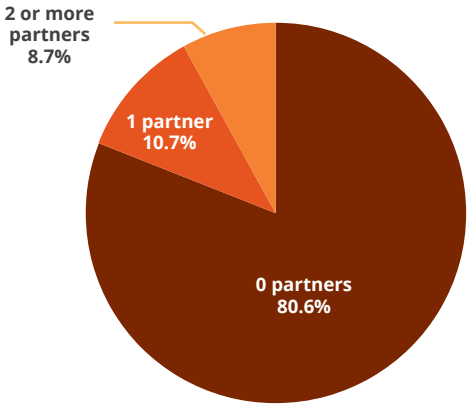

Figure 4.1: Number of main male or TG partners in the last six months

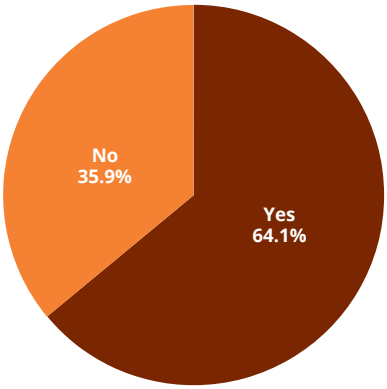

Figure 4.2: Could ask main male or TG partner to use a condom

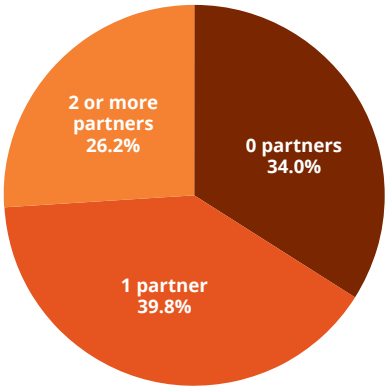

Figure 5.1: Number of casual male or TG partners in the last six months

5. CASUAL NON-PAYING MALE AND TG PARTNER/S

5.1 Number of partners

The median number of casual partners for MSM and TG in the study in the last six months was one. While one in three (34.0%) MSM and TG in the study reported no casual partners in the last six months. Two in five (39.8%) reported one casual male/TG partner and one in four (26.2%) had two or more casual male or TG partners. **See Figure 5.1.**

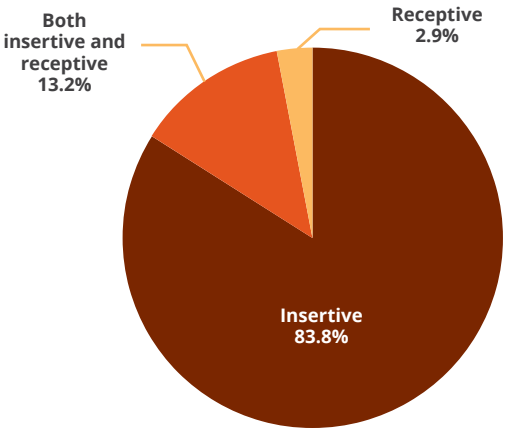

Figure 5.2: Usual sexual positioning with casual male or TG partners

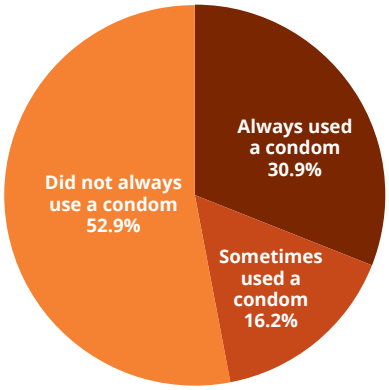

Figure 5.3: Condom use with casual partners in the last six months

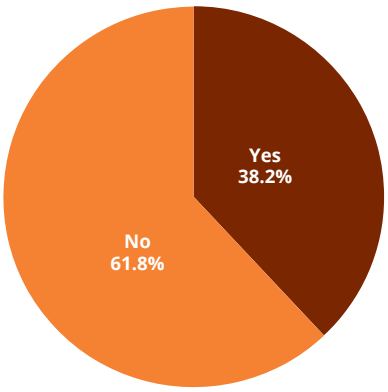

Figure 5.4: Condom use during last anal sex with a casual male or TG partner

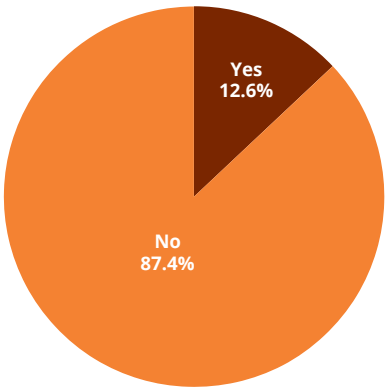

Figure 6.1: Paid another man or TG for sex in the last six months

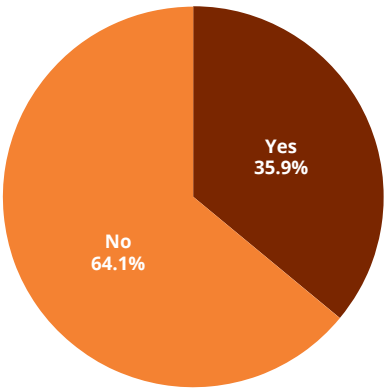

Figure 6.2: Ever sold or exchanged sex in the last six months

5.2 Sexual positioning

Among the MSM and TG who reported having at least one casual partner, 83.8% were insertive with 13.2% being both insertive and receptive, and two people being receptive. **See Figure 5.2.**

I normally play the role of an insertive. Kosen, 20 years

5.3 Condom use

More than one in two (52.9%) MSM and TG in the study who had at least one casual partner did not use condoms with all of their casual partners in the last six months while less than one in three (30.9%) did so with all of them. **See Figure 5.3.**

I secretly continue to have sex with gays and women where sometimes I use a condom, and sometimes I don't use condom. Gordon, aged 36 years.

When we are under the influence of liquor, we just want to satisfy our sexual desires and pleasures so we never think of using a condom. We practise unprotected sex when we are under the influence of liquor. .

While almost three in five (61.8%) MSM and TG in the study with a casual partner used condoms the last time they had anal sex with a casual male or TG partner, the remaining two fifths did not (38.2%). **See Figure 5.4.**

6. BUYING, SELLING OR EXCHANGING SEX

6.1 Buying sex

In the last six months, 12.6% of MSM and TG in the study had paid another male or TG for sex. **See Figure 6.1.**

Of the 13 MSM or TG in the study who paid another MSM or TG for sex, six used a condom on the last occasion (data not shown). Six of the 13 bought sex from the same person each time, while four bought sex from different people each time (data not shown).

6.2 Selling or exchanging sex

More than one in three (35.9%) MSM and TG in the study had received money, goods or services for sex in the last six months. **See Figure 6.2.**

Of the 37 people who sold or exchanged sex to other men or TG, 26 did so with only one person, six with two, and five had done so with three or more partners in the last six months (data not shown).

As for the other two (transgender women), like I said, the first one did not. But the other three of them did. I was actually paid by those three. .

6.3 Sexual positioning with clients

Of the 37 MSM and TG in the study who sold or exchanged sex for money, goods or services, 31 were the insertive partner, five were both insertive and receptive and one was insertive only (data not shown).

He played the role of a female. Francis, 44 year.

6.4 Condom use with clients

Of the 37 MSM and TG in the study who sold or exchanged sex for money, goods or services, 28 did not use condoms with all of their male or transgender clients (data not shown).

But one good thing about them I observed was they (gays) give freely like gifts and money. Like the amount he gives is huge, he will give K100.00,

K150.00, K200.00, think about it... I didn't feel like, it wasn't proper to use that thing (anus), so I decided to use condom to penetrate him. Martin, 22 years.

6.5 Contacting clients

The most common way for the 37 MSM and TG who had sold or exchanged sex for money, goods or services to find clients, was in public areas such as streets and parks (21 people). Other common methods included bars and clubs (18 people), phones (ten people) and private homes (nine people) (data not shown).

He did oral and the way he performed I saw that it was nice so I decided to use him. In order to use him and keep in touch with him, I only took his phone number. Martin, 22 years.

I know his [mobile] number so when I send a "Please call me" request, then he would call me and that is when I usually go to collect my coins. Charles, 21 years.

7. SOCIAL SUPPORT, MENTAL HEALTH AND STIGMA AND DISCRIMINATION

7.1 Social support

About the same proportion of MSM and TG in the study could rely on another MSM or TG woman to accompany them to see a doctor as could rely on one to help them deal with a difficult or violent situation with a partner (60.2% and 58.1% respectively). In the last 12 months, 10.2% (11 people) of MSM and TG supported a peer by negotiating with or standing up against the police. **See Figure 7.1.**

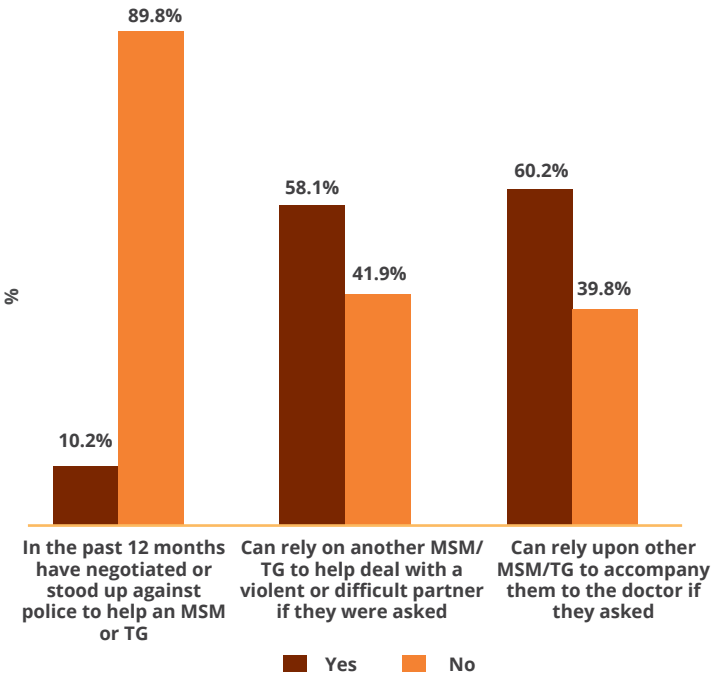

Figure 7.1: Social support

7.2 Depression and shame

Based on the two-item Patient Health Questionnaire-2 screening tool for depression, approximately two in three (62.2%) MSM and TG in the study had depression. **See Figure 7.2.**

While 69.8% of MSM and TG did not feel ashamed of themselves based on their sexual practices or gender identity, 30.2% (32 people) did. **See Figure 7.3.**

If my friends were aware that I am having relationships with gays then they might make fun of me. They are going to say that I was a loser because there are a lot of women around which I can have sexual relationships with. Lucas, 21 years.

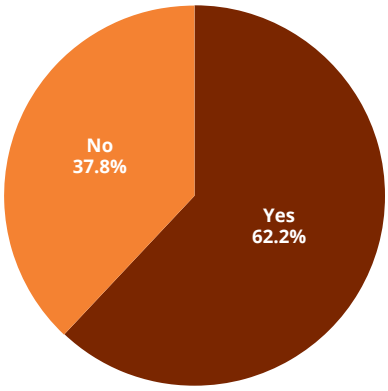

Figure 7.2: Depression

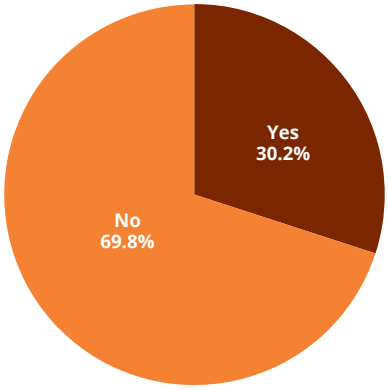

Figure 7.3: Feel ashamed of sexual practices or gender identity

7.3 Stigma and discrimination

Although only three MSM and TG in the study had been denied healthcare because of their sexual practices or gender identity (data not shown), one in three (33.3%) felt the need to hide their sexual practices or gender identity when accessing services. **See Figure 7.4.**

No MSM or TG in the study had been terminated from a job because of their sexual practices or gender identity (data not

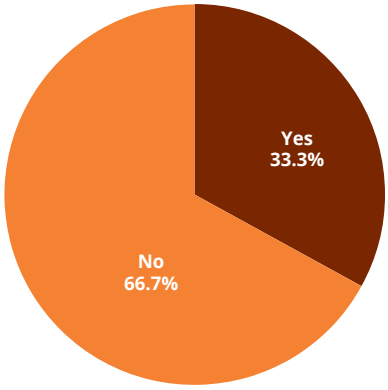

Figure 7.4: Felt the need to hide sexual practices or gender identity when accessing sexual health services

shown). However, four had experienced some form of blackmail because of their sexual practices or gender identity. **See Figure 7.5.**

No MSM or TG in the study had been arrested because of their sexual practices or gender identity (data not shown), and only one person had given something to the police in order to avoid trouble in the last 12 months (data not shown).

7.4 Drug use

Only four (3.6%) MSM and TG in the study had ever smoked, inhaled, or snorted marijuana, crystal meth, cocaine, crack, ecstasy, heroin, or opium (data not shown). None reported ever injecting drugs (data not shown).

> *When we have money we usually support each other by simply getting drunk only. When under the influence of liquor, just imagine it, we drink OP continuously and then top it up with marijuana. Then when the minds of these men are controlled by drugs, he'll turn around and have sex with another man again, that's what happens. Jacob, 21 years*

8. VIOLENCE

8.1 Physical violence

Of the 59.4% of MSM and TG in the study who had ever experienced physical violence (63 of 106 people), 16 experienced physical violence in the past 12 months. Of them, one believed it was related to their sexual practices or gender identity. **See Figure 8.1.**

Among the 16 MSM and TG who experienced physical violence in the last 12 months, 13 did not seek support after the incident. Of the three who did seek support, two did so from a social worker, counsellor or non-government organisation. Only one sought the professional support of police or security services (data not shown).

8.2 Sexual violence

More than one in ten MSM and TG in the study had ever been forced to have sex. Of the 17 of 106 of them who had been forced to have sex, six were forced to have sex with more than one perpetrator at the same time (37.5%). Twelve of the 17 people who had been forced to have sex knew their first sexual perpetrator. **See Figure 8.2.**

Of the 17 people who ever experienced sexual violence, most experienced it for the first time between the ages of 15 and 19 years, with one person experiencing it before the age of 15 years and five between the ages of 20 and 24 years (data not shown).

8.3 Last experience of sexual violence

During the last experience of forced sex, the perpetrator was known by 12 of 17 people (data not shown).

8.4 Sexual violence in the last 12 months

Of the 17 MSM and TG in the study who had ever experienced sexual violence, eight experienced it in the last 12 months. Of these MSM and TG, none believed that they were sexually assaulted because of their gender identity/sexual practices (data not shown).

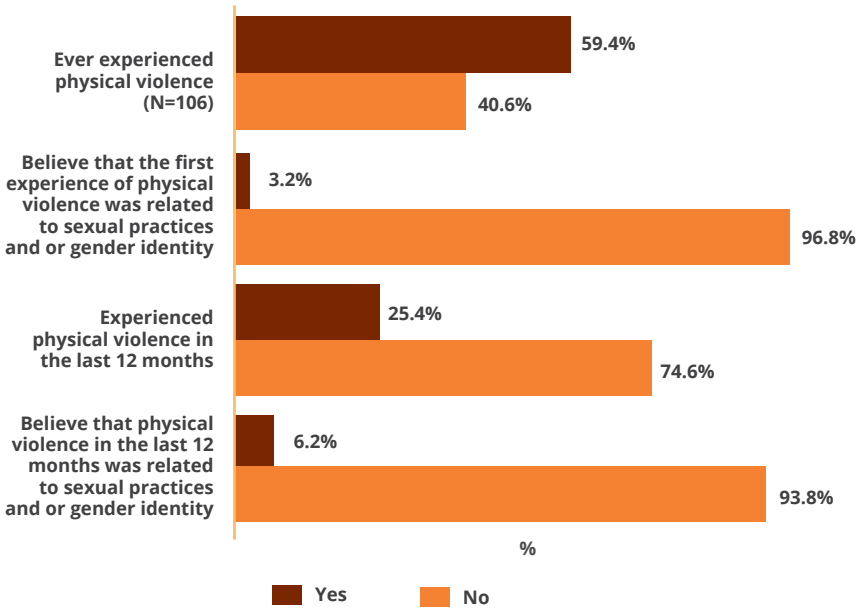

Figure 8.1: Experience of violence

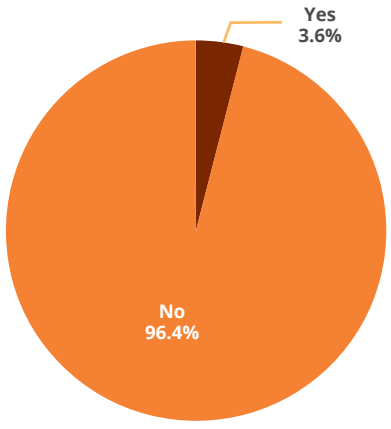

Figure 7.5: Blackmailed because of sexual practices or gender identity

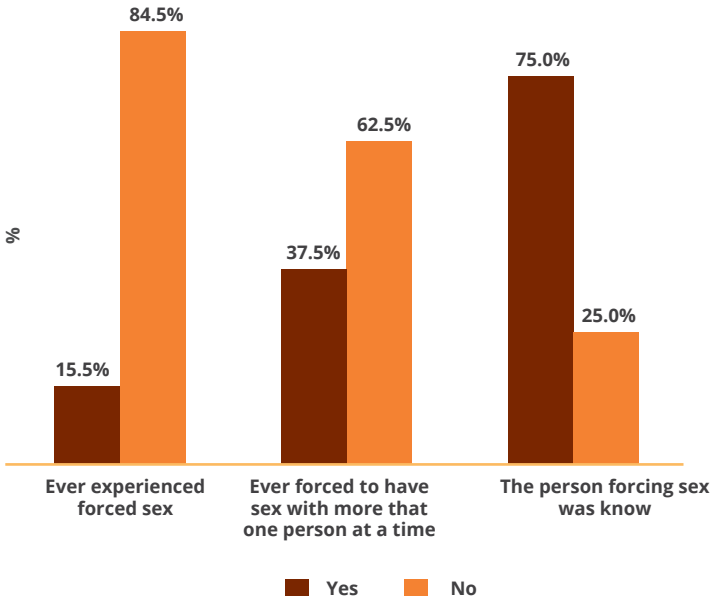

Figure 8.2: History of sexual violence


FH0868
Deit yu ken usim kad / Activation date 23/10/17
Pinis deit bilong kad / Expiry date 07/11/17
Monday, Wednesday & Friday- Females Only
Tuesday, Thursday & Saturday- Males Only

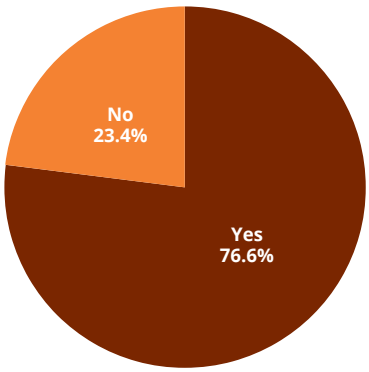

Figure 9.1: Have cut foreskin

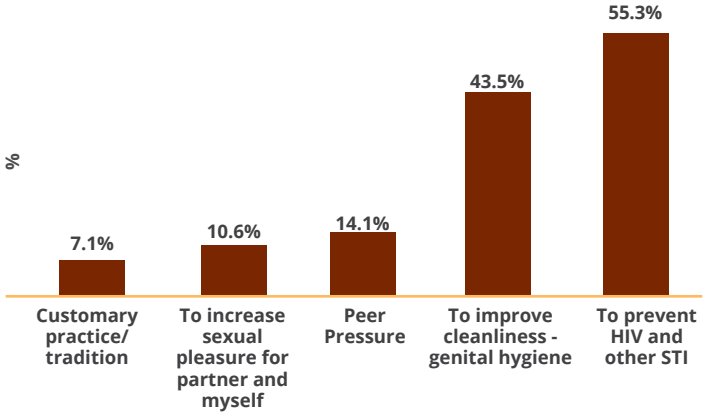

Figure 9.2: Reasons for cutting foreskin

8.5 Forced sex by a sexual partner in the last 12 months

Of the eight MSM/TG in the study who reported forced sex in the last 12 months, two were forced to have sex by a live-in sexual partner (data not shown).

8.6 Accessing support

Almost all (16 of 17 people) MSM and TG in the study who experienced sexual violence did not seek support after the incident (data not shown). Eleven of them thought they did not need support and five were afraid or ashamed to do so (data not shown).

9. PENILE MODIFICATION

Penile modification was common among MSM and TG in the study, with 76.6% having cut the foreskin of their penis. **See Figure 9.1.**

The most common reasons given by the MSM and TG in the study that had their foreskin cut were to prevent HIV and other STIs (55.3%) and improve cleanliness and genital hygiene (43.5%). They also did it because of peer pressure (14.1%), to increase sexual pleasure for themselves or partners (10.6%), and as a customary or traditional practice (7.1%). **See Figure 9.2.**

> *That was after being treated for syphilis I was being circumcised. My friend who had informed his mother about me being infected with syphilis informed me about circumcision so I got circumcised. And after circumcision I never encountered problems in life associated with sex.*
> *Lucas, aged 21 years*

Few MSM and TG had inserted something into their penis (4.5%) while 14.4% had injected objects into their foreskin. **See Figure 9.3.**

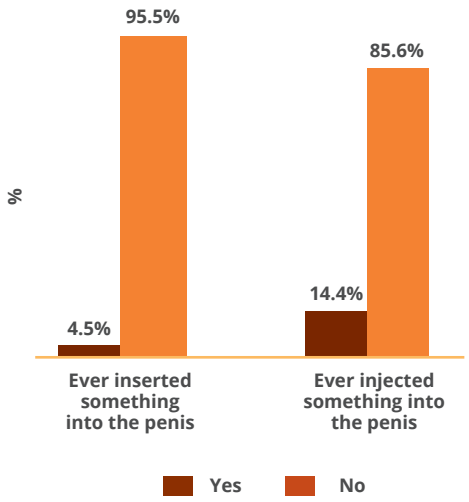

Figure 9.3: Penile inserts and penile injection

10. KNOWLEDGE OF HIV AND ACCESS TO OUTREACH AND HIV PREVENTION SERVICES, INCLUDING PROPHYLACTIC TREATMENT

10.1 Knowledge of HIV

HIV knowledge (**see Figure 10.1**) was greatest amongst MSM and TG in the study for knowing that:

- A healthy-looking person can have HIV (93.7% had correct knowledge).
- A person can reduce the risk of getting HIV by having sex with only one uninfected partner who has no other partners (92.8% had correct knowledge).
- A person can get HIV by sharing food with a HIV positive person (86.5% had correct knowledge).

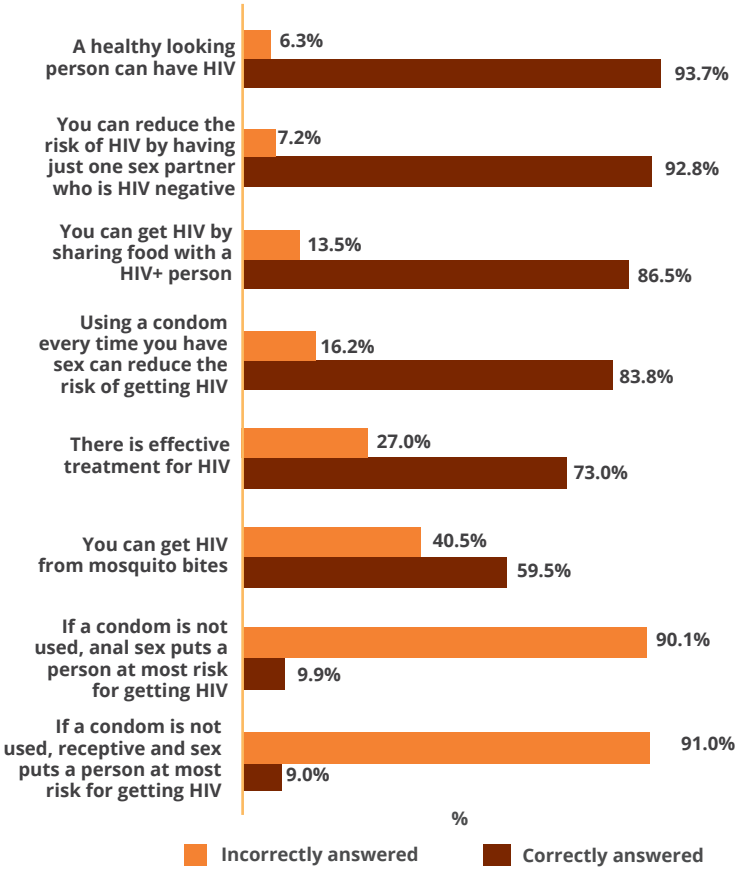

Figure 10.1: HIV knowledge

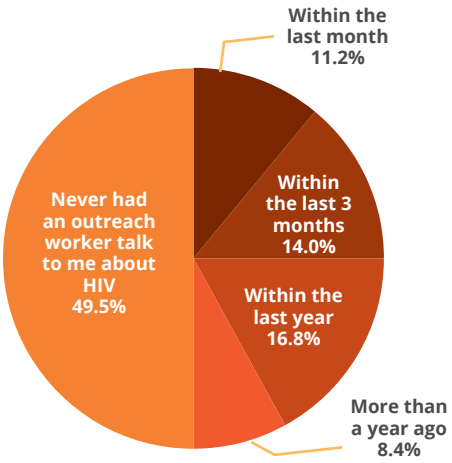

Figure 10.2: Last contact with peer outreach worker

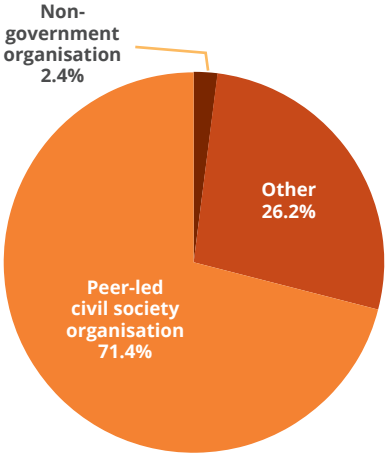

Figure 10.3: Organisation from where peer outreach worker comes from

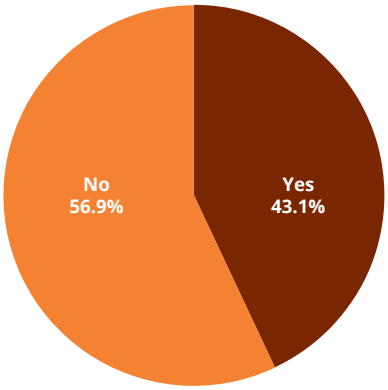

Figure 10.4: In the last 12 months received information on condom use and safer sex

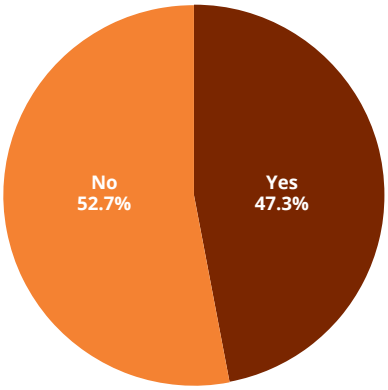

Figure 10.5: In the last 12 months been given condoms for free

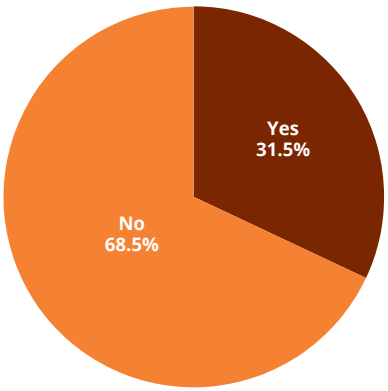

Figure 10.6: Used lubricant in the last six months

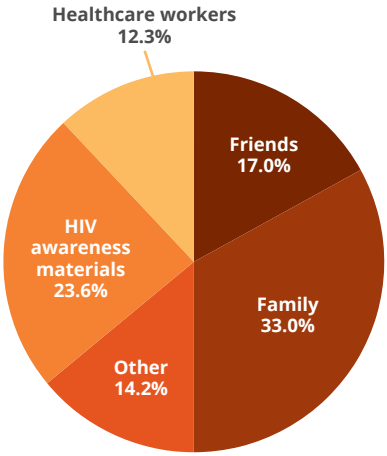

Figure 10.7: Sources of influence to protect self and others from HIV

- A person can reduce the risk of getting HIV by using a condom every time when having sex (83.8% had correct knowledge).

HIV knowledge (**see Figure 10.1**) was poorest for knowing that::

- If a condom is not used, receptive anal sex puts a person at greatest risk for getting HIV (9.0% had correct knowledge).
- If a condom is not used, anal sex puts a person at greatest risk for getting HIV (9.9% had correct knowledge).
- You can get HIV from mosquito bites (59.6% had correct knowledge).

As far as I know HIV is commonly transmitted through sexual intercourse and that's common. But it can also be transmitted through other ways like you know, sharing of blades, razor blades or needles and all that, but with most cases it is transmitted through sexual intercourse. Francis, 44 years.

When I have money in the pocket I try my luck on girls. Concerning HIV/AIDS, my belief and culture in Hagen, we say that it's like a curse. And when you are involved in sex with a female with AIDS (HIV) and when the disease is acquired, you have a problem at home. Rodney, no age supplied.

If I want to have sex with a woman who has AIDS I double condoms – if they have been punctured and all that then I can contract it [HIV]. Jacob, 21 years.

10.2 Peer outreach

Approximately one in two (49.5%) MSM and TG had never been reached by an HIV peer outreach worker. One in four (25.4%) MSM and TG in the study had contact with an HIV peer outreach worker in the last three months. **See Figure 10.2.**

Among the 54 MSM and TG in the study who were ever reached by an HIV peer outreach worker, condoms were received by 46 people, pamphlets and brochures by 33, and lubricants by 28 from the peer outreach worker (data not shown). Most (30 of 54) MSM and TG in the study were engaged by peer outreach workers that belonged to peer-led civil society organisations. **See Figure 10.3.**

10.3 Free condoms

Less than one in two (43.1%) received information on condom use and safer sex in the last 12 months, with 56.9% of MSM and TG in the study receiving none. **See Figure 10.4**. Less than half (47.3%) received free condoms in the last 12 months. **See Figure 10.5.**

10.4 Free lubricant and lubricant use

Only 22 MSM and TG had received free lubricants in the last 12 months (data not shown), yet one in three had used lubricants during anal sex in the last six months**. See Figure 10.6.**

Of the 35 MSM and TG in the study who had used a lubricant in the last six months, most (25 people) used water-based lubricants such as KY Jelly as recommended. Other types of lubricant were less frequently used; saliva was used by 14 people, shea butter, baby oil, or other body lotions by three, and two people used soap (data not shown).

I haven't used condoms with any of these gays; I was only using lubricant to ensure that it's easier for me to have anal sex with them. Lucas, 21 years.

10.5 Sources of influence

After family (33.0%), HIV awareness materials (23.6%) provided the greatest sources of influence to MSM and TG in the study to protect themselves and others from HIV. **See Figure 10.7.**

Most MSM and TG in the study (68.5%) believed that HIV messaging was relevant to them. **See Figure 10.8.** Among the 29 who felt HIV messaging did not relate to them, 21 felt the messages were not relevant because they were not about MSM and TG and six felt the messages were irrelevant because they were not about anal sex (data not shown).

There is a need for programmes and awareness to be carried out so they can feel free and secured to come out and be exposed to such vital information being given out by these organisations. Lucas, 21 years.

10.6 Post-Exposure and Pre-Exposure Prophylaxis

Only one in ten MSM and TG knew of post-exposure prophylaxis (PEP). **See Figure 10.9**. Of these 12 MSM and TG only one had taken PEP in the last six months (data not shown).

Less than 10% (7.2%) of MSM and TG in the study had heard of pre-exposure prophylaxis (PrEP), yet theoretical acceptability was high (83.3%). **See Figure 10.10.**

11. SEXUALLY TRANSMITTED INFECTIONS

11.1 Self-reported STI symptoms and health seeking behaviours

The most common STI symptoms experienced in the last 12 months by MSM and TG in the study were, having pain upon urination (23.4%) and abnormal discharge from the penis (20.7%), an ulcer or sore near the penis (14 people), or near the anus (five people). **See Figure 11.1**. Of the 36 men and transgender women in the study with these symptoms, 22 did not see a healthcare worker (data not shown).

11.2 Prevalence of STI

More than one in three (36.0%) MSM and TG in the study had one or more STIs, excluding HIV. **See Figure 11.2**.

Genital chlamydia was the most common STI (18 people) followed by hepatitis B virus (15 people). Anorectal infections were more common in MSM and TG than urogenital infections. While seven people had ever been infected with syphilis, three people had active syphilis. **See Figure 11.3**.

12. HIV TESTING, CARE AND TREATMENT

12.1 HIV testing prior to *Kauntim mi tu*

Only one in four (26.1%) MSM and TG in the study had ever tested for HIV. **See Figure 12.1.**

Of the 29 who had ever tested for HIV, 15 had disclosed that they had sex with other men or identified as transgender during their last HIV test and only one had tested with a sexual partner (data not shown).

"That is you know, I feel that the way people think are different. Should I go for the test and have the doctor tell me 'you are already infected'? Then I can die of shock, you know. I fear dying of shock that is why I never went for the test." Gordon, 36 years.

Of three in four (73.9%) MSM and TG in the study who had never tested for HIV, the most common reasons for not testing

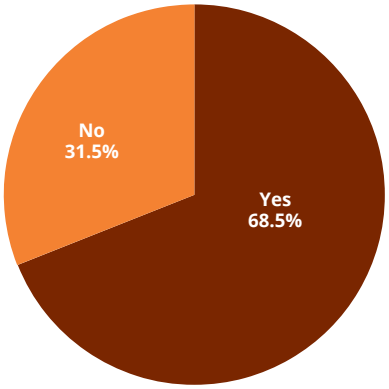

Figure 10.8: Relevance of HIV messaging to MSM and transgender

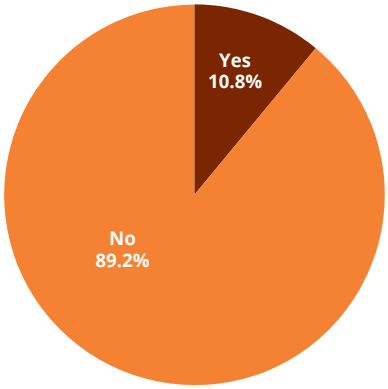

Figure 10.9: Knowledge of Post-exposure prophylaxis (PEP)

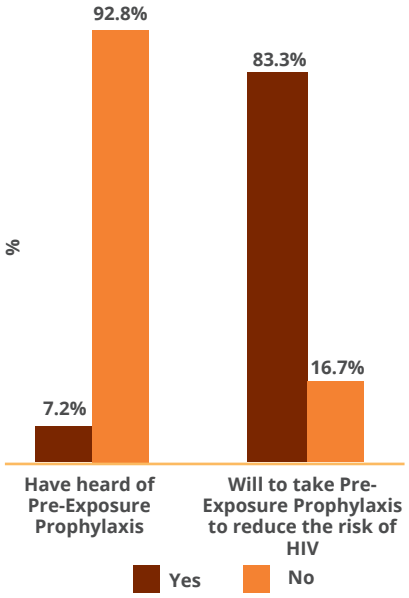

Figure 10.10: Pre-Exposure Prophylaxis (PrEP) knowledge and acceptability

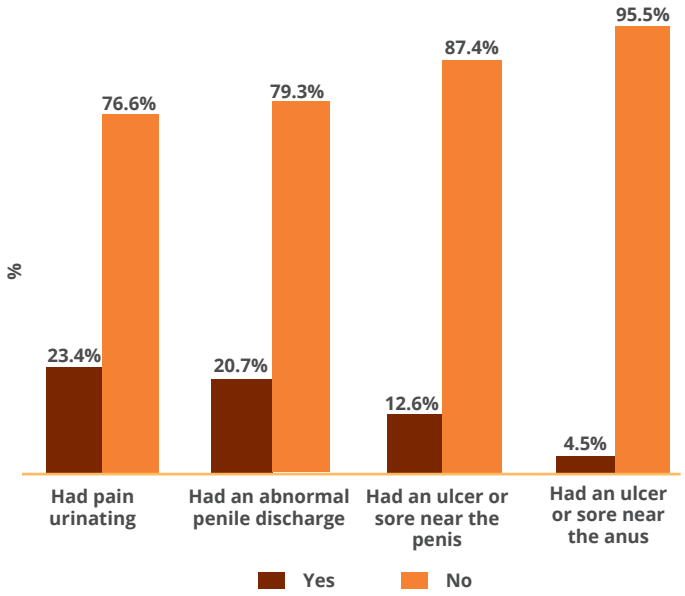

Figure 11.1: Symptoms of STIs in the past 12 months

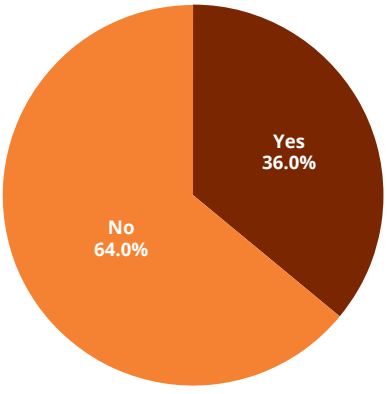

Figure 11.2: Proportion of MSM and TG with one or more STIS

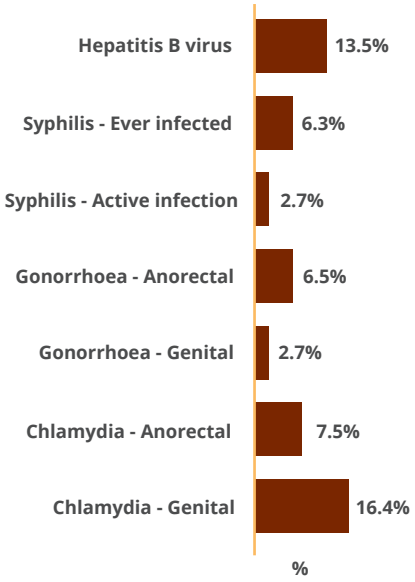

Figure 11.3: STI test results

included feeling not at risk of HIV (42.5%) and having no time to get tested (21.9%). **See Figure 12.2**.

At first I was not having the idea of getting tested for HIV because I was thinking that I won't contract the HIV virus because my partners are residing at the same compound which I am residing. Lucas, 21 years.

Of the 29 people in the study who had tested for HIV, 15 had done so in the last six months, eight between six and 12 months ago, and six more than 12 months ago (data not shown).

Of MSM and TG in the study who had tested for HIV, most (23 people) were tested in sexual health clinics, including stand-alone HIV testing facilities. Other testing locations included outreach or a mobile clinic (four people) and other health clinics, hospitals or private doctors (two people) (data not shown).

Excluding those who knew that they were HIV positive and had tested for HIV more than 12 months ago, only one person had no time to get tested (data not shown).

Of the MSM and TG in the study who had ever tested for HIV, one reported never receiving their results (data not shown). Of those who had tested for HIV previously and received their results (28), one person had returned an HIV-positive result the last time that they tested (data not shown).

For that [negative result] I am very grateful to God and very happy and say that I must try to, wherever my turning point would be I must try to pull my socks up. And I must try to practice safe sex by using condoms and being faithful to one another. Stanley, 18 years.

Yeah, during my last check here I was on the safe side [negative] so I was thinking that I must try and refrain from some of my undisciplined behaviours of having unprotected sex without condoms. At that time, I decided that I should try and stop this kind of behaviour. Charles, 21 years.

12.2 HIV care and treatment

HIV prevalence among MSM and TG in the study was 1.8% - two out of 109 persons tested for HIV in the study. Of the two people tested positive for HIV, one of them was unaware of his/her HIV status (data not shown).

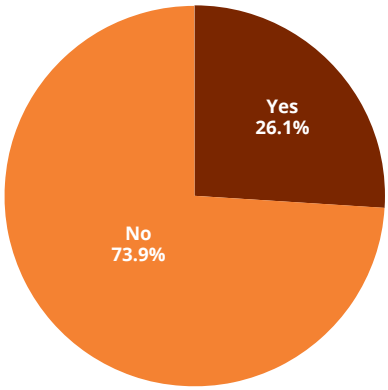

Figure 12.1: Ever tested for HIV

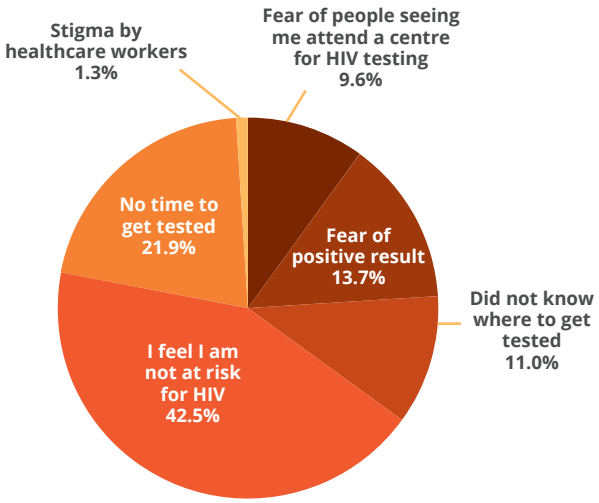

Figure 12.2: Reasons for never testing for HIV

13. TUBERCULOSIS

In Kauntim mi tu, the WHO screening algorithm for people with HIV, which is more sensitive than the one for people without HIV, was applied. As a key population with a higher burden of HIV, this screening algorithm was decided upon to ensure that those with HIV who presented TB symptoms during study recruitment were tested for TB. Of all MSM and TG in the study:

- 38 had unexplained weight loss in the last two weeks.
- 34 had a cough in the last two weeks.
- 20 had a fever in the last two weeks.
- 29 had night sweats in the last two weeks.

Over half (51.3%) of MSM and TG in the study experienced at least one of these symptoms of TB in the last two weeks (data not shown).

Of the 21 MSM and TG in the study tested for TB, one had tuberculosis that was not drug resistant (data not shown).

Among MSM and TG screened for TB, none had HIV/TB co-infection (data not shown).

14. SIZE ESTIMATION

In Mt. Hagen, we estimated the population of MSM and TG utilizing the successive sampling method, which yielded an estimate of 1,100 MSM and TG.

Statement by Port Moresby members of

Friends Frangipani

The study provided for us in very good ways. The staff talked to us respectfully and understood us. They did not judge or look down on us. They respected our confidentiality. When we got to talk to the staff we felt it was better than counselling. We shared very deep secrets that we had not told anyone, even counsellors. The questions we were asked were easy for us to understand. We liked the tablets that they put our answers in.

We appreciated that we could know our health status and get treatment on the same day. This was the best thing ever. While some of us had to stay late in the day and struggle to get home before dark, getting our results, treatment and referrals was worth it. The referral pathways that Kauntim mi tu set up were effective.

Most of the time we are only asked about symptoms and never get tested and know exactly what STIs we have. In Kauntim mi tu we were told exactly what STIs we had and were given treatment on the same day. We were so happy. Even our peer educators did not know much about each of these different STIs. We were supported by staff to go to the clinics. One of our members was particularly grateful that having tested positive for TB that the laboratory staff member escorted her to the TB clinic himself. She is about to finish treatment and if it was not for the study she would not have known.

For those of us who have lived with HIV for a long time, some of us 20 years, this was the first time that our members were able to know of HIV viral load. We were happy to share our viral load and CD4 T-cell count results with our healthcare workers, and they were excited to see them. We are crying out for HIV viral load tests to be rolled out to other clinics so all our HIV-positive friends can get tested.

We were so excited to wait and get a coupon. Once we were given one from our peer we were so happy we could not wait for the assigned date on our card to come around.

We feel proud of the different roles we had in the study, being seeds, study participants or, for some of us, being part of the qualitative interview as well.

Our friends who did not get coupons are asking when the research is coming back because they feel that they missed out on something special that others got. Those of us who were part of Kauntim mi tu are very happy. After the study, some of us have insisted on having protected sex at all times, others have reduced the number of clients they have, others still (based on the knowledge that they were free from HIV and STIs) have sought other means of earning an income.

We knew this study was coming; we were spreading the message to our friends before the study team even arrived. We knew our friends would benefit from this and so we sent word around soon after the first community mobilization meeting.

We want to acknowledge and thank the Kauntim mi tu study team for coming and we think everyone, including the government and others should be thankful as well.

RECOMMENDATIONS

- Strong referral pathways are important to ensuring members of our communities access a variety of services.
- We want to have more comprehensive HIV/STI and TB services like those provided by Kauntim mi tu using the point of care testing machine.
- We need to research our peers that live beyond Mt Hagen town and who live in more rural areas and are currently not being reached.
- We need more condoms and lubricants available to members of our community.
- We need to diversify and find more participatory ways for how we provide information to members of our community since the literacy rates are so low.
- Stakeholders and people who work with our community need to be better sensitized to our community and our needs.
- The systems that bridge stakeholders and communities of key populations need to be strengthened.
- We want a safe house / space where we can come and get information and access services.
- We need to advance decriminalization efforts so that we are seen as citizens.People, particularly police, should leave us alone and we should have the right to earn an income and freely access services.
- We want the services in Mt Hagen to treat us like the staff at the Kauntim mi tu study did.
- Micro-financing opportunities should be considered to help our community.

Statement by Port Moresby members of Kapul Champions

Kauntim mi tu provided a safe space for men of diverse sexualities and transgenders to come and access the services and the study. The research has given us more information about where our community is at and there are many issues we are still facing, including violence, shame, forced sex and the alarming low rates of condom use.

The good thing about *Kauntim mi tu* was that it gave us clinical services we haven't had before and still cannot get anywhere.

We were tested and treated for chlamydia and gonorrhoea right there on the spot, given results and treated straight away. It was a one-stop shop. The services for HIV, STIs and TB were very convenient.

We want more Gene-Xpert machines to test us. We did not spend a whole day waiting. Some of our friends thought that they were not affected by any of these infections, but many were. Many of our friends did not have a chance to go to other services for a check-up because they did not know about other clinics or are too afraid.

Once people saw their friends coming they felt it was their chance to come out as well and find out about their status. Some of our friends found out that they had HIV and were surprised and shocked. But they were cared for by the *Kauntim mi tu* team. They counselled us well and referred our friends to clinics. We continue to support our newly diagnosed friends.

Talking about the abuses we have faced was uplifting, a big relief. The questions in the survey helped us to talk about things that we face in our lives, but don't talk about. It helped us to assess our own risky behaviours.

Many of the clinics in Port Moresby are not friendly. The IBBS survey team were friendly and made us feel comfortable. The coupons were great. The coupons were able to reach our peers.

The coupons went further than our peer educators have gone before. Although we are doing a lot of outreach, the rates of contact with hidden men who have sex with men are low and a concern for us. Many have never sat with an outreach worker before.

There are so many programs in the National Capital District and it appears from *Kauntim mi tu* we are reaching the same people over and over again. Something needs to change in order for us to reach those who have not been reached before.

Kapul Champions is the network that represents MDS and TG in PNG and we were central to the development of the *Kauntim mi tu* study.

Kapul Champions has an important role to play in addressing the issues of our members including the alarming issues raised in this study such as violence, depression, condom use and HIV testing We carry the voice of all members, particularly the silent ones; ones who started to come out in *Kauntim mi tu*. The hidden members are being strengthened.

Kapul Champions need to be urgently supported to continue to address the issues facing our members.

We would like to thank the *Kauntim mi tu* team for welcoming our friends to be part of the study. We acknowledge the way you treated us, cared for us and referred us on for further support and treatment. Many of our friends are now on treatment having been diagnosed.

We also acknowledge that the IMR are not new partners, they have worked and journeyed with us from the beginning with the TranSex Project and continue still.

We are grateful for this partnership and look forward to working further together and using this evidence for action.

RECOMMENDATIONS

- The Secretariat of Kapul Champions needs to be funded to ensure civil society participation and the ongoing representation of men of diverse sexualities (MDS) and TG in PNG. Kapul Champions must be part of the HIV response.
- Ensure adequate supply and distribution of condoms.
- The national response to HIV needs to work in partnership with all partners to strengthen the current systems including clinics. With the closure of the only clinic designated for our community, we need to train healthcare workers in other sexual and reproductive health services about our communities, diversity of sexual practices and gender and sexual identity. Members of our community should be employed to work in these clinics to ensure they are safe and welcoming. In order to build sustainable change in healthcare worker attitudes and skills, a training curriculum should be implemented for healthcare worker trainings addressing the issues of sexuality and gender diverse Papua New Guineans. This same training could be used in the training of law enforcement officers such as the police.
- Reinvigorate the efforts to address law reform for MDS and TG in PNG, including laws on sodomy and sex work, of which many of our members also engage in.
- Address the wider health issues of our members including gender-based violence including forced sex and mental health issues.
- Shift from syndromic management of STIs to point of care testing with the Gene-Xpert machine.
- Improve the quality and scope of peer outreach workers to address issues of mental health, violence, treatment adherence for HIV and TB, HIV testing and STI information. As part of this, identify and pilot new approaches to bringing HIV testing to the settlements, rural areas and more hidden populations such as mobile clinics and peer testing.
- Improve the capacity of the MDS and TG community to understand new tests like HIV viral load and improve our understandings of HIV risk.
- Increase the use of social media to disseminate information. This will require developing updated and electronic information, eduction and communication materials specifically for our MDS and TG population.

Recommendations from

All Stakeholders*

- Continue efforts to achieve law reform to create an enabling legal environment for key populations.
- Review and revise current peer outreach models to improve quality of outreach. Expand outreach activities to reach more people. Include outreach HIV testing and/or referrals to HIV testing.
- Use social media for health advocacy and information for key populations.
- Secure funding for civil society organisations to ensure ongoing representation of key populations and advocacy for health and human rights, including law reform.
- Implement Sunset Clinics for key populations so that they can access out of hour's healthcare.
- Expand health and HIV treatment literacy to all key populations in order to improve knowledge of HIV and of treatments.
- Train members of key populations to be Peer Workers in healthcare services to ensure services are friendly and receptive to the needs of the community.
- Invest in alternative methods of condom distribution through hotels and in the community.
- Information, education and communication materials on HIV and STIs need to be designed and tailored to the risky behaviours of key populations.
- Incorporate detailed and correct information on anal sex for key populations (including women and girls in transactional sex), including different levels of risks associated with unprotected receptive anal sex.
- Devise and implement educational curriculum in healthcare worker training to ensure that they are equipped with the necessary knowledge to provide quality care and treatment to members of key populations in whatever services they access.
- WHO Integrated Management of Adolescents Adult Illnesses training needs to be strengthened to include modules on caring for members of key populations.
- Integrate health services so that people can be tested and treated for HIV, STIs, TB and other infections and diseases in the same service.
- Prioritise the implementation of point of care testing for genital and anorectal STIs.
- Undertake research into the epidemiology of oropharyngeal STIs among key populations.
- Promote family planning especially use of long-term methods among FSW.
- Work with facilities providing services to key populations to provide more psychosocial support at clinics for survivors of violence/abuse.

* A one day workshop was held with representatives from the Government of Papua New Guinea, international and local non-government organisations, faith based organisations, civil societies representing key populations and donors, including the Government of Australia and representatives from the Global Fund to Fight AIDS, TB and Malaria.

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Kauntim mi tu