KAUNTIM MI TU PORT MORESBY 2017

Key findings from the Key Population Integrated Bio-Behavioural Survey, Port Moresby, Papua New Guinea

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PAPUA NEW GUINEA

PEPFAR

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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 this study. 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 multiple 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 points 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, an integrated bio-behavioural survey (IBBS) of women and girls who sell and exchange sex (from here on referred to as FSW), and men who have sex with men and transgender women (from here on referred to as MSM/TG), was conducted to support the scale up of essential HIV prevention and treatment services for these populations. The survey was conducted in Port Moresby between June and November 2016 and used respondent-driven sampling (RDS) to recruit participants. *Kauntim mi tu* had two goals: 1) to conduct Papua New Guinea's first population size estimations of FSW and MSM/TG; 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, 674 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 Port Moresby was 27 years, with 28.0% aged 35 years or older. Half of all FSW in Port Moresby originate from the Highlands Region (50.2%) and most FSW have been residing in Port Moresby for more than 15 years (58.2%). Nearly one-third of FSW (30%) could not read or write and only 12.5% completed high school. While most FSW were separated or divorced (61.4%), 18.4% were never married and 13.2% were currently married. Over half (56.3%) earned less than 500 kina per month. Sex work was the primary income source for 66.4% of FSW. It is estimated that there are 16,053 FSW in Port Moresby.

The median ages for first vaginal and anal sex were 16 and 20 years, respectively. One-quarter (25.9%) of FSW received money or goods the first time they had sex and 19.6% were forced into their first vaginal sex, while 64.5% were forced into their first anal sex. Most FSW did not use a condom at last sex (63.0%). The median age when FSW first sold or exchanged sex was 20 years. While most FSW (61.4%) had been selling or exchanging sex for less than five years, 18.5% have 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 (55.8%). Most FSW (61.4%) have had less than five clients who gave money in the past six months. Only 32.7% of FSW used condoms with all clients who gave money in the last six months.

Nearly half (45.2%) of FSW felt the need to hide that they sell or exchange sex when accessing health services. An estimated 23.2% of FSW had given something to the police to avoid trouble in the last 12 months and 10.9% had been arrested because they sell or exchange sex.

More than half of FSW (57.3%) have experienced physical violence and 34.2% have been forced to have sex. Of those experiencing physical violence in the last 12 months, 42.9% of survivors believed it was related to them selling and or exchanging sex. Most FSW (60.6%) who experienced sexual violence never sought help after their last unwanted sexual encounter. Approximately one in five (21.5%) of FSW experienced any violence from their clients in the last six months.

An estimated 80.4% of FSW were using modern family planning methods to prevent pregnancy. Among FSW who have been pregnant, 20.5% tried to induce an abortion at least once. Of the 26.4% of FSW who had a pregnancy that resulted in a live birth in the last three years, 91.2% attended an antenatal clinic at least once. Of those who were offered an HIV test, 72.1% tested for HIV and, of these, 4.3% tested positive.

Nearly one in three FSW (30.8%) have never been reached by a peer outreach worker in their lifetime. Approximately half of FSW (53.6%) have been reached in the last year. Approximately two-thirds (67.9%) of FSW had ever tested for HIV.

HIV prevalence among FSW in Port Moresby was 14.9%. Overall, PNG has not reached UNAIDS 90-90-90 targets among FSW. 39.3% of FSW living with HIV were aware that they had HIV, 80.3% of these FSW were on ART, and 54.1% of them had achieved viral load suppression. Most FSW living with HIV had been asked at their last HIV clinic appointment if they had any symptoms of TB (73.8%).

Prevalence of sexually transmitted infections (STI) was high and 52.1% of FSW had at least one STI (excluding HIV). The most prevalent infections were anorectal and genital chlamydia and were roughly equal (31.8% and 29.7%, respectively). The next most common sexually transmitted infection was anorectal gonorrhoea (19.3%) and genital gonorrhoea (18.6%). Syphilis was also common with 16.1% of FSW having ever had syphilis and 7.2% having active syphilis infection. Almost one in ten FSW (9.3%) had hepatitis B. Of FSW screened for tuberculosis in the study, 2.2% had tuberculosis. No FSW in the survey had drug resistant TB.

MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN - RESULTS

A total of 400 MSM and TG participated in the study. The median age of MSM and TG was 27 years, with more than one-third (37.8%) between the ages of 15 and 24 years. The largest regions of origin were the Highlands Region (35.1%) and mixed heritage from two or more regions (39.8%). Approximately half (54.3%) of MSM and TG had been residing in Port Moresby for more than 20 years. An estimated 12.1% of MSM and TG could not read or write and only 28.7% had completed high school. While most MSM and TG had never been married (62.5%), 18.1% were currently married, and 16.6% were divorced or separated. Many MSM and TG were unemployed (37.2%) and 45.8% of those who were employed earned less than 500 kina per month. It is estimated that there are 7,487 MSM and TG in Port Moresby.

Sexual identity varies among MSM and TG, with 32.6% identifying as MSM and 24.8% identifying as men of diverse sexualities. In terms of gender identity, 7.4% identified as

transgender. The largest share of MSM and TG were equally attracted to men and women (39.1%) and most MSM and TG had not disclosed to their families their gender and sexual identity or sexual practices (83.2%).

Almost all MSM and TG in Port Moresby (96.4%) had anal sex with another man or TG. The median age for first anal sex with man or TG was 20 years. Almost half (45.1%) of MSM and TG in Port Moresby received money, goods or services the first time they had anal sex with a man or TG, and 23.9% were forced to have sex this first time. Most MSM and TG in Port Moresby had 4 or fewer male or transgender sexual partners (57.0%) in their lifetime and 20.0% had ten or more. Four in five MSM and TG (80.7%) have had sex with a female in the last six months.

An estimated 39.4% of MSM and TG had at least one main male or TG sex partner in the last six months. Less than one-third (31.3%) of these men and TG used a condom the last time that they had anal sex with a main male or transgender partner. More than half of MSM and TG (54.6%) had at least one casual male or TG sex partner in the last six months; 30.4% of these men and TG used a condom at last sex with this kind of partner.

In the last six months, 9.2% of MSM and TG in Port Moresby paid another male or transgender woman for sex. Of these individuals, 59.1% did not use a condom at last sex with this kind of partner. Just over half (51.6%) of MSM and TG in Port Moresby had ever received money, goods, or services for sex.

Nearly half (48.0%) of MSM and TG felt the need to hide their sexual practices or gender identity when accessing sexual health services. An estimated 12.7% of MSM and TG had given something to the police to avoid trouble in the last 12 months and 4.1% had been arrested because of their sexual practices or gender identity.

More than half of MSM and TG (58.5%) have experienced physical violence and 24.1% have been forced to have sex. Of those experiencing physical violence in the last 12 months, 8.9% of survivors believed it was related to their sexual behaviours or sexual identity. Almost all MSM and TG (90.4%) did not seek support after an experience of sexual violence.

Approximately one-third (34.6%) of MSM and TG had never been reached by an HIV peer outreach worker in their lifetime while 53.8% had been reached within the last year. Less than half (41.8%) of MSM and TG in Port Moresby had ever tested for HIV.

HIV prevalence among MSM and TG in Port Moresby was 8.5%. Overall, PNG has not reached UNAIDS 90-90-90 targets among MSM and TG. Given that there were only 30 HIV-positive MSM and TG in the study, the following cascade results are unweighted. 23.3% of MSM and TG living with HIV were aware of their infection, 42.9% were on treatment, 66.7% were virally suppressed. Of MSM and TG screened for tuberculosis, 1.9% had tuberculosis.

Prevalence of sexually transmitted infections (STI) was high and 34.0% of MSM and TG had at least one STI (excluding HIV). Genital chlamydia was the most common STI (12.3%) followed by anorectal chlamydia was 9.6%. Anorectal gonorrhoea was more prevalent (7.1%) than genital gonorrhoea (3.6%). Syphilis was also common with 10.0% of MSM and TG having ever had syphilis and 4.0% having active syphilis. Over one in ten MSM and TG had hepatitis B (11.6%). Of the four MSM and TG in the study who had tuberculosis, one had a drug resistant form.

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 Port Moresby recommend that the National Department of Health and other service providers:

1. **Expand the use of peer driven and social networks and other new evidence-informed HIV testing strategies to increase HIV testing yield.**
2. **Strengthen linkages of people newly diagnosed with HIV to key population friendly clinics for immediate initiation of ART.**
3. **Expand the use of peer navigators to support treatment retention of key populations.**
4. **Promote gender and sexual orientation and identity equality.**
5. **Provide key population sensitivity training to healthcare workers at key health facilities and designate them as key population friendly.**
6. **Ensure the availability of safe-spaces for the reporting of physical and sexual violence, and the provision of services for key populations.**
7. **Integrate point of care STI testing and treatment in all sexual health services, including HIV testing and treatment facilities.**
8. **Increase provision of condoms and lubricants at key population hotspots and sexual health facilities.**
9. **Ensure women and girls who sell and exchange sex are tested for HIV and syphilis during pregnancy, receive treatment as needed, and are provided with comprehensive reproductive health care including family planning.**

INTRODUCTION

Despite more than three decades of global efforts in the prevention and treatment, 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 as 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, STI and TB services. *Kauntim mi tu* provides much needed information to improve the scaling up of combination prevention and improving access to point of care 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) or 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, STIs, 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 socialise 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 Port Moresby. Following the completion of field work in Port Moresby, 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. Port Moresby-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 Port Moresby 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 unique object multiplier methods were used to estimate the size of each population.

Integrated Bio-Behavioural Survey (IBBS)

Data collection in Port Moresby, the National Capital District of Papua New Guinea, occurred between June and November 2016.

The target populations were:

1. Women and girls who sell and exchange sex (from here on it will be written as FSW); and
2. Men who have sex with men, and transgender women (from here on it will be 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
- Be in possession of a valid study coupon

To take part in this study, MSM/TG participants must:

- 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
- Be in possession of a valid study coupon

Sample size

We proposed a sample size of 700 FSW and 700 MSM/TG in Port Moresby. 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

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).

Primary incentives are those received when an eligible participant completes a first visit, including the survey and biological testing. Should a participant decline the biological testing they are still eligible for full reimbursement for their time. Secondary incentives are those received by a participant on their second visit. The amount reimbursed is determined by the number of successful recruits. A sub-sample of participants are identified to participate in a qualitative interview and a separate reimbursement schedule was devised and offered to those who consent and participant in a qualitative interview.

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

1.1 Behavioural Survey

Eligible and consenting participants undertook a researcher-administered survey. In 2015, more than 2.1 million adults and 150,000 children were infected with HIV (UNAIDS 2016).

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 Port Moresby, 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 available to facilitate transportation.

1.2 Biological testing

Kauntim mi tu study participants were offered point of care 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 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, to store remaining specimens and test them in the future, including overseas testing if necessary.

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 program with the Royal College of Pathologists of Australasia for HIV, hepatitis B virus and syphilis immunochromatographic testing.

Quality control 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 PNG Institute Medical Research's Sexual and Reproductive Health Laboratory. In-house chlamydia, gonorrhoea, tuberculosis and HIV viral load QC were developed for this study and ran 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. Eighteen FSW and 22 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

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

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 two methods to estimate the number of FSW and MSM/TG in Port Moresby: the unique object multiplier method and the service multiplier method.

The unique object multiplier method estimates the size of the population by determining the probability of being 'recaptured' in the RDS survey.

Approximately two weeks prior to the start of the *Kauntim mi tu* study, peer volunteers distributed a fixed number of unique objects to FSW and MSM/TG in Port Moresby. They noted on Size Estimation Log Forms the number of objects they distributed, the date and location of the distribution.

Each person encountered by the peer volunteers received only one unique object and was instructed to keep the unique object because they may be asked about it the near future by another project staff. They also verified that the person had not already received an object.

The goal was to distribute as many of the unique objects as possible, ideally up to twice as much as the sample size. Volunteers were paid a small sum of money to thank them for their time distributing objects to their peers.

Peer volunteers distributed 867 unique objects to FSW and 598 to MSM/TG in Port Moresby. To strengthen accuracy and recall of receiving an object, object distribution was done with peer volunteers wearing a *Kauntim mi tu* hat. During the screening for eligibility of enrolment, study participants were asked whether they received the object.

The study used the formula below to estimate the size of each population:

$$N = \frac{MC}{R}$$

Where:

M = Number counted during first phase (first capture)

C = Number counted during second phase (second capture)

R = Number of people captured during the first phase that were recaptured during the second phase (included in both captures)

N = Estimate of total population size

The service multiplier method utilizes service data from HIV and STI service providers. Survey participants were asked whether they received specific services in 2015 and which entity provided the service.

Counts of the number of FSW and MSM/TG receiving these services were obtained from each of the providers and using the formula below an estimate of the size of each population was produced.

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

Ethics

This study was approved by the PNG National Department of Health's Medical Research Advisor Committee, the Research Advisory Committee of the National AIDS Council Secretariat, the PNG Institute of Medical Research's Institutional Review Board, 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 Port Moresby 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 Port Moresby, 674 women and girls involved in the selling and exchanging of sex for goods, services or money (hereon referred to as FSW) were eligible, provided informed consent and participated in the study. Results presented here are weighted population proportions representing the entire population of FSW in Port Moresby, 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 half (58.7%) of the women and girls were over the age of 25 years, with 28.0% aged 35 years or older. Adolescents aged 15-19 years made up 13.9% of women and girls engaged in transactional sex. **See Figure 1.1**.

Half of all the women and girls self-identified as from the Highlands Region (50.2%), one-quarter identified that they had mixed regions of origin (25.0%) and slightly less were from the Southern Region (22.7%). **See Figure 1.2**.

Among those from the Southern Region, 51.6% were from Gulf Province and 38.0% from Central Province. Of those who identified that they were from the Highlands Region, 48.5% were from Simbu Province (data not shown).

While the majority of the women and girls were long-term residents of Port Moresby, with most residing there for more than 15 years (58.2%), 18.9% moved to Port Moresby in the last four years. **See Figure 1.3**.

There was diversity in religious affiliation among the women and girls engaged in transactional sex.

The most common religious affiliation of FSW was the Seventh Day Adventist Church (36.6%). Although there were many who identified as Catholic, other mainline churches (United and Lutheran) are relatively equally represented. An affiliation with

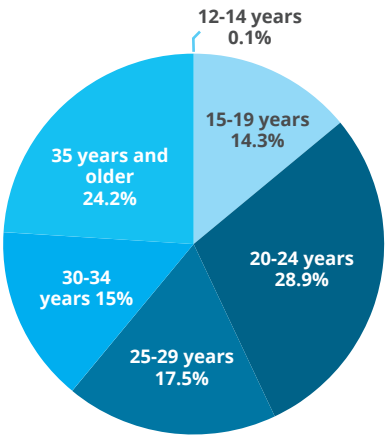

Figure 1.1: Distribution of age

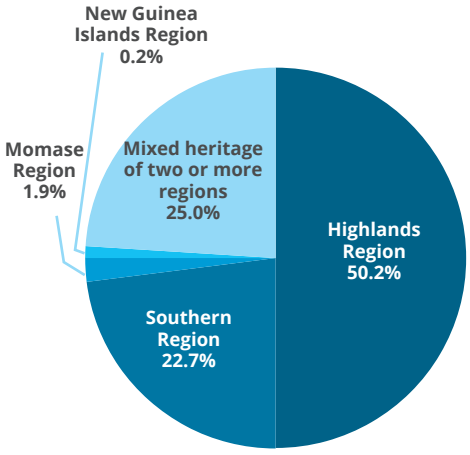

Figure 1.2: Region of origin

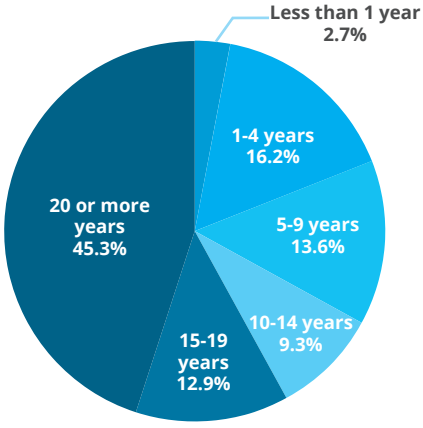

Figure 1.3: Years living in Port Moresby

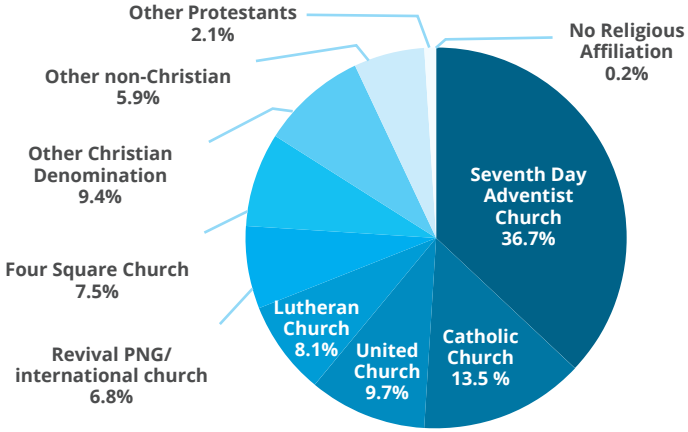

Figure 1.4: Religious affiliation

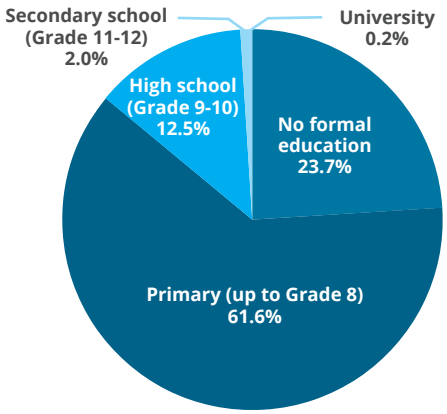

Figure 1.5: Educational level

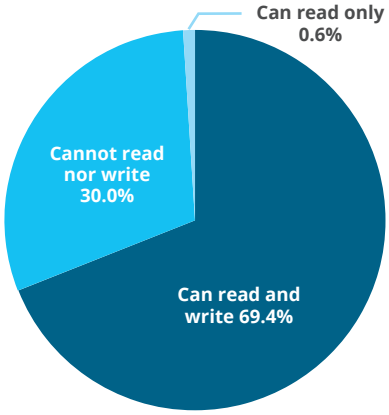

Figure 1.6: Literacy level

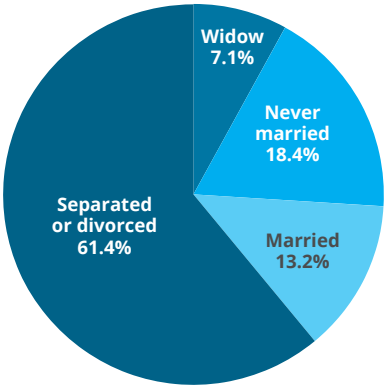

Figure 1.7: Marital Status

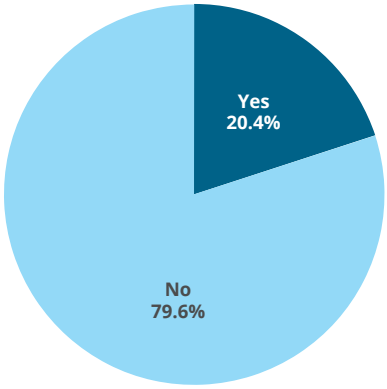

Figure 1.8: Time away from Port Moresby in the last 6 months for more than a month at a time

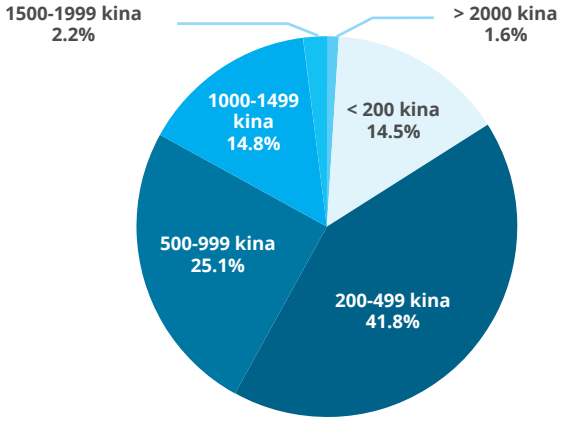

Figure 1.9: Average monthly income

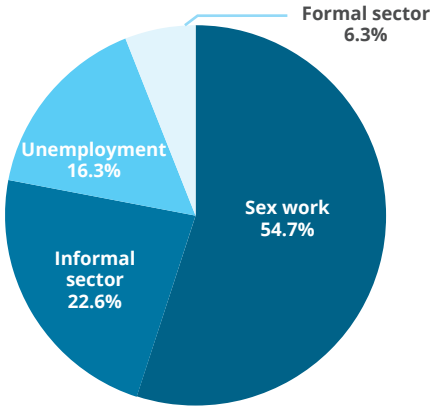

Figure 1.10: Main form of employment/income

newer Pentecostal churches such as Revival Church and Four-Square Church, reflect the national growth in these religious denominations. **See Figure 1.4**.

The level of educational attainment for women and girls who sold or exchanged sex was low, with 23.7% having no formal education, but with the majority (61.6%) completing through Grade 8.

Few FSW have completed high school (12.5%), secondary school (2.0%), or university (0.2%). **See Figure 1.5**. Only 1% were currently in school (data not shown).

Almost 70% of FSW could read and write, while 30.0% were neither able to read nor write. **See Figure 1.6**.

1.1 Living arrangements and marital status

More than one in ten (13.2%) FSW were married with more than four times that proportion (61.4%) separated or divorced while 7.1% were widows. **See Figure 1.7**.

Most FSW were long-term residents of Port Moresby (see Figure 1.3), and 20.4% spent more than a month away from Port Moresby in the past six months. **See Figure 1.8.**

1.2. Income and employment

Combining all income sources, 56.3% of FSW earned less than 500 kina per month. Another 18.6% earned more than 1,000 kina per month. **See Figure 1.9**.

Just over half (54.7%) of all FSW report sex work as their main source of income/employment, with 22.6% working in the informal sector, 16.3% reporting that they are unemployed and 6.3% formally employed. **See Figure 1.10**.

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

2.1 Sexual debut

The median age for first vaginal sex was 16 years. The majority of FSW (77.0%) had vaginal sex for the first time between 15 and 19 years, with a sizable proportion (14.1%) having sex between the ages of 10 and 14 years. **See Figure 2.1**.

The median age for first anal sex was 20 years. Of FSW who have had anal sex, 41.5% first did so before the age of 20 years. **See Figure 2.2**.

Nearly one in five women (19.6%) were forced into their first vaginal sex. **See Figure 2.3**. Nearly two in three women (64.5%) were forced into their first anal sex. **See Figure 2.3**. Of the FSW who first had vaginal or anal sex because they were forced to do so, the means by which they were forced were largely similar in both scenarios.

The most common method of force was being physically forced (37.9% and 37.0%, respectively). Payment was less common for vaginal sex than for anal sex (21.3% and 32.6%, respectively) and pressure was applied almost equally for vaginal sex as for anal sex (17.4% and 20.6%, respectively). **See Figure 2.4**.

2.2 Vaginal and anal sex

The sexual behaviours of FSW varied, and therefore, so did their risk for HIV.

Of all FSW, slightly more than half (52.6%) practiced both vaginal and anal sex, with 47.4% 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 (89.1%), with 1.9% having some form of attraction to other women. Most FSW had never had sex with another women (96.3%), but 3.7% had (data not shown).

2.4 Initiation of sex work

The median age when FSW first sold or exchanged sex was 20 years. Most FSW first sold sex between the years of 15 and 24 years (64.7%).

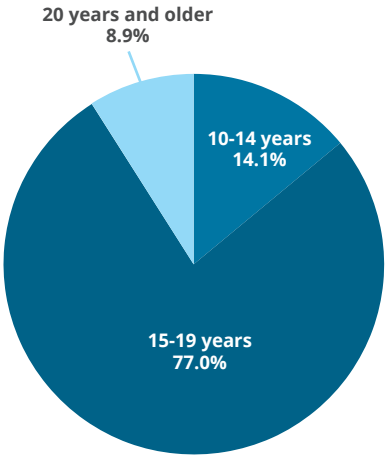

Figure 2.1: Age of first vaginal sex

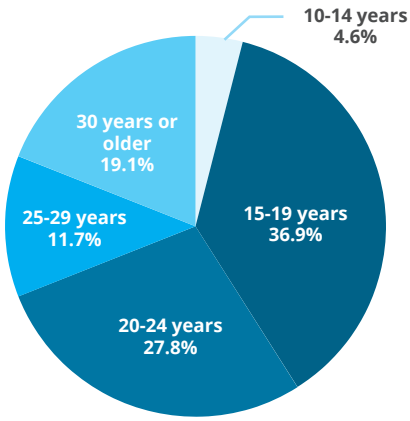

Figure 2.2: Age of first anal sex

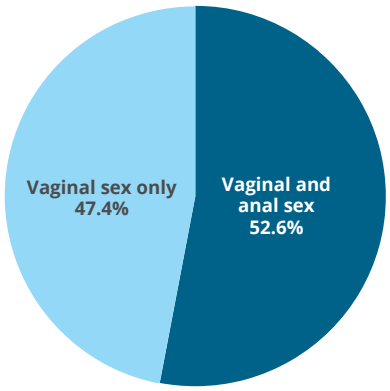

Figure 2.5: Sexual behaviour

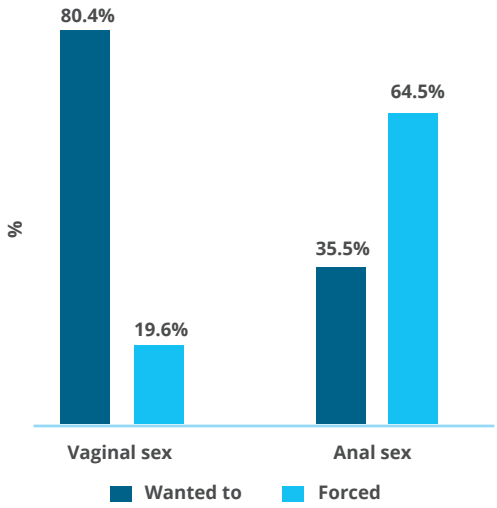

Figure 2.3: Proportion forced/coerced into first sex

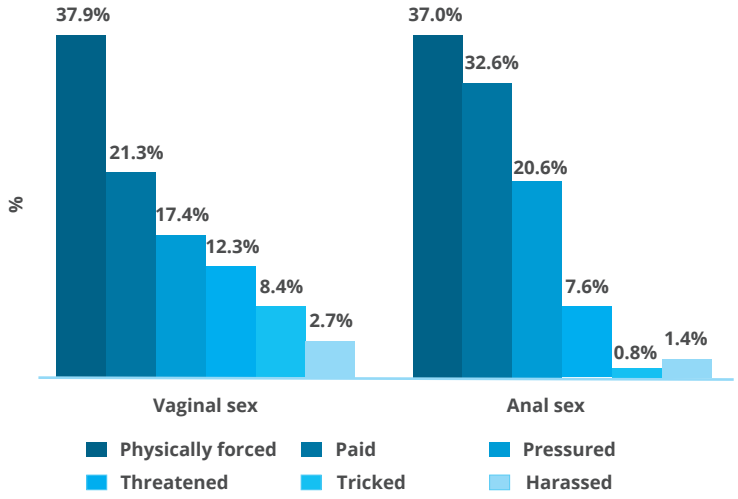

Figure 2.4: Means of being forced/coerced to have anal and vaginal sex for the first time

A few began selling sex in their early adolescent years – 10-14 years (4.9%). **See Figure 2.6**.

"I was 18 when I started doing this. At 18, I married and when my husband deserted me, men started asking me. They smoothen me with nice words, bought me drinks or offered me betel nut and then they would ask me out and I would agree to them." Seru, 19 years

"I was 14 years old and in Grade 3. My parents didn't pay my school fee and so I followed other girls going around and started having sex. I also followed boys and went into nightclubs and we would hold men and take their money. Sometimes, when I see good men, I would follow them and go have sex with them." Yala, 19 years

"When I slept with that man, it changed me totally. It was my first time to have sex with a man and it completely changed me. Everything about being a young innocent girl seem difficult – it transformed me into a woman. My thoughts of being a good girl in the house and live a normal life became difficult. I just changed into a totally different person. I was exactly 17 years old." Anesa, 24 years

One-quarter (25.9%) of FSW received money or goods the first time they had sex. **See Figure 2.7**.

While most FSW (61.4%) had been selling or exchanging sex for less than five years, 18.5% have been doing so for ten or more years. Nearly one in ten FSW (9.4%) had been selling or exchanging sex for less than one year. **See Figure 2.8**.

"A friend of mine came and when she saw me, she lured me and I went with her and came out altogether. I have been living outside doing sex work for almost 3 years now." Sandra, 42 years

The most common reason for beginning to sell and exchange sex was to provide money for the family or themselves (55.8%). Family and friends doing it (17.7%), was the second most common reason. Very few sold or exchanged sex for pleasure (4.1%). **See Figure 2.9**.

"I was young when I went to this ship and I met this man. I married him and after our second child he left me for someone else in 2002 and so I started going around and now I am in this immoral practice." Molly, 40 years

"It's all about the body's desire and the pleasure that comes with it that is pulling me and I do it anyway. Since I have problem by husband who does not treat me well and, I go out with when men seek me out. If my husband takes good care of me, I will listen to him and be a good wife but since he's also seeing other women, I am also doing the same. When I feel like seeing other men, I just go ahead and do it. When I run short of needs or money and if they [men] want to give, I just go to them." Tina, 41 years

"I have a set of twins and a boy and a husband who does not have a job. Life in Moresby is very tough and so I started hanging out with other women and we would start going around and then earn to buy food and take home and feed our children. My husband is not fit to secure a job so I looked for

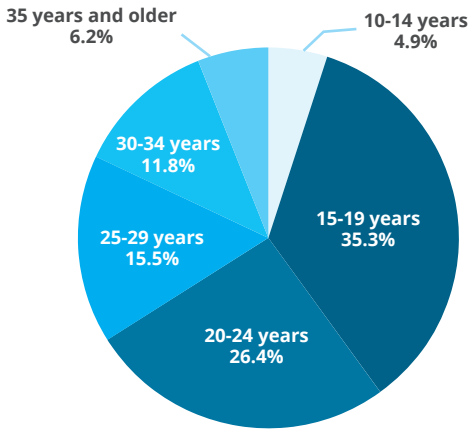

Figure 2.6: Age first sold or exchanged sex

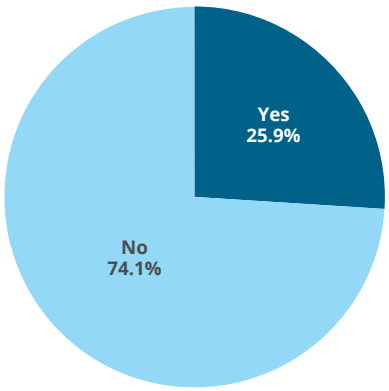

Figure 2.7: Sexual debut with men who gave money or goods

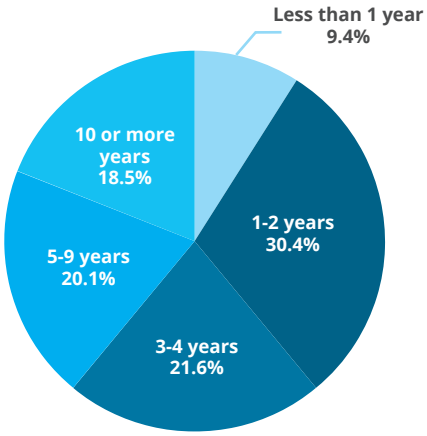

Figure 2.8: Time selling or exchanging sex

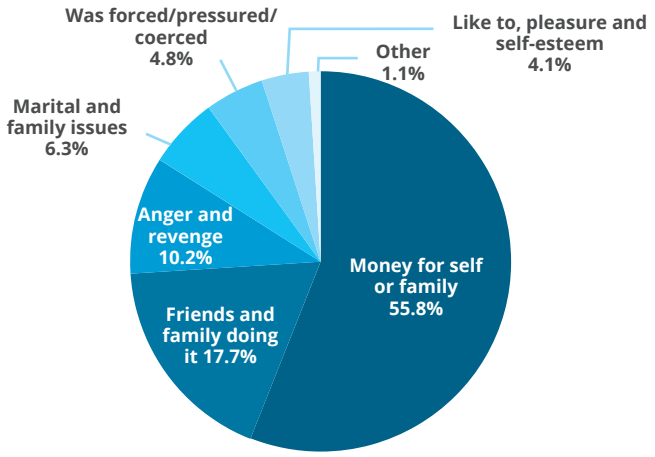

Figure 2.9: Reasons for starting to sell or exchange sex

job myself to support my children. When my husband found out that I was doing this, he beat me and so I left him and went away. This is my job. I team up with the other women and we go out to nightclubs, drink alcohol, lure men and take them to hotels." Maria, 25 years

"This sex life is an income. Anyone that does not have an income goes and has sex for money. They think of their children [because] the family does not have an income. That person will go have sex and then be able to bring food [home]. So we survive on fairly on this because at the end of the day, I don't have a formal income. I usually go out and pay for food and bring it to the house." Sia, 40 years

"I live a difficult life; my husband does not give me a single toea. I would like sit down and think quite often and then I said to myself that 'ah, I must go out and go around with men." Sandra, 42 years

"My husband drinks alcohol around every time he gets his salary. I would argue with him and we would fight all time he does that and I gave up arguing and fighting. I have lived such miserable life for so long and I wasn't looking well…I said 'It's alright, this is a world of sin, you do whatever you are doing there [having sex with others] and I will do the same here'. I do this because I am angry and stressed out." Tamox, Age not known

Selling and exchanging sex was the primary income source of 66.4% of FSW. **See Figure 2.10**.

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" (54.5% and 58.1%, respectively)
- "When having sex with a regular partner" (52.3% and 44.3% respectively)
- "When I cannot find one" (38.8% and 29.0% respectively)
- "When I'm drunk or stoned" (36.2% and 35.1% respectively)

Most FSW (76.4%) had vaginal sex at last sex act and most FSW did not use a condom at last sex (63.0%). **See Figures 2.12 & 2.13**.

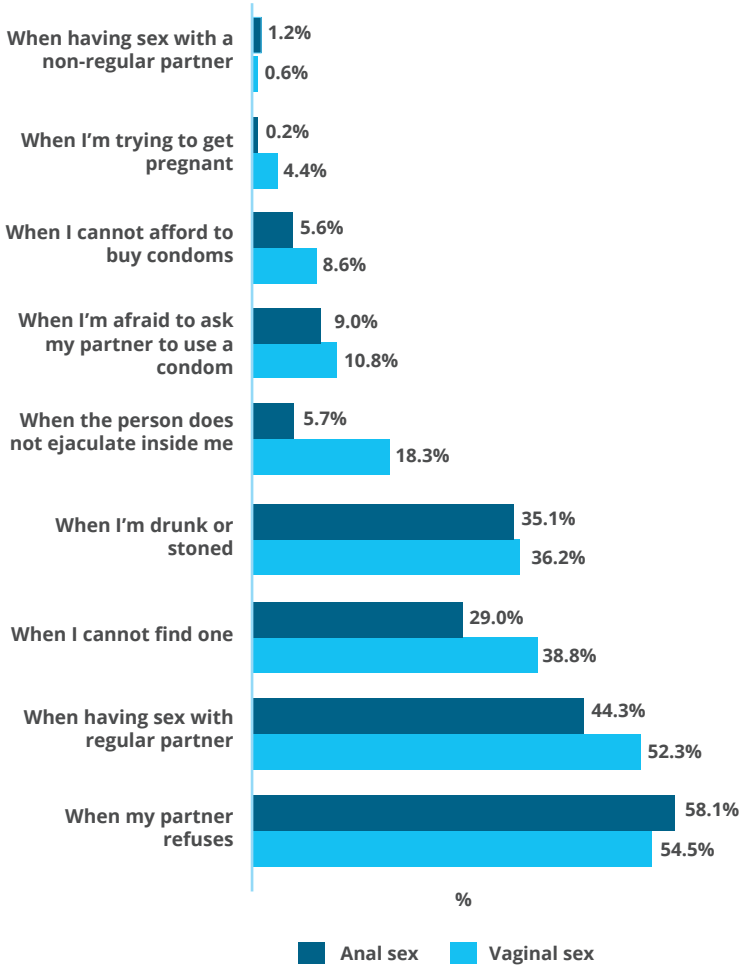

Figure 2.11: Reasons why condom not used during type of sex

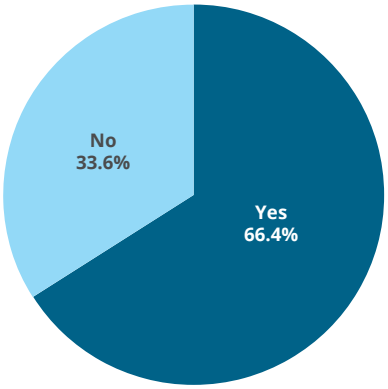

Figure 2.10: Sex work main source of income

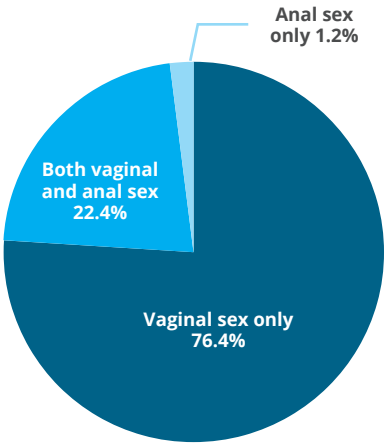

Figure 2.12: Type of sex at last sex

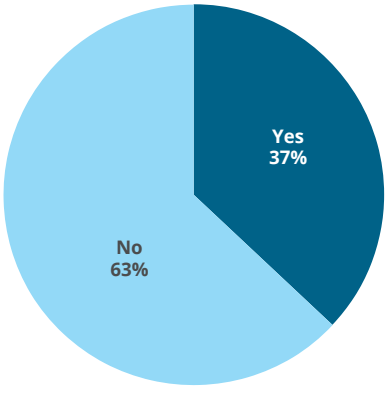

Figure 2.13: Last sex act used a condom

3. CURRENT SEX WORK PRACTICES

3.1. Meeting clients and sex work areas

FSW usually met their clients in a number of different ways, including at public areas such as streets and parks (77.0%), through mobile phones (58.1%) or at bars and clubs (48.0%). **See Figure 3.1**.

Responding to a question specifically on the use of mobile phone applications and the internet, less than 10% (7.9%) had ever used these means of meeting/finding clients (data not shown).

Almost all FSW (98.8%) sold or exchanged sex for goods, money or services in and around Port Moresby and the National Capital District with only 1.2% doing so in other parts of PNG. **See Figure 3.2**.

3.2. Methods of payment and income earned

Almost all FSW (99.5%) received money in return for sex, with 72.8% also reporting that they are provided goods in exchange for sex. Less than ten percent (7.1%) received services in return for sex. **See Figure 3.3**.

FSW received more money for anal sex than they did for vaginal sex. Less than 30% (28.1%) of FSW received 200 kina or more for vaginal sex while almost 40% (39.8%) received 200 kina or more for anal sex.

A slightly higher proportion of FSW earned 100-199 kina for vaginal sex (52.5%) as compared to anal sex (41.4%). **See Figure 3.4**.

The median amount earned for vaginal sex was 100 Kina and for anal sex it was 150 Kina.

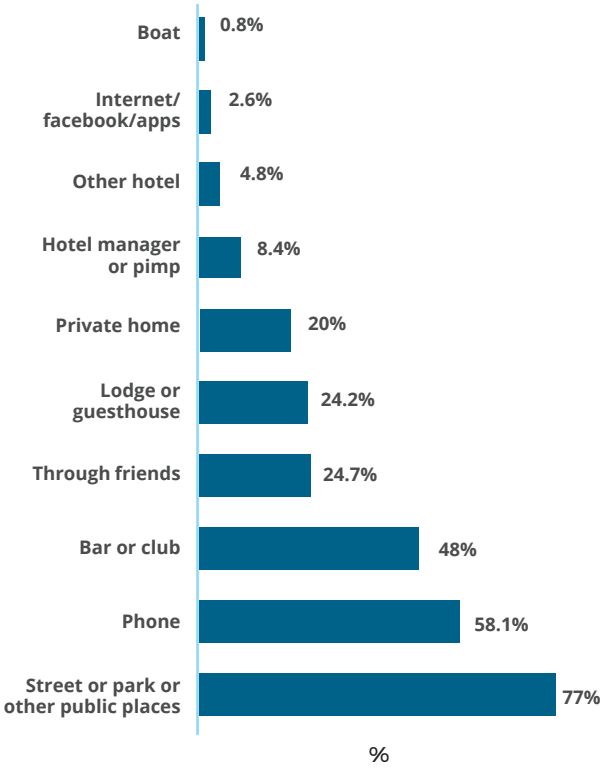

Figure 3.1: Venues where clients are usually found*
***Multiple responses possible**

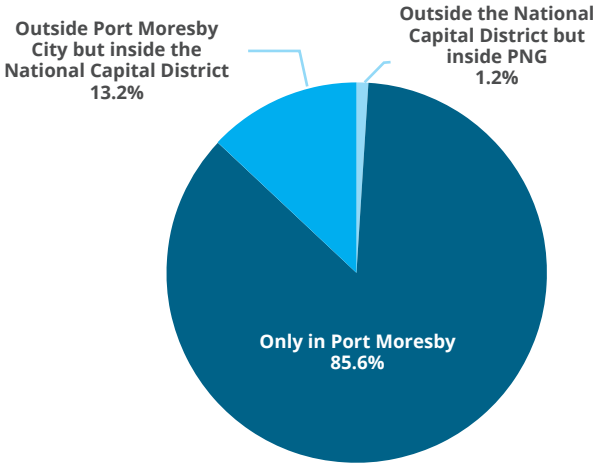

Figure 3.2: Sex sold or exhanged in Port Moresby and elsewhere

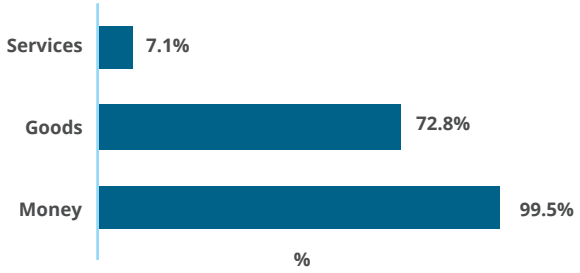

Figure 3.3: Method's of payment and exhange*
***Multiple responses possible**

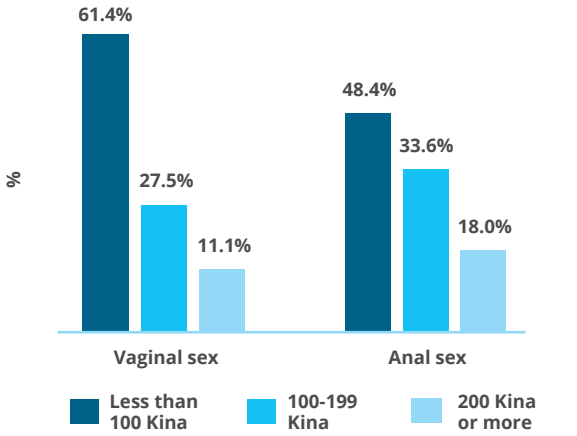

Figure 3.4: Income earned by selling anal or vaginal sex

"I do have anal sex. I remember one time when a man insisted to have anal sex and he said, 'I will give you whatever amount you charge so I agreed." Seru, 19 years

"In regards to payment, we know our job. We are not foolish so when we go out we usually negotiate first. We normally give them our rate and then we go out but whatever sexual positions they want and if we are comfortable, we do it. Whether it be oral, anal or vaginal, we do it, then that's how much they will give us." Yano, 28 year old

3.3. Number and type of clients

Most FSW (61.4%) have had four or less clients who gave money in the past six months. Nearly one in five FSW (18.7%) had ten or more clients who gave money in the past six months. **See Figure 3.5**.

"It's like 6 or 7 of them that I have gone out [with and sold sex]. It's like we would talk and decide whether we would go to a guesthouse or something like that." Seru, 19 years

"I would usually go out with 3 or 4 and sometimes I would only get one [client] and I would go." Sandra, 42 years

"I have a regular client that I go out with and he knows. He [my husband] knows that we [my regular client] go out together and so he bashed me just recently. That is why I like to keep things to myself to avoid such problems." Yano, 28 years

The majority of FSW (59.1%) had at least one regular client in the last two weeks. **See Figure 3.6**. Of those who had a regular client during this period, 19.8% had vaginal sex with three or more regular clients. **See Figure 3.7**.

The majority of FSW (69.4%) did not have any one-time clients in the last two weeks. **See Figure 3.8**. Of FSW who had a one-time client during this period, only 23.4% sold or exchanged vaginal sex with three or more one-time clients. **See Figure 3.9**.

3.4. Condom use with clients

Only 32.7% of FSW used condoms with all clients who gave money in the last six months. The majority of FSW (67.3%) have had at least one client with whom they did not use a condom. **See Figure 3.10**.

Of FSW who had sold or exchanged vaginal sex with a one-time client in the last two weeks, two out of five (41.4%) did not use a condom during last vaginal sex with a one-time client during this period. **See Figure 3.11**.

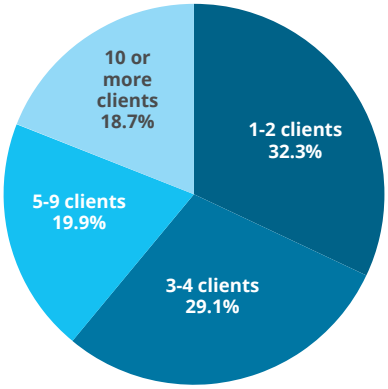

Figure 3.5: Number of clients who gave money for sex in the last six months

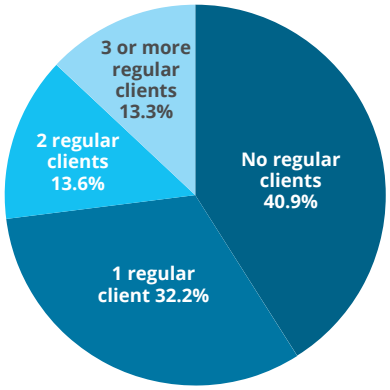

Figure 3.6: Number of regular clients with whom sold or exchanged vaginal or anal sex in the last two weeks

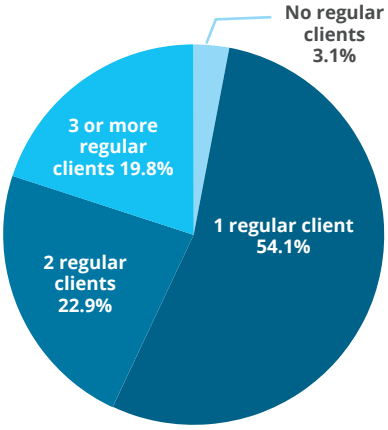

Figure 3.7: Number of regular clients with who sold or exchanged vaginal sex in the last two weeks

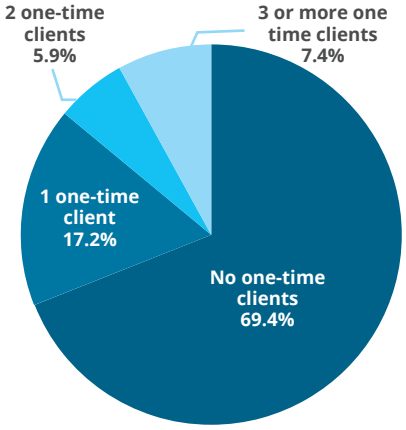

Figure 3.8: Number of one-time clients with whom sold or exchanged vaginal or anal sex in the last two weeks

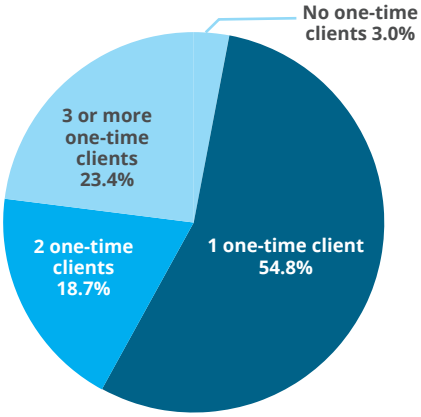

Figure 3.9: Number of one-time clients with whom had vaginal sex with in the last two weeks

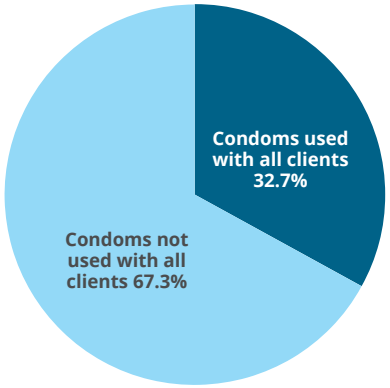

Figure 3.10: Condom use by clients who gave money in the last six months

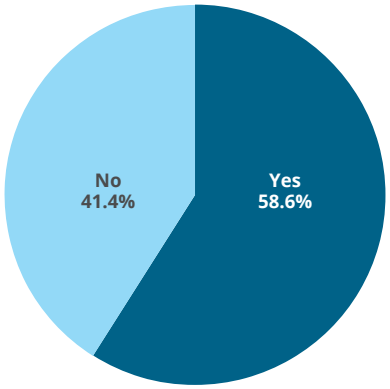

Figure 3.11: Condom use at last vaginal sex with one-time client in the last two weeks

Of those with a regular client, 49.6% did not use a condom in the last two weeks with a regular client. **See Figure 3.12**.

Almost half (45.2%) of FSW could frequently negotiate condom use with a client who refused to use one with 18.7% reporting that they could never or rarely do so. **See Figure 3.13**.

"I have never even seen a condom in my life. I don't know what a condom looks like." Tina, 41 years

"I am already in this [have HIV]. I use condom. When I go out and ask my boyfriends to use condom, they would say 'we will go skin to skin' and I would say 'No, your life and mine is important, we must use condom. I have safety that I take with me around'. I use condom with all my boyfriends. Some of them would really insist I would use female condom. When they are drunk and want rush into sex without condom, I already have female condom inside me. At least, I have prevention and I don't want to be re-infected, fall sick quickly and die." Sia, 40 years

"I usually tell them diseases are common these days. It is alright not to use condom with my husband but not with other men. It's a pity they have to use condom. We are able to use condom when men also agree to use it. Once in a while, we have sex without condom. It's when men do not wish to use condom, that when we have sex without condom." Tamox, Age not known

"Since I know that I am HIV [positive], I always fear reinfection so before payment negotiation, I always tell them that we will use condom. They don't want to use condom, fine, I leave. I don't mind that because I am scared. STIs are now coming resistant to drugs and I don't want to burden my immune system. Thus, I always want to use condom for my own safety because STI opens door to HIV." Yano, 28 years

"If a condom is available, we will have sex so we use condom and have sex. Sometimes, when I come across men who are skinny, I say to them that this shows that you are carrying virus; you must use a condom. They would ask how come I'm saying that and I would tell them that your rib cage is sticking out so I'm a little scared. You don't have to use your cock without anything on so they would use condom. Some of them really like to experience the sweetness; they want to feel skin to skin." Pina, 27 years old

4. SEX WITH NON-PAYING PARTNERS

4.1. Main partners

Less than half of FSW (45.1%) had no main non-paying sexual partners. **See Figure 4.1**.

Condom use during last anal sex (6.1%) was about half that of vaginal sex (13.6%). Almost all FSW did not use a condom at last sex with main partners for both anal (93.9%) and vaginal (86.4%) sex. **See Figure 4.2**.

Condom use with a main partner in the last six months was not universal, with 42.1% never using a condom during vaginal sex and 34.9% never using a condom during anal sex. **See Figure 4.3**.

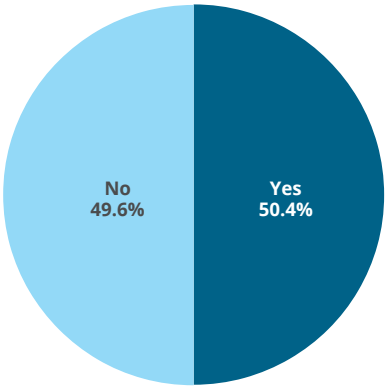

Figure 3.12: Condom use at last vaginal sex with a regular client in the last two weeks

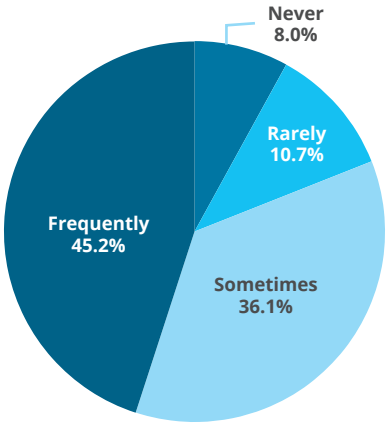

Figure 3.13: Ability to negotiate condom use with any client who refuses a condom in the last six months

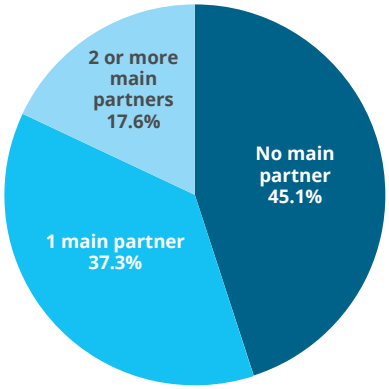

Figure 4.1: Number of main partners

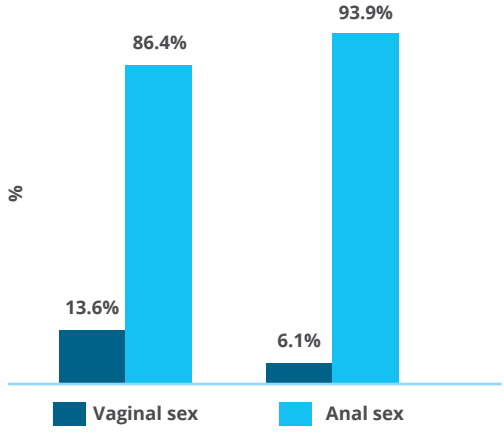

Figure 4.2: Condom use last vaginal and anal sex with a main partner

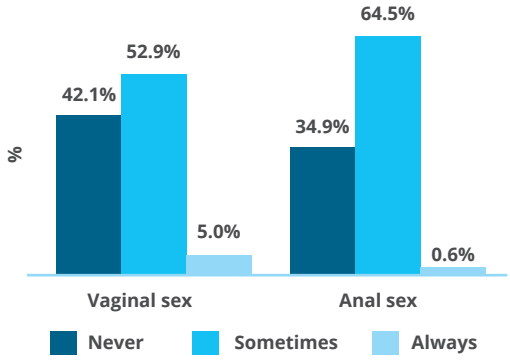

Figure 4.3: Frequency of condom use during vaginal and anal sex with a main partner in the last six months

Just over half (54.4%) of FSW with a main partner could ask their main partner to use a condom. **See Figure 4.4**.

4.2. Casual partners

Most FSW (78.5%) 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, 35.9% had both vaginal and anal sex with their casual partners, with 64.1% having only vaginal sex. **See Figure 4.6**.

Only about one-third (35.0%) of FSW used condoms with all of their casual partners in the last six months. **See Figure 4.7**.

FSW reported higher condom use at last sex with a casual partner during vaginal sex than during anal sex (39.4% versus 6.8% respectively). **See Figure 4.8**.

Frequency of condom use for vaginal sex was higher than it was for anal sex with casual partners. While only 22.8% FSW always used a condom during vaginal sex with a casual partner in the last six months this was only 8.6% for anal sex with the same partner type.

More than half (55.1%) of FSW never or rarely used a condom during anal sex with a casual partner compared to 41.9% during vaginal sex with the same partner type. **See Figure 4.9**.

5. SOCIAL SUPPORT, MENTAL HEALTH AND STIGMA AND DISCRIMINATION

5.1. Social support

FSW were more readily able to rely on another FSW to

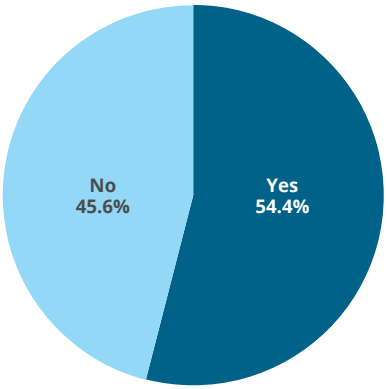

Figure 4.4: Could ask a main partner to use a condom

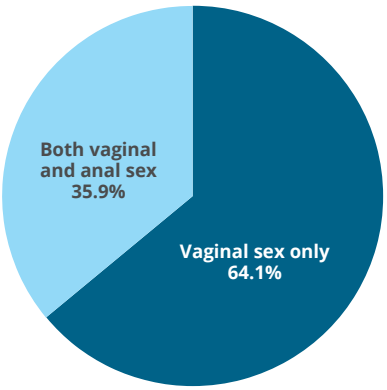

Figure 4.6: Type of sex with casual partners in the last six months

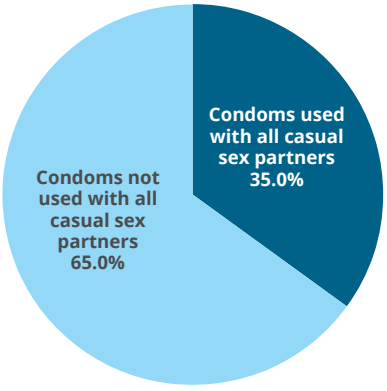

Figure 4.7: Condom use and casual partners

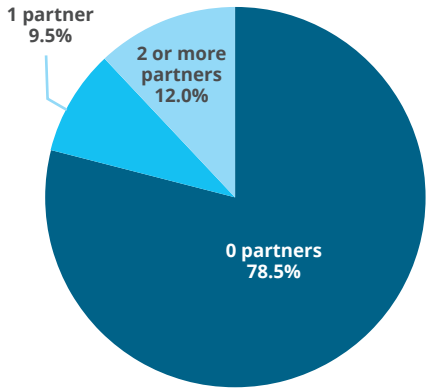

Figure 4.5: Number of different casual partners in the last six months

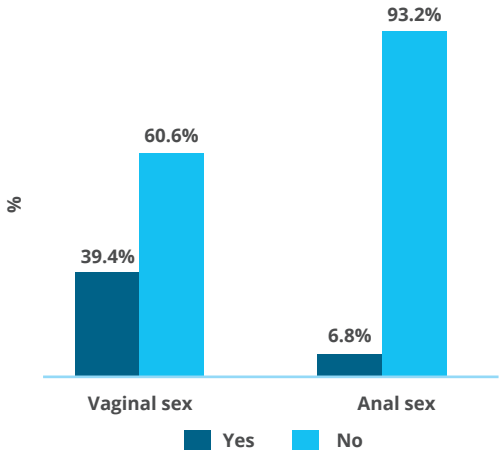

Figure 4.8: Condom use at last vaginal and anal sex with a casual partner

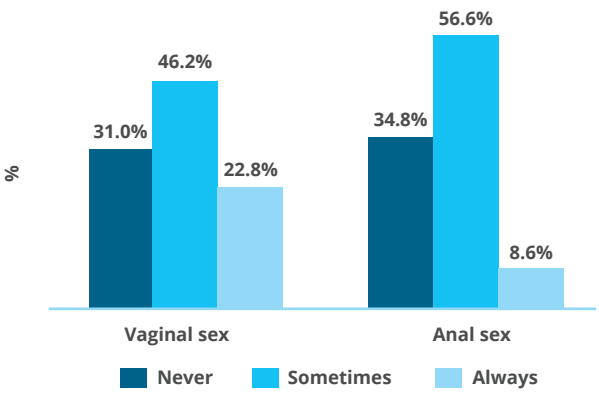

Figure 4.9: Frequency of condom use during vaginal and anal sex with a casual partner in the last six months

accompany them to see a doctor than they were to deal with a difficult or violent situation with a client or partner (59.9% versus 34.7% respectively).

Almost all FSW had supported a peer in the last 12 months by negotiating or standing up to police (91.6%) or a pimp/madam/broker (98.4%). **See Figure 5.1**.

5.2. Depression

Based on the two-item Patient Health Questionnaire-2 screening tool for depression, more than one in five (21.9%) FSW experienced depression. **See Figure 5.2**.

5.3. Stigma and discrimination

Nearly half (45.2%) of FSW felt the need to hide that they sell or exchange sex when accessing health services. **See Figure 5.3**.

Most FSW were not denied healthcare because they sell or exchange sex (75.3%), but another 23.2% did not disclose that they sell sex and therefore were not denied health services. **See Figure 5.4**.

Almost one-quarter (22.4%) of FSW had experienced some form of blackmail because they sell or exchange sex. **See Figure 5.5**.

While most FSW had not experienced discriminatory practices by the police, 23.2% had given something to the police to avoid trouble in the last 12 months.

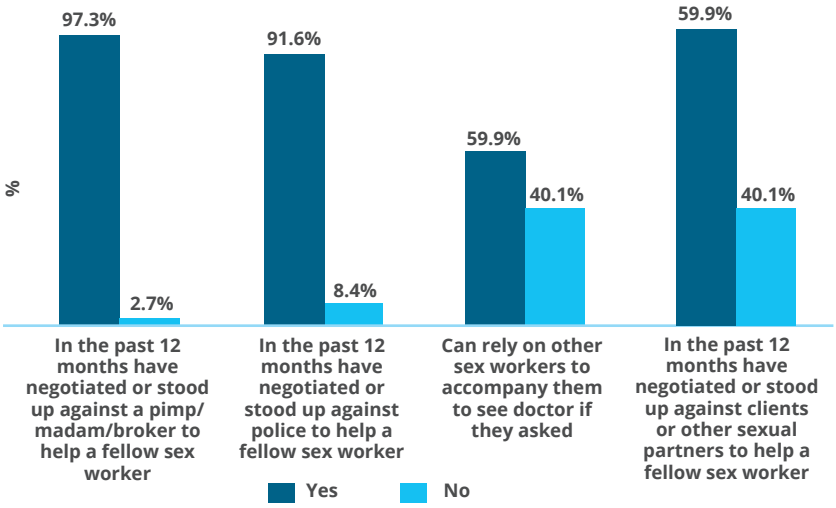

Figure 5.1: Social support

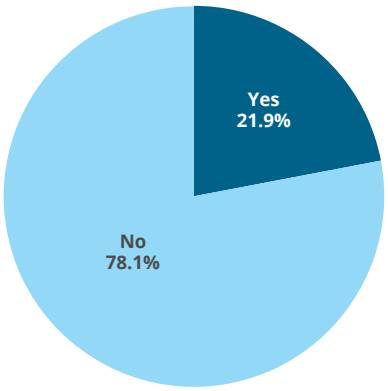

Figure 5.2: Depression

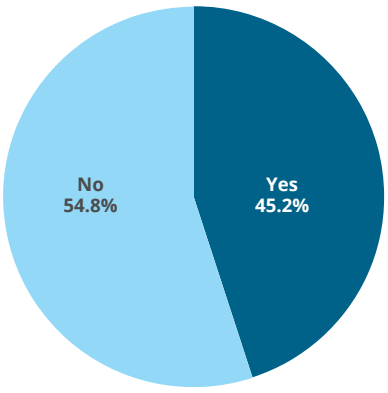

Figure 5.3: Feel the need when accessing health services to hide that they are engaged in sellling and exchanging sex

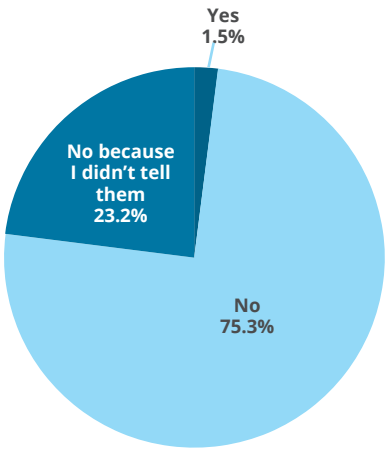

Figure 5.4: Denied health care because they sell or exchange sex

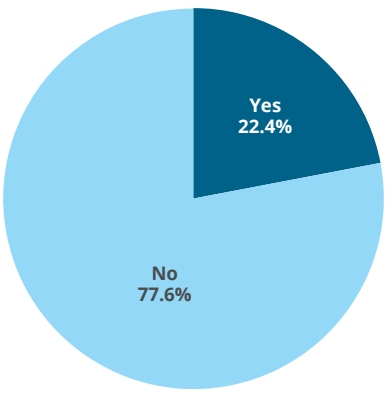

Figure 5.5: Blackmailed by someone because you sell or exchange sex

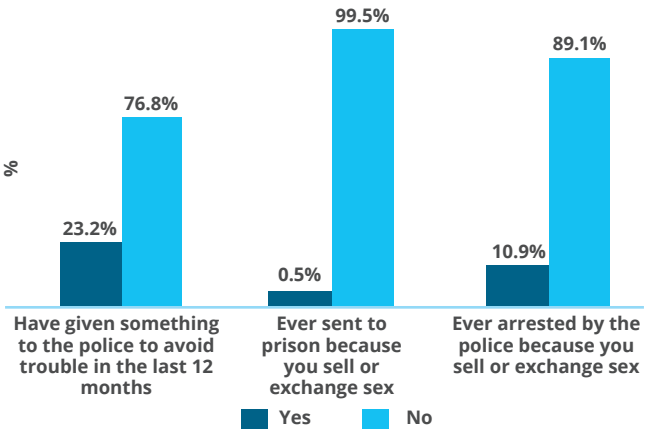

Figure 5.6: Experience with the police

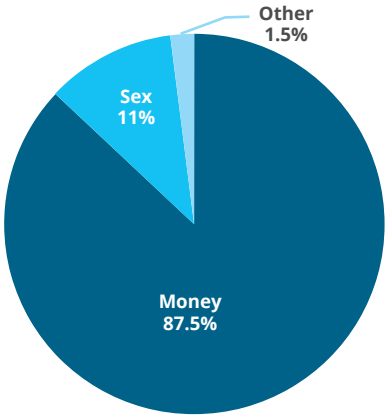

Figure 5.7: Things given to police to avoid trouble in the last 12 months

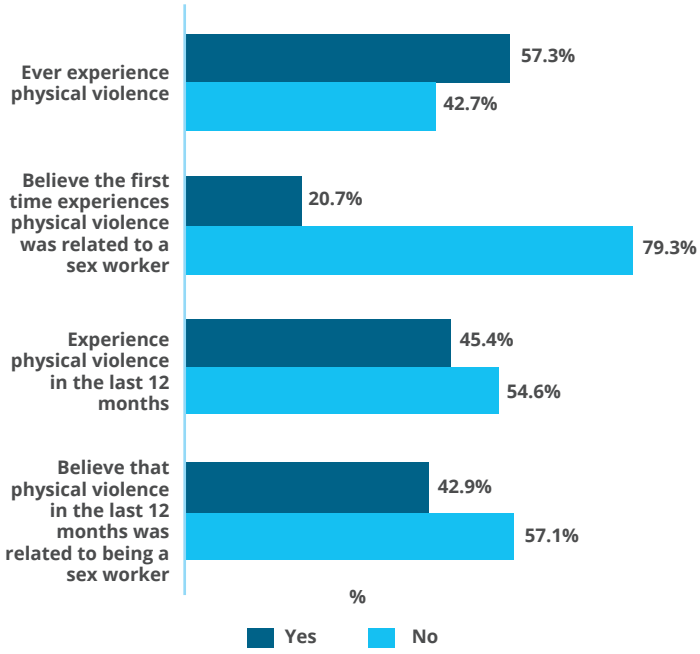

Figure 6.1: Experience of violence

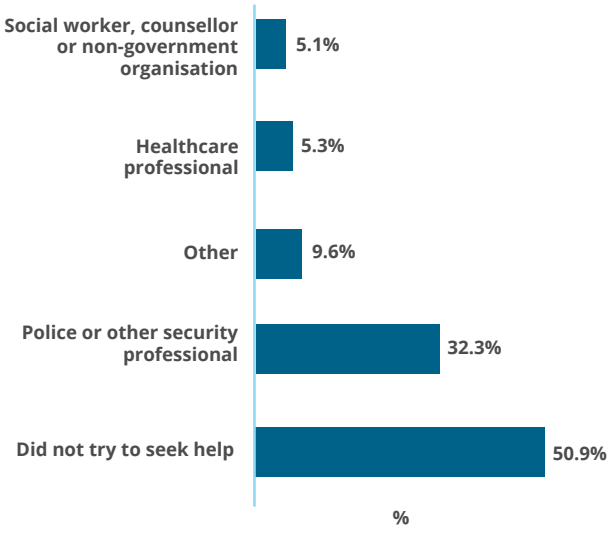

Figure 6.2: Access to support services after any physical violence
*Multiple responses possible

Just over one in ten (10.9%) of FSW had been arrested because of their involvement in the selling and exchanging of sex and 0.5% had been sent to prison because of this. **See Figure 5.6**.

Of the 23.2% of FSW who had given something to the police to avoid trouble in the last 12 months, 87.5% gave money. Another 11.0% 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 1% of FSW had ever taken illegal drugs, with none having taken illegal drugs in the last six months (data not shown).

6. VIOLENCE

6.1. Physical violence

More than half of FSW (57.3%) have experienced physical violence, with 20.7% believing that the violence was directly related to them selling or exchanging sex. In the past 12 months, 45.4% of FSW experienced physical violence, with 42.9% of survivors of the opinion that this violence was related to being involved in the selling and or exchanging of sex. **See Figure 6.1**.

"My family got mad. They gave me a good beating when they found out. They said, 'quit it, you are very young'. They would beat me quite often and I went worse and was already in deep. When I got pregnant, they just didn't want anything to do with me. This is how they describe me 'kando wenipa' meaning 'woman that hangs around the roadside.'" Anesa, 24 years

"I left my previous husband because of this life [sex work]. My former husband would beat me up all the time so I left him and found someone else." Molly, 40 years

While 50.9% of FSW did not try to seek support after any experience of physical violence in the past 12 months, 32.3% sought support from police or other security personnel. Few sought the professional support of social workers, counsellor or non-government organisations (5.1%), or healthcare professionals (5.3%). **See Figure 6.2**.

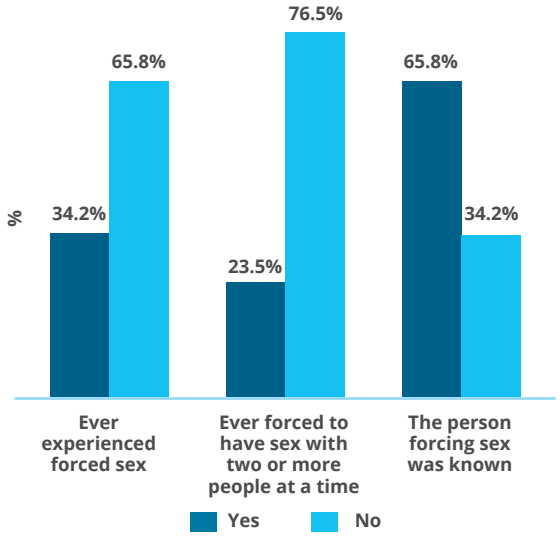

Figure 6.3: History of sexual violence

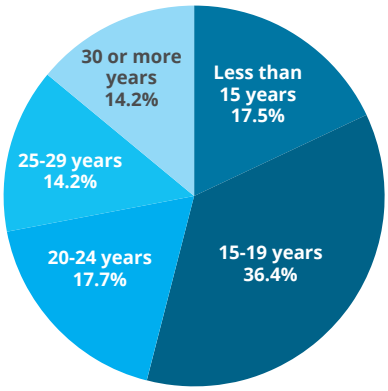

Figure 6.4: Age of first experience of sexual violence

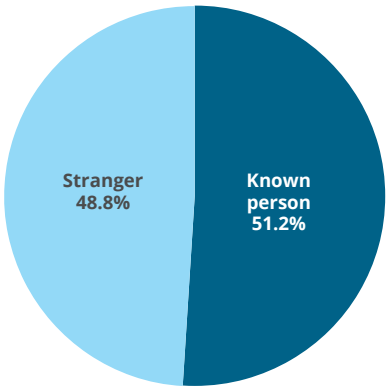

Figure 6.5: Identity of last perpetrator

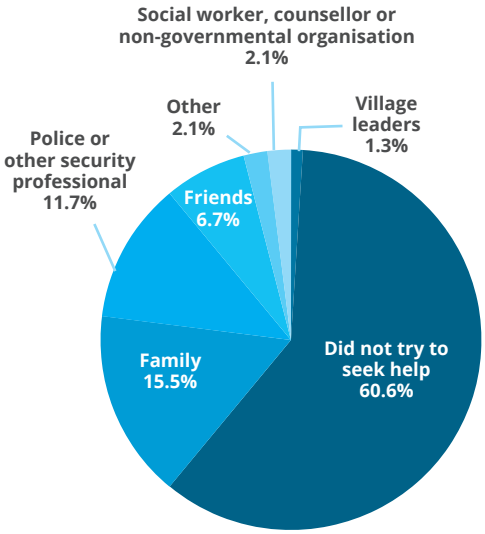

Figure 6.6: Source of help after last sexual violence

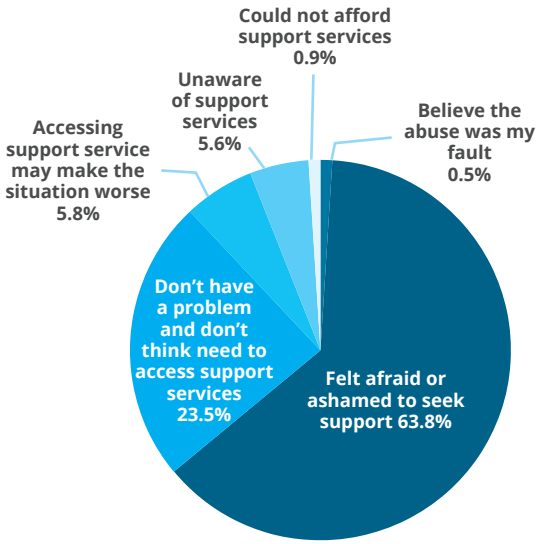

Figure 6.7: Reasons for not seeking support after most recent experience of sexual violence

6.2. Sexual violence

A third (34.2%) of FSW had ever been forced to have sex. Of them, 23.5% had been forced to have sex with two or more people at the same time. The perpetrator was known to the FSW in 65.8% of first cases of sexual violence. **See Figure 6.3**.

> *"A lot of things have happened to me. One time as I was walking towards town some boys came and pulled me and dragged me down. There were about eight of them and they raped me. I screamed for help but they cracked my head with a stone. They stripped all my clothes off and I was naked. Some had their penis in my mouth, some in my vagina while others in my anus, all at the same time; I couldn't breathe. After they had their way, I wore my trousers and went out to call for help. There was a police car nearby so I called for help and I was brought straight to the hospital." Maria, 25 years*

Among FSW who experienced sexual violence, 53.9% were abused before the age of 20 years. **See Figure 6.4**.

6.3. Last experience of sexual violence

Strangers and known individuals were almost equally likely to perpetrate the most recent instance of sexual violence against a FSW (48.8% and 51.2% respectively). **See Figure 6.5**.

Most FSW who experienced sexual violence never sought help after their last unwanted sexual encounter (60.6%). Other common sources of help include family (15.5%) and police and other security personnel (11.7%). **See Figure 6.6**.

The most common reason 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 (63.8%). **See Figure 6.7**.

6.4. Sexual violence in the last 12 months

Of FSW who had ever experienced sexual violence, almost half (44.8%) of FSW had someone physically force them 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, 50.5% were forced to do so by a live-in sexual partner.

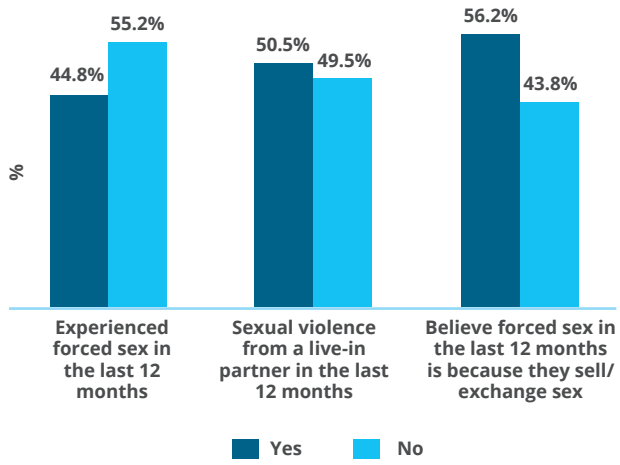

Figure 6.8: Sexual violence in the last 12 months

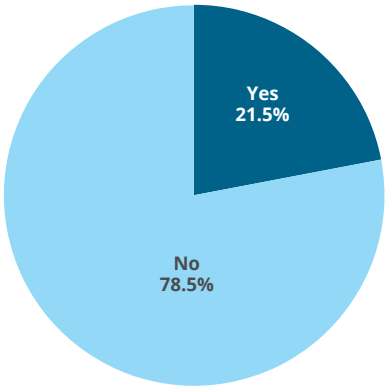

Figure 6.9: Any violence by client in the last six months

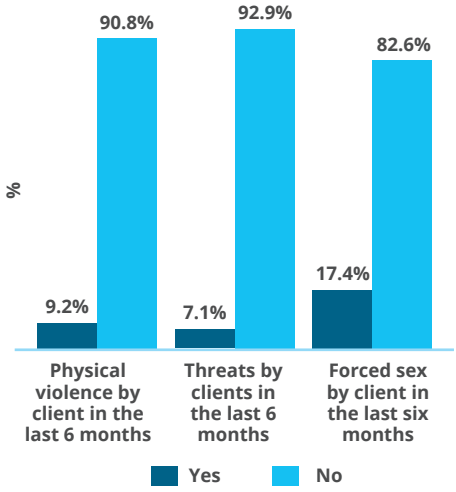

Figure 6.10: Type of violence perpetrated by a client in the last six months

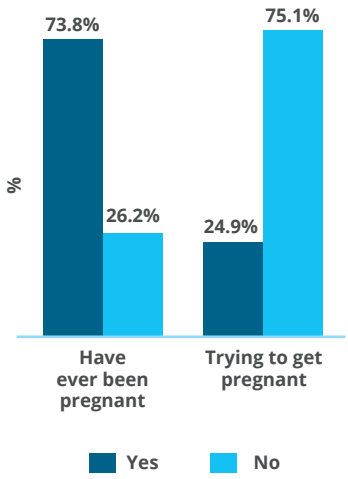

Figure 7.1: Pregnancy history

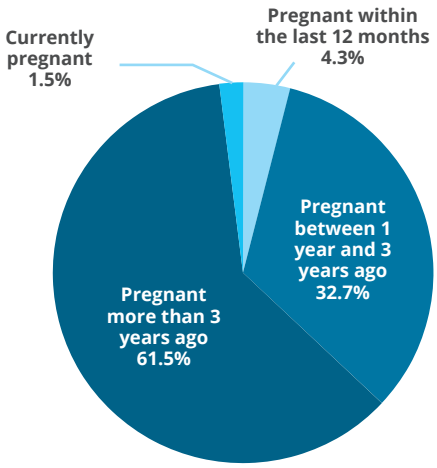

Figure 7.2: Time of most recent pregnancy

Of these women, more than half (56.2%) 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 six months

Approximately one in five (21.5%) of FSW experienced any form of violence from their clients in the last six months. **See Figure 6.9**.

The most common form of client-perpetrated violence in the last six months was forced sex (17.4%) followed by physical abuse (9.2%) and threats (7%). **See Figure 6.10**.

"I have experienced sexual violence many times but not with my clients. I experience this within my marriage. My husband forces me when I don't feel like having sex. He would beat me and rip off my clothes without my consent. He abuses me and so I reported him to the police. However, I see that sex with clients is with respect. They would respect your emotions and your opinions. Whatever kinds of sexual practice, they would respect but within marriage, husbands think that they own their wives and they can do anything they want. They can have sex anytime they want." Yano, 28 years

7. REPRODUCTIVE HEALTH

7.1. History of pregnancy

Almost three-quarters (73.8%) of FSW had ever been pregnant. Nearly one in four (24.9%) FSW were trying to get pregnant. **See Figure 7.1**.

Among FSW who had been pregnant, 61.5% had their last pregnancy more than three years ago. Very few FSW were either currently pregnant (1.5%) or had been pregnant in the past 12 months (5.8%). **See Figure 7.2**.

7.2. Induced abortion

Among FSW who have been pregnant, 20.5% 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 (24.6%); 2) drinking large volumes of coffee or other substances (20.8%); and 3) taking medication available at the chemist (15.9%). **See Figure 7.3**.

7.3. Antenatal attendance

Of the 26.4% of FSW who had a pregnancy that resulted in a live birth in the last three years (data not shown), 91.2% attended an antenatal clinic at least once. **See Figure 7.4**.

7.4. HIV and syphilis testing during pregnancy

Of those who attended an antenatal clinic during the last pregnancy that resulted in a live birth in the last three years and were offered an HIV test, 72.1% tested for HIV (data not shown). Of these women, 4.3% tested positive. **See Figure 7.5**.

"I have lived with this HIV for 11 years now. My first marriage was problematic and so was my second marriage. My marriage life was not good so left everything and came out. I now have two children. I took them both for first, second and third testing and they are both negative." Yano, 28 years

"I thought to myself that I didn't have this disease that would require testing. They [healthcare workers] checked us the pregnant mothers at the antenatal clinic in case the unborn child would have this disease. They checked and said that we were ok. I was afraid because my husband is a promiscuous man. I was troubled in case I was infected but when I got my result, I didn't have [HIV]. I was filled with joy that I am confirmed that I didn't have the virus." Tamox, Age not known

At last pregnancy that resulted in a live birth in the last three years, 37.3% of FSW were tested for syphilis. Among those tested, 18.2% tested positive and, among them, 94.3% received treatment. **See Figure 7.6**.

7.5. Family planning

Most FSW (80.4%) were using family

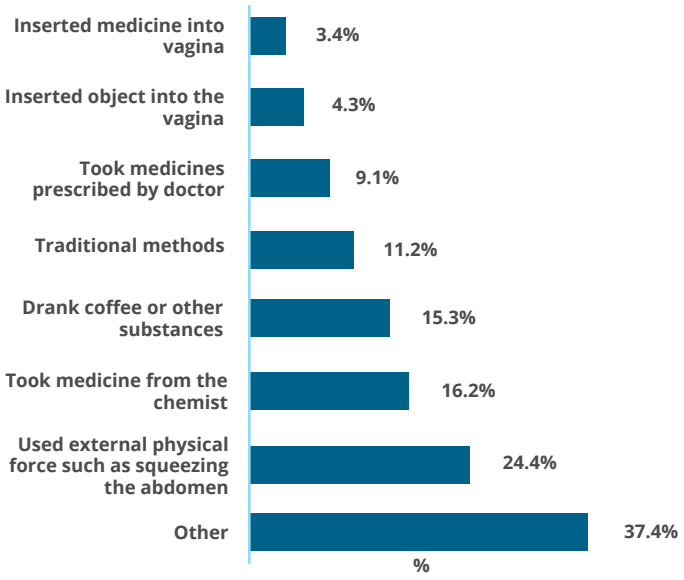

Figure 7.3: Methods of inducing an abortion*

***Multiple responses responsible**

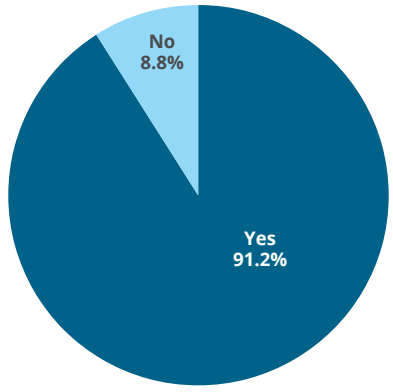

Figure 7.4: ANC attendance during last pregnancy

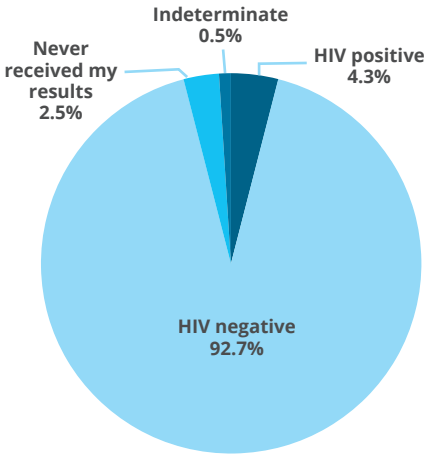

Figure 7.5: Results from HIV test during last pregnancy

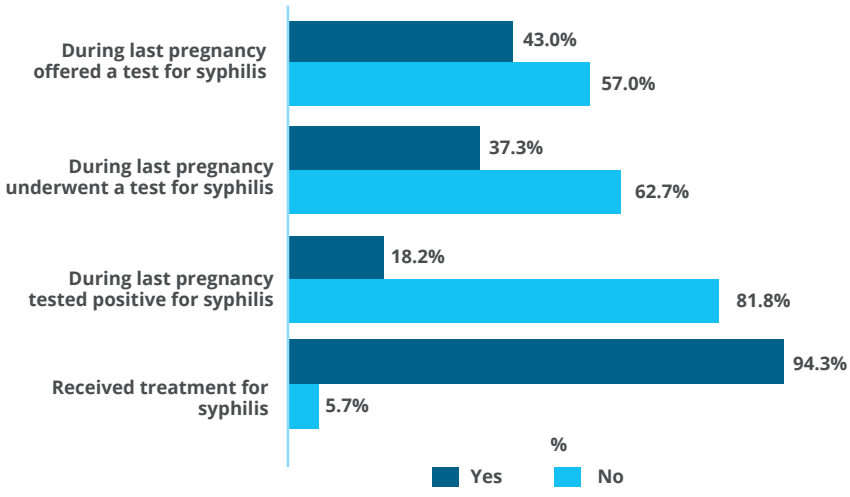

Figure 7.6: Syphilis testing and treatment during last pregnancy

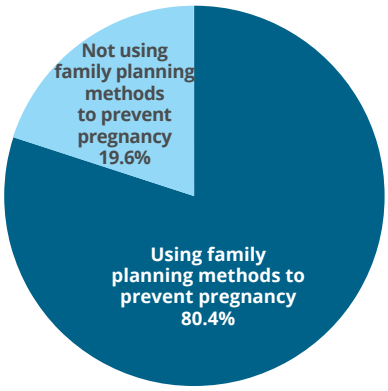

Figure 7.7: Uptake of family planning

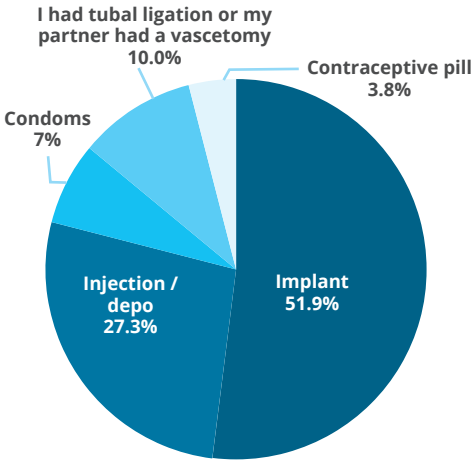

Figure 7.8: Main contraceptive method used

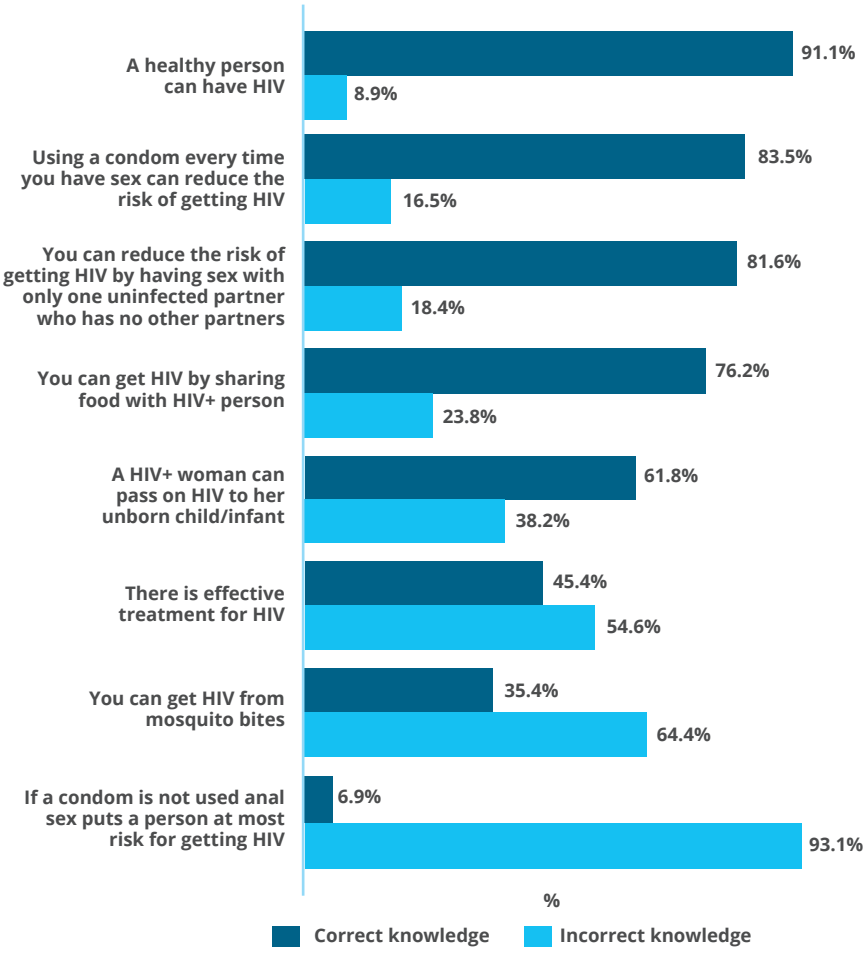

Figure 8.1: HIV knowledge

planning methods to prevent pregnancy. **See Figure 7.7**.

Of FSW using family planning methods, the most commonly used method was the implant (51.9%) followed by the injection/ Depo Provera (27.3%). Very few relied on oral contraceptives (3.8%). **See Figure 7.8**.

8. ACCESS TO HIV OUTREACH AND PREVENTION SERVICES

8.1. Knowledge of HIV

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

- A healthy looking person can have HIV (91.1% correctly answered)
- Using a condom every time you have sex you can reduce the risk of getting HIV (83.5% correctly answered)
- You can reduce the risk of getting HIV by having sex with only one uninfected partner who has no other partners (81.6% 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 (6.9% correctly answered)
  - You can get HIV from mosquito bites (35.4% correctly answered)
  - There is effective treatment for HIV (45.4% correctly answered)

"They said that if you have sores on your hand and if you touch someone's blood, you will get that virus or if someone cuts himself and you use that same razor to cut yourself or using same needle. You can also get HIV from not using condom. That is what I heard from the radio." Maria, 25 years

"I know HIV transmission is through vaginal and penial fluids and also from blood contacts. If someone has HIV and has a cut and you have an open sore on your body, you can be infected if blood from that person comes in contact with your open sore. In order for us women that go around to prevent this is to have sex with condom only." Anesa 24 years

"I hear people say that when you sleep around or go outside, it's like if a man has the disease, it will be transmitted to you or if woman has it, it will be transmitted to the man if that man gets in contact with a woman who has the disease." Sandra, 42 years

"I heard that this disease is a bad disease. When it gets into you, it's more and worse. It will destroy you and you are will only die. It will destroy your and feed on your skin and your skin will turn yellow like ripe banana." Molly, 40 years

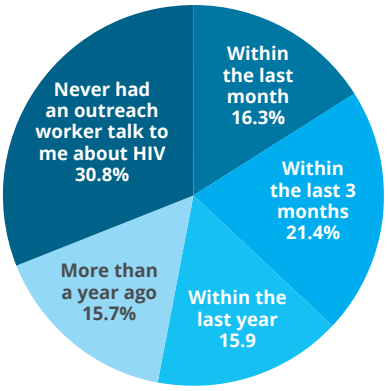

Figure 8.2: Last contact with peer outreach worker

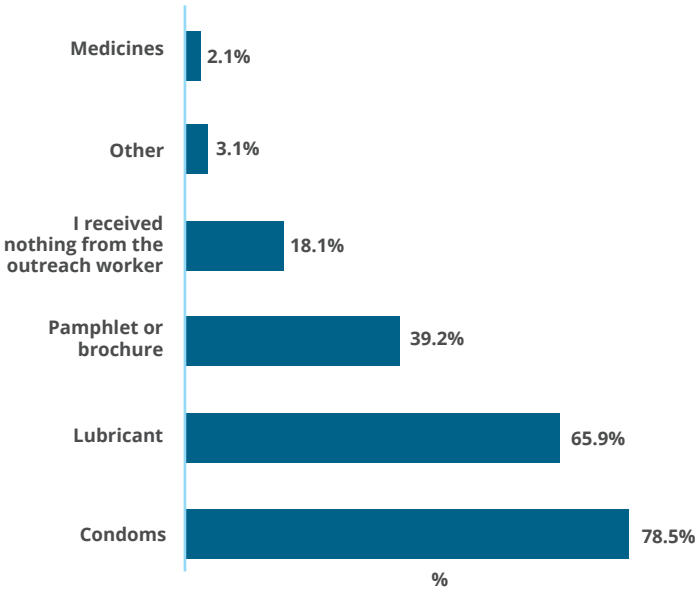

Figure 8.3: Products received at last peer outreach contact*

*Multiple responses possible

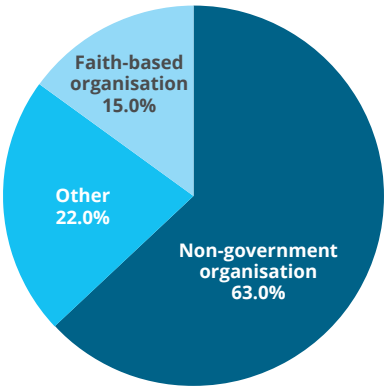

Figure 8.4: Organisation from where peer outreach worker comes from

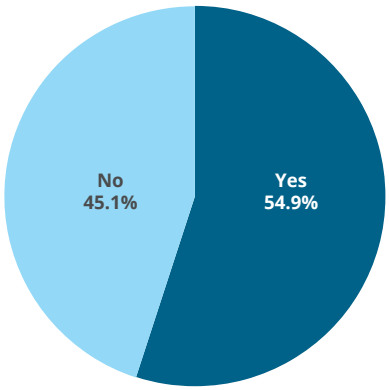

Figure 8.5: In the last 12 months received information on condom use and safer sex

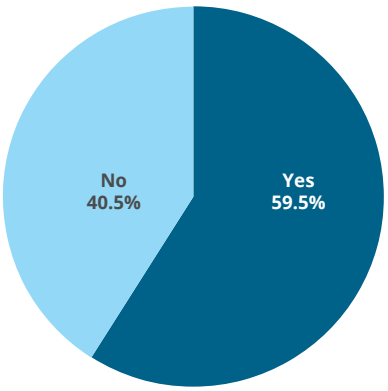

Figure 8.6: In the last 12 months been given condoms for free

8.2. Peer outreach

Almost one-third of FSW (30.8%) have never been reached by a peer outreach worker in their lifetime. Among all FSW, at least half (53.6%) have been reached within the last year or earlier. **See Figure 8.2**.

Of those reached by a peer outreach worker, 18.1% received nothing. Condoms (78.5%) and lubricant (65.9%) were the most common items received. See Figure 8.3. Most peer outreach workers belonged to non-government organisations (63.0%). **See Figure 8.4**.

8.3. Free condoms

Just over half (54.9%) of FSW received information on condom use and safer sex in the last 12 months. **See Figure 8.5**.

A similar proportion (59.5%) received free condoms at the same time. **See Figure 8.6**.

8.4. Free lubricant and lubricant use

Less than half (46.3%) of FSW received free packets of lubricants in the last 12 months. **See Figure 8.7**.

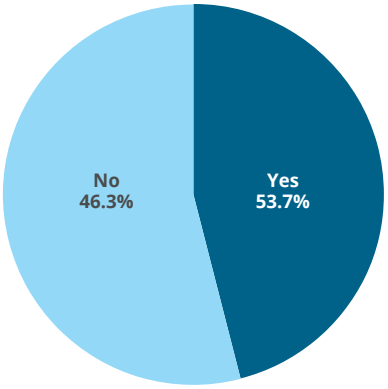

Figure 8.7: In the last 12 months given free packets of lubricant

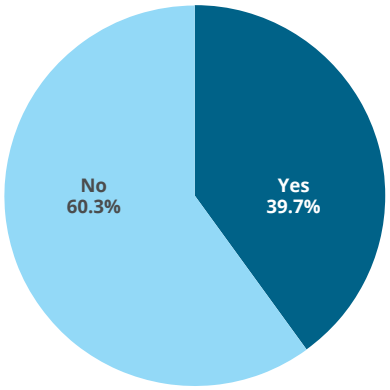

Figure 8.8: Used lubricant in the last six months for vaginal or anal sex

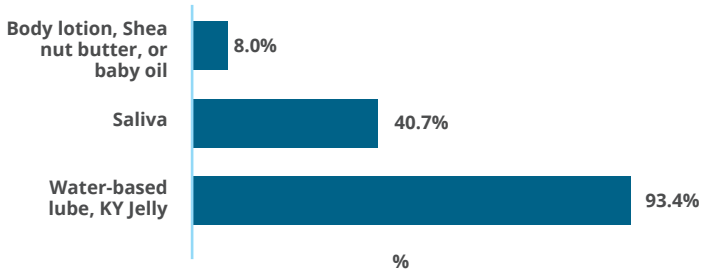

Figure 8.9: Type of lubricants used*

*Multiple responses possible

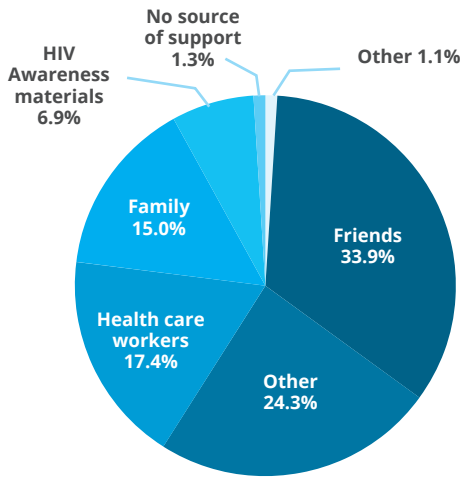

Figure 8.10: Sources of influences to protect self and others from HIV

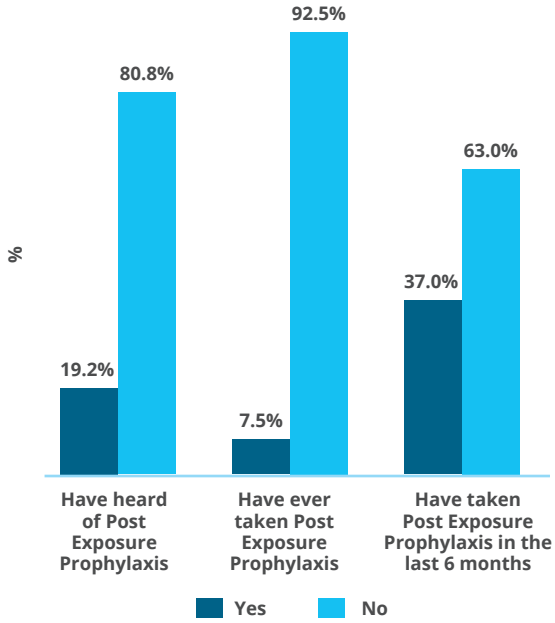

Figure 8.11: Post-exposure prophylaxis - knowledge and uptake

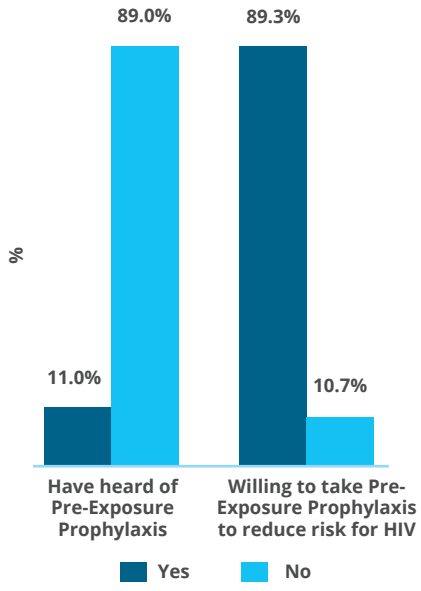

Figure 8.12: Pre-exposure prophylaxis - knowledge and acceptability

Most FSW (60.3%) did not use lubricants in the last six months for either vaginal or anal sex. **See Figure 8.8**.

Of FSW who had used lubricants in the last six months, 93.4% used water-based lubricants such as KY Jelly and 40.7% used saliva. Few FSW used oil-based lubricants such as shea butter, baby oil or other body lotions (8.0%). **See Figure 8.9**.

8.5. Sources of influence

Almost all FSW (98.7%) were influenced by outside forces to protect themselves and others from HIV. The most common influences were: 1) friends (33.9%); 2) healthcare workers (17.4%); and 3) family (15.0%). **See Figure 8.10**.

8.6. Post-Exposure and Pre-Exposure Prophylaxis

Less than 20% (19.2%) had heard of post-exposure prophylaxis (19.2%). Few FSW had ever taken post-exposure prophylaxis (7.5%). Of those who had taken post-exposure prophylaxis, almost 40% (37.0%) had done so in the last six months. **See Figure 8.11**.

Very few FSW had heard of pre-exposure prophylaxis (11%) yet theoretical acceptability of pre-exposure prophylaxis was high (89.3%). **See Figure 8.12**.

9. SEXUALLY TRANSMITTED INFECTIONS

9.1. Self-reported STI symptoms and health seeking behaviours

More FSW had experienced abnormal vaginal discharge (53.8%) in the last 12 months than they did vaginal or anal sores or ulcers in the same period (14.2% and 8.1% respectively). **See Figure 9.1**.

Of FSW with these symptoms, less than half saw a healthcare worker (43.2%) (data not shown).

9.1. Prevalence of STI

Rates of sexually transmitted infections were high with more than half (52.1%) 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 anorectal and genital chlamydia were roughly equal (31.8% and 29.7%, respectively).

The next most common sexually transmitted infection was anorectal gonorrhoea (19.3%) and genital gonorrhoea (18.6%). Syphilis was also common with 16.1% of FSW ever been infected and 7.2% having active syphilis infection.

Almost one in ten FSW (9.3%) had hepatitis B Virus. **See Figure 9.3**.

10. HIV TESTING, CARE AND TREATMENT

10.1. HIV testing prior to *Kauntim mi tu*

Almost 70% (67.9%) of FSW had ever tested for HIV. Of those who had tested, around half (51.4%) disclosed during their last test for HIV that they sold and or exchanged sex.

Among women who had a main partner 7.5% tested with their partner. **See Figure 10.1**.

"I hear from women that those women that go around doing this [sex work] usually get this diseases, all kinds of diseases such as HIV or gonorrhoea and such. I usually think about it and I have tested twice. The first I checked there at the clinic and this is my second test here." Sandra, 42 years

"If I have sex and if this person is someone new and I feel that I don't trust and I need to be checked, I quickly go and get tested. I would feel bad when I go to get my result because I used to think that I must have already had the disease. My heart would beat faster and I get impatient to get my results back." Anesa, 24 years

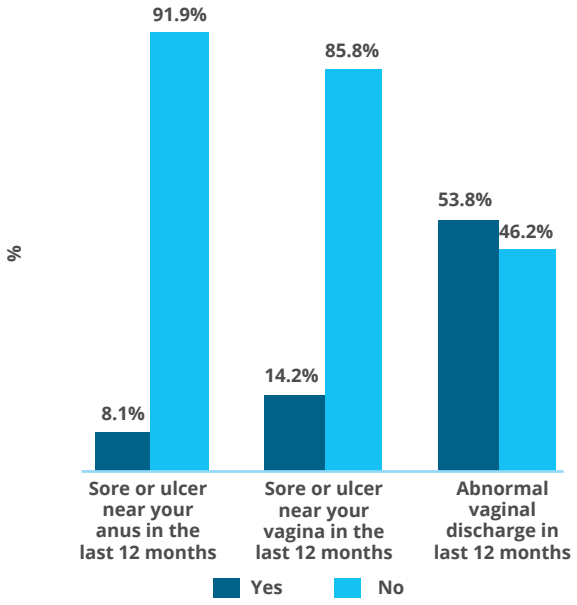

Figure 9.1: Symptoms of STIs in the past 12 months

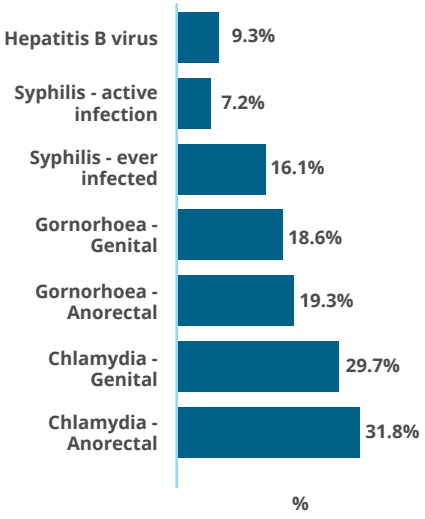

Figure 9.3: STI test results

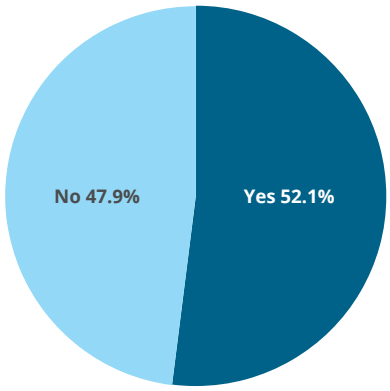

Figure 9.2: Proportion of FSW with one or more STIs

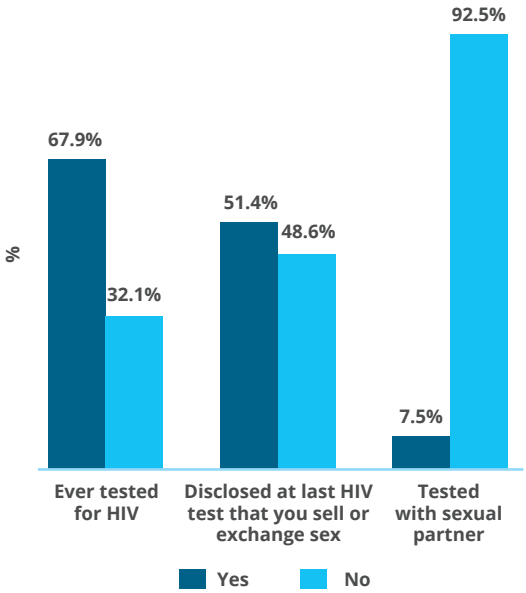

Figure 10.1: HIV testing history

Of FSW who had never tested for HIV, 38.5% had not tested because they felt healthy, while fear and stigma prevented 28.4% from ever testing.

A quarter (25.7%) did not know where they could be tested and 7.4% had no time to be tested. **See Figure 10.2**.

Among FSW who had ever tested for HIV, 40.0% tested within the last six months with most testing at a sexual health service (61.5%). **See Figures 10.3 and 10.4**.

Excluding those who knew that they were HIV positive, the most common reason for not testing for HIV in the last 12 months was that they felt fine (53.0%) followed by not feeling like testing (19.8%). **See Figure 10.5**.

Of those who tested for HIV prior to the study, 9.7% tested HIV positive and 4.8% did not know their result. **See Figure 10.6**.

"I was not troubled when I came for a test. I took it as an ordinary disease. The sisters came and told me that there is a disease called AIDS and it reminded me of my parents. I said my parents had this disease, which had no cure. When I tested positive, automatically I thought of my parents. They never told us everything but only said that we are dead people living amongst you all. So when, I got my result, I thought I was a dead woman but they [sisters] said 'It's alright.' They gave me time to cry and then they said, 'We will encourage you on how to take care of yourself'. They told me that there is medication but it depends on how you take care of yourself and how you think." Rosey, 32 years

"The first time I was diagnosed, I thought that I would die. I wanted to commit suicide. I didn't accept my HIV status, I was in confusion, I was lost. I didn't accept at that moment. It took me 2 -3 years to accept my HIV status." Yano, 28 years

"I know that you will get this disease a few hours later when you have sex with someone that has HIV but I don't know why I haven't yet gotten it. I would really like a doctor to explain this to me why I have not yet been infected because I have had so many different kinds of sexual partners. When I worked at 6 mile, I would have sex with many men after work and those men that I have gone out with have already died." Rachael, 45 years

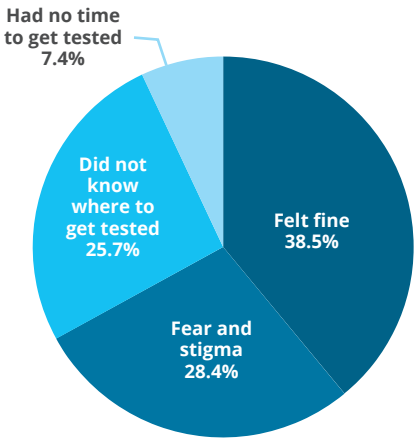

Figure 10.2: Reasons for never testing for HIV

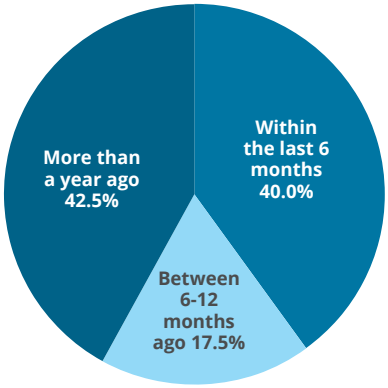

Figure 10.3: Timing of last HIV test

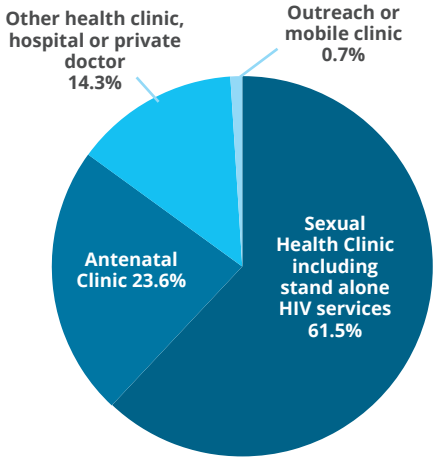

Figure 10.4: Location of last HIV test

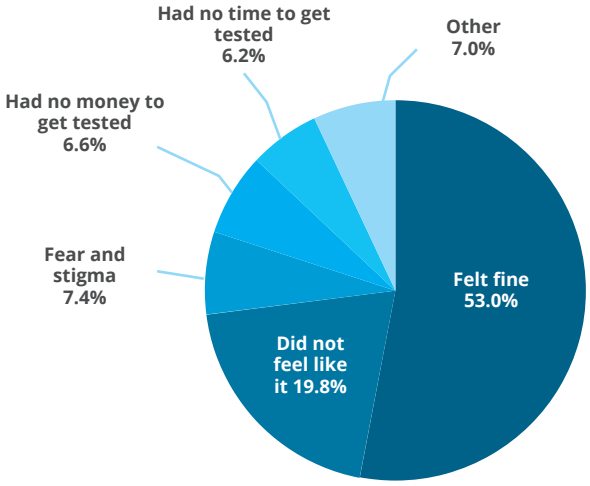

Figure 10.5: Reason for not testing in the last 12 months

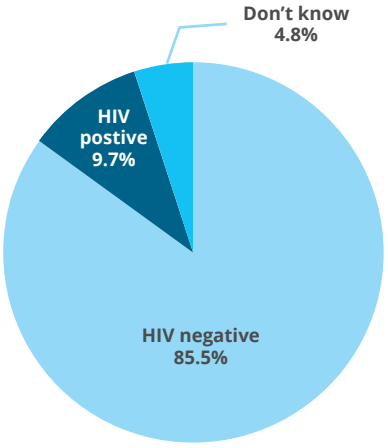

Figure 10.6: Result of last HIV test prior to *Kauntim mi tu*

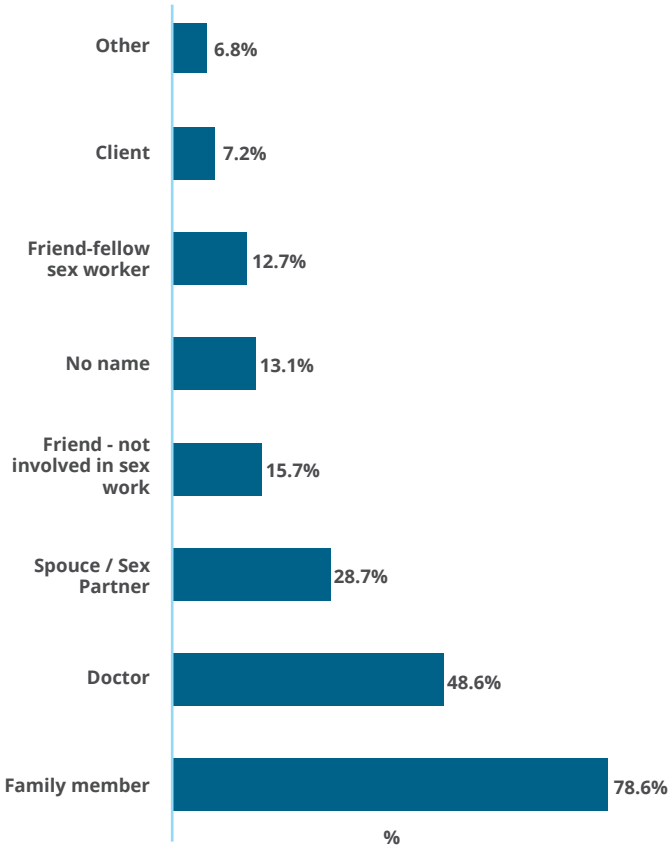

Figure 10.7: HIV disclosure

*Multiple responses possible

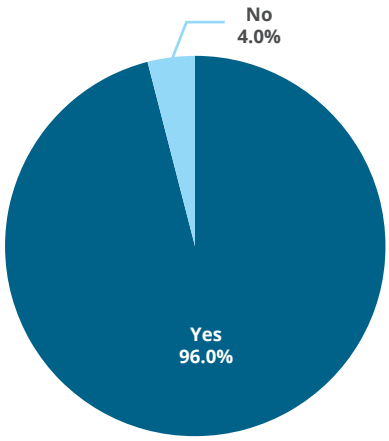

Figure 10.8: Linked HIV care

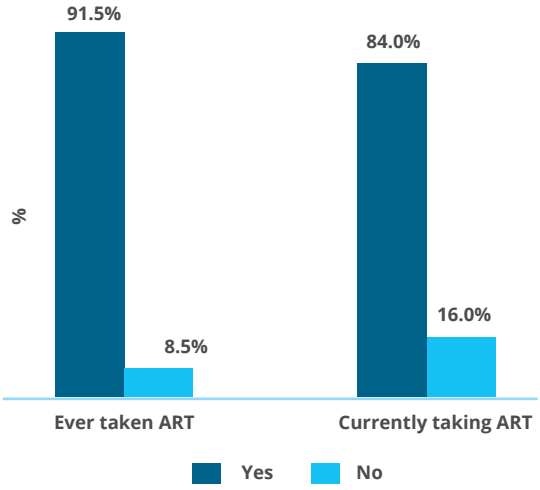

Figure 10.9: History of ART

While 13.1% of HIV positive FSW had not disclosed their HIV status to anyone, 78.6% disclosed it to a family member, 48.6% disclosed to a doctor, and 28.7% disclosed to a spouse or sex partner. **See Figure 10.7**.

"My long time partners like ex [boyfriends] when I see that they understand HIV and if they know about my family life history, I just disclose [my HIV status] to them. I don't need tell if I want to have sex for money because I might face stigma and discrimination. Why would I disclose? My HIV status is private; it's my personal thing." Yano, 28 years

"'You have the HIV virus and such and such.' It was my first time so when I heard this, I was very worried. I felt like one part of my life had left me at that time. I came outside and I disclosed to my father. I told my father that I am like this and he said 'Oh, this is nothing in the eyes of God, so you go to church and live'. He encouraged me and I was strengthened by what he said to me." Maria 25 years

"I have seen a big change when I came out and disclosed my HIV status and joined NGOs. I see that my life has changed. I see that respect is there; support is there [and] help is there. I grow stronger and stronger every time I disclose my status. I disclose at a national level and [also] advocate at a national level so I personally feel that discloser is a very important thing. When you disclose, it will take you to the next level and it will also give you courage and strength to move on and live." Yano, 28 years

"He [my husband] went to a private hospital and took his test but he wouldn't tell me but as for me, I have been to an HIV training and I know the symptoms. He can hide it from me but I can tell when he gets this back aches and when he's feeling sick, gets cold and he would have this itchiness. I know but I wouldn't say anything. I knew I was already infected too and I didn't tell him. But I could tell from the symptoms he had it; I knew that he is infected too." Sia, 40 years

10.2. HIV care and treatment

Almost all FSW who had previously been diagnosed with HIV had accessed HIV medical care (96.0%). **See Figure 10.8**.

Most FSW aware of their HIV infection have taken ART (91.5%). Of them, 84.0% were currently on treatment. **See Figure 10.9**.

"I usually think that I'm negative. I never think that I'm positive. I usually think that I am not a victim I have a strong conviction in my heart that I am negative. Why would I take this ART? Why will I take this medicine throughout my life? I'm not positive, I'm negative. I live convincing myself that. So when I come to the clinic, they [clinicians] would say 'Ah, what do you think about your ART?' and I tell them to wait and give me time to think." Sia, 40 years

"I left my medicines and ran into hiding from the father of my children. I said to myself that he might know the clinic that I usually get my medications from and he might wait there to attack me. I missed my medication for almost 5 months until I was very sick. I nearly died and so I went to the ward [hospital] and told the nurses. The nurses would go down to the clinic and get my medicine and bring them to me." Rachael, 45 years

"ART boosts you. Like in the past I never gave much though about eating. Since I started taking ART, it has increased my desire to eat a lot. My appetite has gone up and I see that ART has helped me. It has helped me a lot." Scholar, Age not known

"Yes, it is very important to be on [ART] treatment. They [healthcare workers] tell us how to take care of our immune system. I have never experienced other effects of the medication." Rosey, 32 years

Among FSW who knew they were HIV positive, only 37.2% had ever undergone a CD4 cell test (data not shown). Of those who have ever had a CD4 cell test, 77.7% had one in the last six months. **See Figure 10.10**.

"I feel that it's [ART] is good. When I had my two children, the test result was negative and I was filled with joy and gladness. I have been faithful to my medication and when I came here for this viral load test, I can see that my viral load is undetected...I feel that this ART that I am taking is doing working. You can see that CD4 goes up and down but to really know if ART is working or not is the viral load test." Yano, 28 years

Most FSW living with HIV had been asked at their last HIV clinic appointment if they had any symptoms of TB (73.8%). Slightly more than half of HIV positive FSW had any symptom (cough, fever, night sweats or unexplained weight loss) of TB in the last 12 months (51.6%).

Of the 43 women in the study who indicated that they have been diagnosed with HIV and accessed care, 22 were screened for TB in the last 12 months. Fourteen had been told by a healthcare worker that they have TB, of whom 12 started treatment.

Of the 31 women in the study who are aware of their HIV status and have never had TB, 12 have taken intermittent prophylactic therapy to prevent TB.

10.3. Prevalence of HIV

HIV prevalence among FSW was 14.9%. **See Figure 10.11**.

Among the 24 FSW in the study who were aware of their infection in our study, (60.0%) had less than 500 CD4 T cells/uL (data not shown).

Among FSW who self-reported being on treatment for HIV, just over half (54.4%) had suppressed HIV viral load (<1,000 copies/mL) (data not shown).

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 sensitised 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 with TB symptoms during study recruitment were tested for TB.

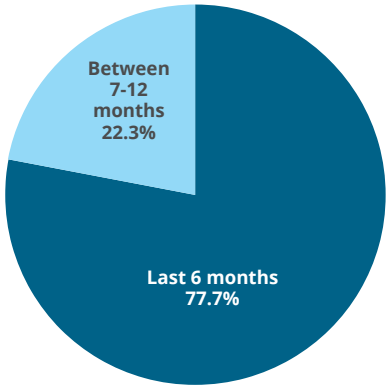

Figure 10.10: Most recent C4D test

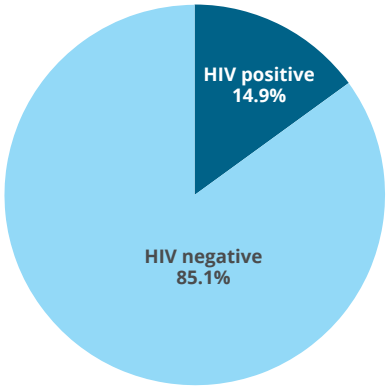

Figure 10.11: HIV prevalence

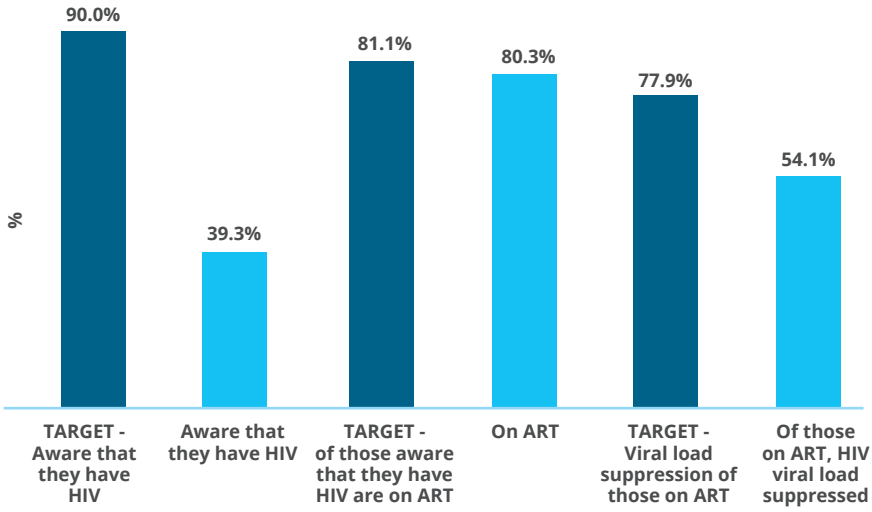

Figure 11.1: HIV cascade among FSW in Port Moresby

Of all FSW:

- 56.2% had unexplained weight loss in the last two weeks
- 35.5% had a cough in the last two weeks
- 33.1% had a fever in the last two weeks
- 25.9% had night sweats in the last two weeks

Almost three-quarters (72.6%) of FSW experienced at least one of these symptoms of TB in the last two weeks and were tested for TB.

Of FSW screened for tuberculosis, 2.2% had tuberculosis. Of the FSW in the study who had tuberculosis, none had a drug resistant form.

Among women screened for TB, 0.2% had HIV/TB co-infection.

Among the 14.9% of FSW with HIV, 82.6% had at least one symptom of TB in the last two weeks. Among these women, 1.1% were co-infected with TB.

12. GLOBAL TARGETS: 90-90-90

In Port Moresby, PNG is not reaching the first or the second of the global targets where 90% of people with HIV are aware of their status and of those aware of their status 90% are on ART.
In 2016, only 39.2% of HIV positive FSW were aware that they had HIV, far below the target of 90%.

In Port Moresby, PNG is achieving the second target but needs to improve the HIV viral load suppression amongst FSW on treatment in order to achieve the third target. **See Figure 11.1**.

13. SIZE ESTIMATION

We distributed 867 unique objects to women who sell or exchange sex throughout Port Moresby to estimate their population in in the city utilizing the unique object multiplier method. Combining this distribution with the RDS IBBS where we estimated that 5.4% of the population received a unique object, we estimate that there are 16,053 FSW in Port Moresby.

Part 2

Men who have sex with men, and transgender women

In Port Moresby, 400 MSM and TG were eligible, provided informed consent and participated in the study. Results presented here are **weighted population proportions** representing the entire population of MSM and TG in Port Moresby, 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

Almost 40% (37.8%) of MSM and TG were aged 15-24 years. Equal proportions were aged 20-24 years and 25-29 years (26.3% each). The median age of MSM and TG was 27 years. **See Figure 1.1.**
The Highlands Region was the single largest region of origin among MSM and TG in Port Moresby (35.1%) followed by the Southern Region (14.8%). However, the largest category of place of origin was of a mixed heritage from two or more regions (39.8%). **See Figure 1.2.**

Most MSM and TG were long-term residents of Port Moresby, with half residing there for more than 20 years (54.3%). Almost 40% (38.4%) had lived in Port Moresby between five and 20 years with 7.4% having migrated to live in Port Moresby in the last four years. **See Figure 1.3.**

The most common religious affiliation of MSM and TG in Port Moresby was the Seventh Day Adventist Church (31.6%).

The next two largest religious groups represented by MSM and TG were the United Church (26.3%) and the Catholic Church (13.8%). Less than 5% of the population were affiliated with

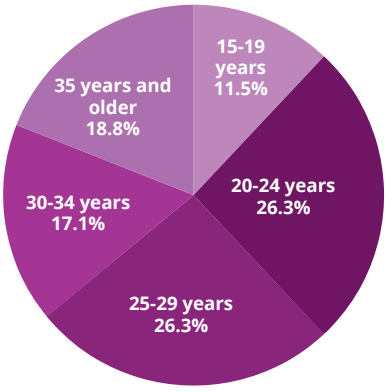

Figure 1.1: Distribution of age

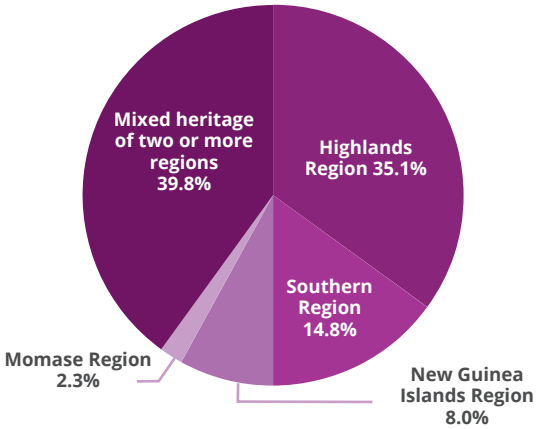

Figure 1.2: Region of origin

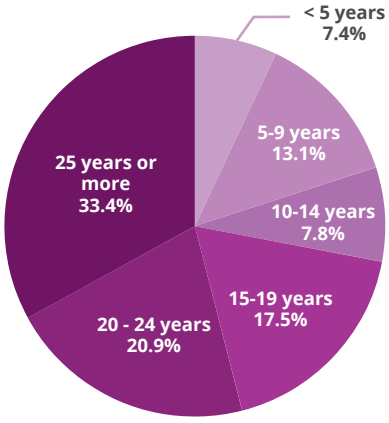

Figure 1.3: Years living in Port Moresby

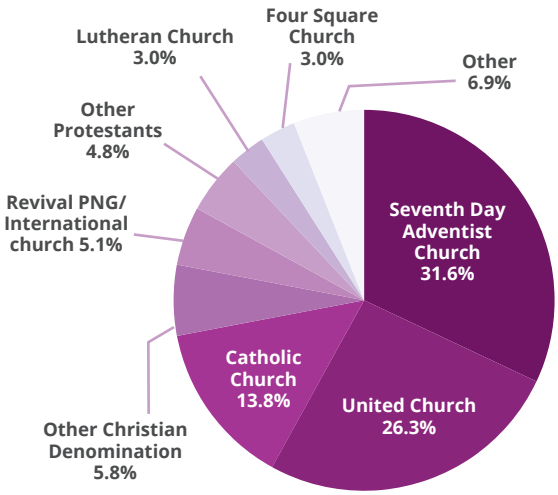

Figure 1.4: Religious affiliation

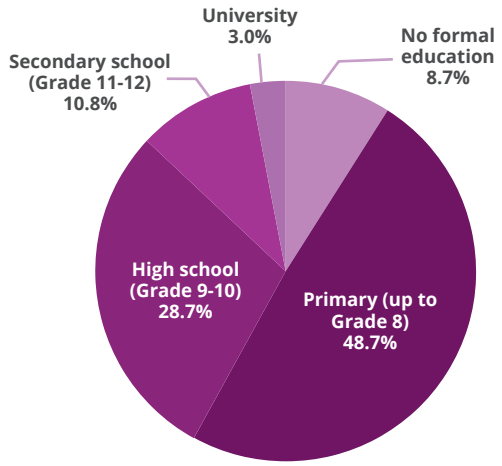

Figure 1.5: Educational level

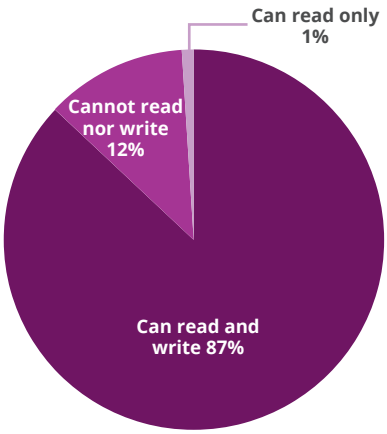

Figure 1.6: Literacy level

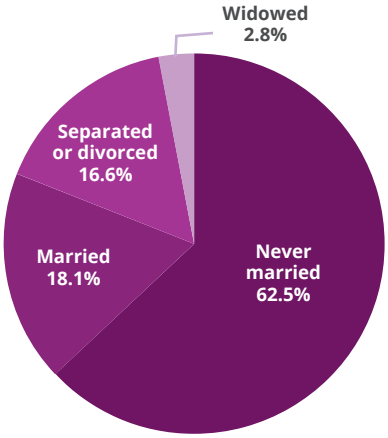

Figure 1.7: Marital Status

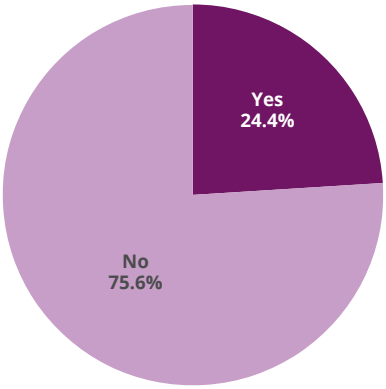

Figure 1.8: Time away from Port Moresby in last 6 months

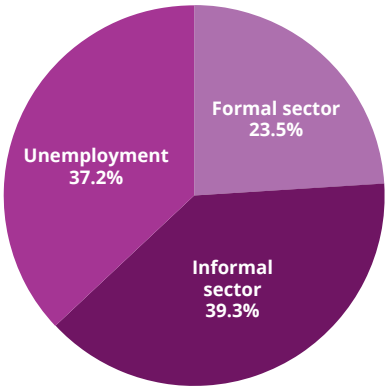

Figure 1.9: Main form of employment/income

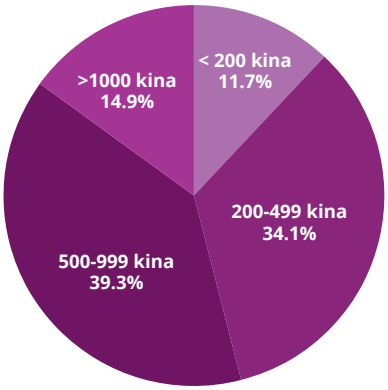

Figure 1.10: Average monthly income

newer Pentecostal churches such as the Revival Church and the Four Square Church. **See Figure 1.4**.

Almost half (48.7%) of MSM and TG in Port Moresby had achieved primary schooling with an additional 28.7% having completed high school. Smaller proportions had completed secondary school (10.8%) or university (3.0%). Fewer than 9% (8.7%) had no formal education. **See Figure 1.5**.

Of all MSM and TG in Port Moresby, 6% were in school (data not shown). Most MSM and TG in Port Moresby could both read and write with much smaller proportions not able to read nor write (12.1%), or able to read only (1.2%). **See Figure 1.6**.

1.1. Living arrangements and marital status

Most MSM and TG had never been married (62.5%). Another 18.1% were currently married and 16.6% were divorced or separated. **See Figure 1.7**.

Most MSM and TG (75.6%) in Port Moresby were not mobile, with 24.4% spending more than one month away from the city in the past six months. **See Figure 1.8**.

1.2. Income and employment

Nearly one-quarter (23.5%) of MSM and TG in Port Moresby were employed in the formal sector while 39.3% worked in the informal sector.

The remaining 37.2% were unemployed. **See Figure 1.9**.

Just under half of MSM and TG in Port Moresby (45.8%) lived on less than 500 Kina per month. Another 39.3% earned between 500 and 999 Kina per month while only 14.9% earned more than 1,000 Kina per month. **See Figure 1.10**.

2. IDENTITY AND SEXUAL ATTRACTION

2.1. Sexual identity

More than half (57.4%) of MSM and TG in Port Moresby identified as a man who has sex with other men (MSM – 32.6%) or a man of diverse sexualities (MDS – 24.8%).

Over one-quarter identified as heterosexual (17.0%) or bisexual (11.5%). Other identities included gay (7.4%) and transgender (6.7%). **See Figure 2.1**.

"I identify myself as gay, I go out with other men. Sometimes I go out with women but the pleasure that I get from women does not satisfy my sexual desire so wont go out with women again. I have no thoughts of going out with women." Saki, age not known

2.2. Gender identity

The most common gender identity, as opposed to sex assigned at birth, was a man (89.4%) with 7.4% identifying as transgender and 1.8% identify as a woman. Another 1.4% identified as 'other'. **See Figure 2.2**.

2.3. Sexual attraction

Those who were 'exclusively attracted to men' (11.4%) or 'mostly attracted to men but sometimes women' (9.4%) constituted the smallest proportions of MSM and TG (21.8% combined).

The largest share of MSM and TG were equally attracted to men and women (39.1%) followed by 'mostly women but sometimes men' (21.2%) and 'only women' (19%). **See Figure 2.3**.

"I was in Grade 9 and I started figuring out my sexual preference. From there I started dating men. I started going out with both men and women, so like since then I have sex with both men and women." Baku, 24 years

"I think sex with men is the best; that is where you will feel satisfied." Ricky, 34 years

"Nowadays, with the spread of HIV/AIDS all over the place, gay men are all right. For women, within a month they will not be able to stay at home. They like to go out so when they don't have money, that's when they start to go out. So women would have sex with how many different men within a month. It is very typical of them; they would have sex with men from Central, the Highlands, with foreigners and so on." Mori, age not known

"Nowadays, I feel that having sex with women is too risky. It's risky because there are all kinds of infections being introduced and I feel that having sex with gay men is alright." Gende, age not known

"Nowadays, men really don't like vagina. A woman's vagina stinks and so they don't want to have sex. Many top shots want to have sex with gay men. You have not had sex with a gay man and so you would think that he's a man so stop. If you have had sex with a gay, damn, you will get the real feeling very well. You will forget about your wife. You will only want to have sex with gay men and you will go looking for them wherever they are." Saki, age not known

"When I am drunk and call out to my wife to have sex, you know how it is. Some women will be obedient while some would not submit easily; my wife is not too submissive. She would not submit to my request and so I would live in denial and go around with the boys. There are now very young boys ages 10 to 15 years that [who] are now coming out as gay in our country. I would lure them with betelnut and cigarette. I get excited when I see them. I tell myself while in Bomana [prison] I used to fuck men's ass so what makes you any different from them?" Theo, age not known

2.4. Living as a woman

Of those who identified as a woman or TG (9.2%), most (66.9%) had lived publicly as a woman in the last six months. **See Figure 2.4**.

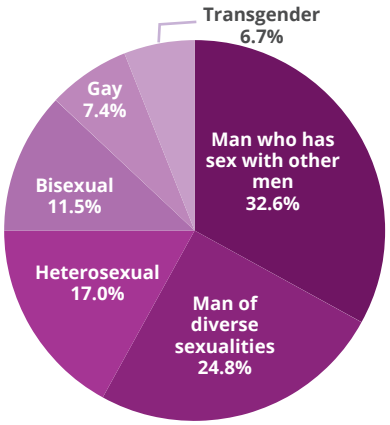

Figure 2.1: Sexual identity

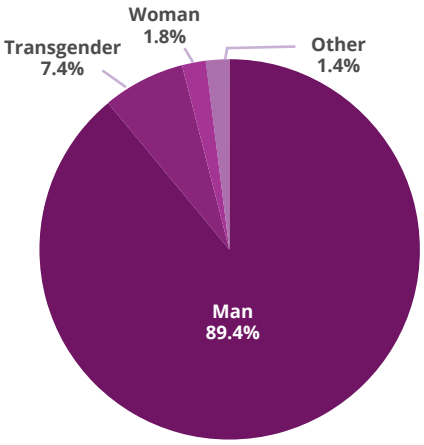

Figure 2.2: Gender identity

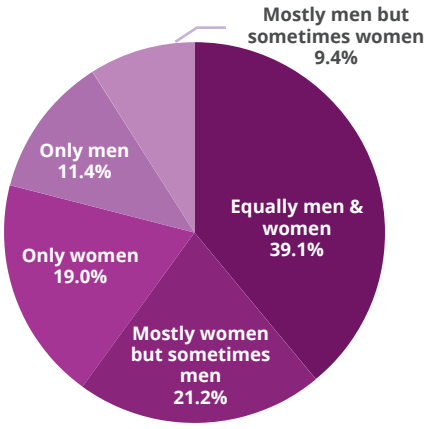

Figure 2.3: Sexual attraction

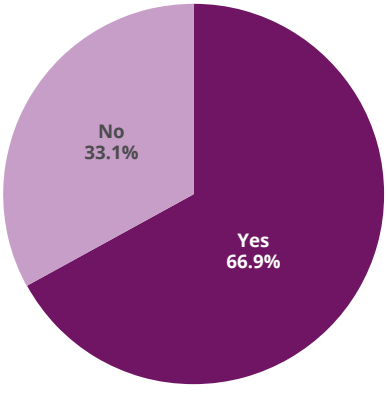

Figure 2.4: Publically lived as a woman in the last six months

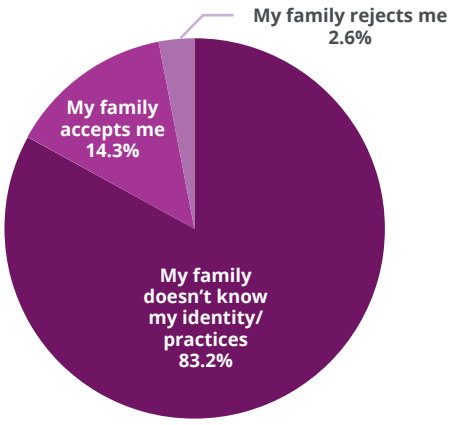

Figure 2.5: Family acceptance

2.5. Familial acceptance

Most MSM and TG had not disclosed to their families their gender and sexual identity or sexual practices (83.2%). Of the 16.9% who had disclosed to their family, the majority experienced familial acceptance. **See Figure 2.5**.

2.6. Use of hormones to change the body

Of the 400 MSM and TG in the study, 46 had a gender different from their birth gender. Of them, five used hormones. Four of the five used hormones without the supervision of a healthcare professional (data not shown).

3. SEXUAL HISTORY AND MOST RECENT SEX

3.1. History of anal sex

Almost all MSM and TG in Port Moresby (96.4%) had had anal sex with another man or TG. **See Figure 3.1**.

Of those who had ever had anal sex with a man or TG, almost all (97.3%) had done so in the last two weeks. **See Figure 3.2**.

Of all MSM and TG in Port Moresby, 48.2% had had anal sex with a woman (not including transgender women). **See Figure 3.3**.

"Most women, I have had anal sex with them." Saki, age not known

3.2. Sexual debut

The median age for first anal sex with man or TG was 20 years. Most MSM and TG (68.0%) had anal sex the first time with a man or transgender woman between the ages of 15 and 24 years with slightly more aged 15-19 years than 20-24 years (37.7% versus 30.3% respectively).

Another 24.9% did so at age 25 years or older. A much smaller proportion first had anal sex with another man or transgender woman between the ages of 10 and 14 years (7.0%). **See Figure 3.4**.

Almost half of all Port Moresby MSM and TG received money, goods or services the first time they had anal sex with a man or TG. **See Figure 3.5**.

More than three-quarters (76.1%) of Port Moresby MSM and TG first had anal sex with another man or transgender woman because they "wanted to"; one-quarter (23.9%) were forced to the first time. **See Figure 3.6**.

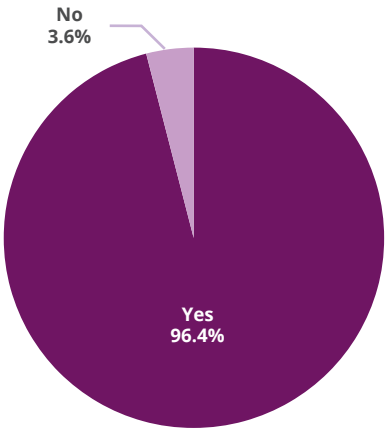

Figure 3.1: Ever had anal sex with a man or TG

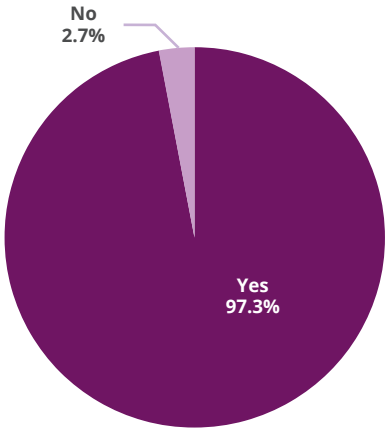

Figure 3.2: Had anal sex with a man or TG in the last six months

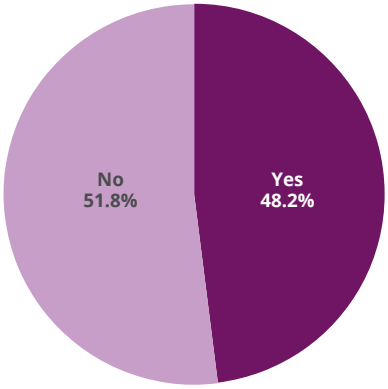

Figure 3.3: Ever had anal sex with a woman (not transgender)

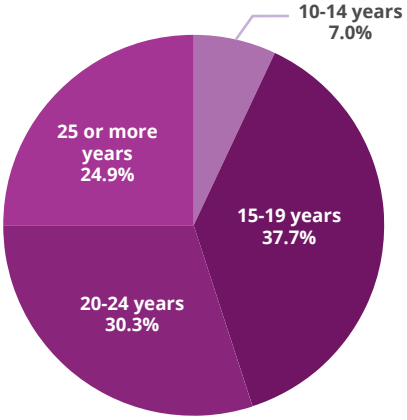

Figure 3.4: Age first had sex with a man or TG

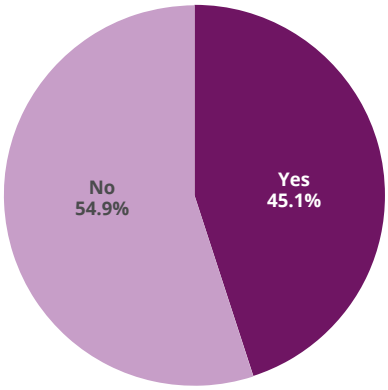

Figure 3.5: Received money, good or services the first time had sex with a man or TG

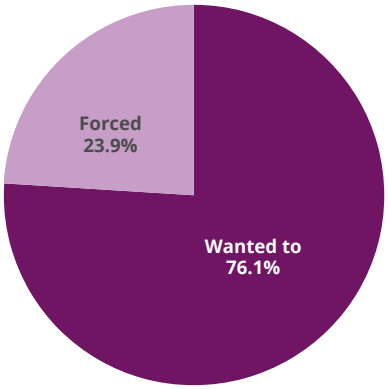

Figure 3.6: Reason for first having anal sex with a man or TG

Of MSM and TG who first had anal sex because they were forced/coerced to, the means by which they were forced included being pressured (49.7%), paid (28.7%), and physically forced (14.4%). **See Figure 3.7**.

"I was in community school, Grade 5 when I first went out with a man. It was a new experience for me. He asked me and so I attended to him the first time. The experience I got from that moment after was something new and I felt like I wanted to keep on doing it. So I continued going out with some of these kinds of men and then when I went to high school, some men identified me as someone like this, so they started asking me out." Saki, age not known

"My first sex, I fucked a gay. He was a church deacon. I was in Grade 8. It was a male anus and wow! The feeling I got from this sex was too good. He was much older than me with a big arse hole but his body was smooth and just like a woman." Terry, age not known

"I went out for a drink and a friend told me about this - sex with men - and then I got used to male partners. I went out with them and had fun while my wife was pregnant. I met many friends in 2009 to 2012, both male and female. I met them all while I was working and then I got used to them and we would have sex." Kenny, 30 years

3.3. Number of lifetime male or transgender partners

Most MSM and TG in Port Moresby had 4 or fewer male or transgender sexual partners (57.0%) in their lifetime, with 23.3% having 5-9 partners and 19.7% having 10 or more. **See Figure 3.8**.

"I am 26 years old and never had sex until just last year. I had sex without condom. This year, I have had six sexual encounters, four with women and two with men." Seva, 26 years

3.4. Meeting sexual partners

While most (76.7%) MSM and TG in Port Moresby did not use the internet or mobile phone applications to meet sexual partners, almost one- quarter (23.3%) did. **See Figure 3.9**.

3.5. Sex with female partners

Most men and transgender women (80.7%) have had sex with a female in the last six months. **See Figure 3.10**.

Among MSM and TG in Port Moresby who had sex with a female in the last six months, approximately three-quarters (72.2%) had only one main female partner during this period. **See Figure 3.11**.

"Last two weeks ago, I got my Christmas bonus and I also took out a loan, K20,000 in total and I booked a room at Boroko Lodge for a week. I took countless women around night clubs and brought them to that room and had sex with them and used up all that money. I have no money left and am now having a hard time repaying the loan." Saki, age not known

"There are young girls that are taken in and looked after and then sent to do sex work for them. In my case, I have around four girls that I know and have sex with. When one goes out, I have sex with another, another time with another and so on." Terry, 26 years

3.6. Condom use

Nearly three-quarters of MSM and TG (71.0%) in Port Moresby were most likely to use a condom during anal sex when they were the insertive partner.

For 20.2%, they were equally likely to use a condom when they were an insertive partner as they were when they were the receptive partner. Less than one in ten (8.9%) were most likely to use a condom when they are the receptive partner. **See Figure 3.12**.

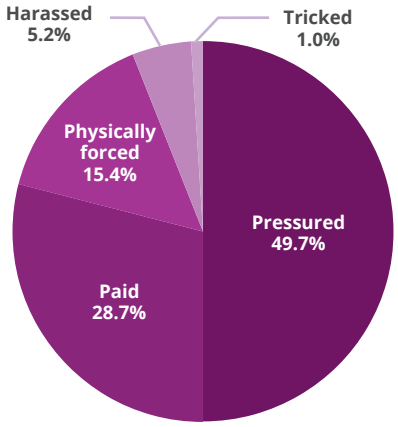

Figure 3.7: Means of being forced / coerced to have anal sex for the first time

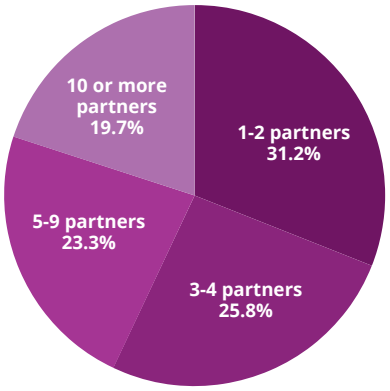

Figure 3.8: Number of lifetime partners

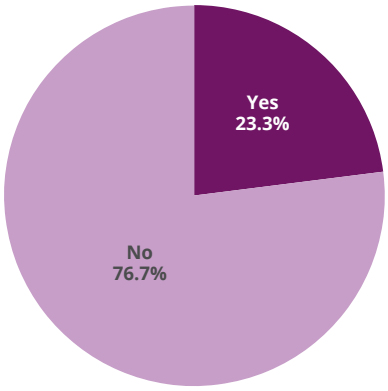

Figure 3.9: Internet or mobile phone applicatrions used to meert partners

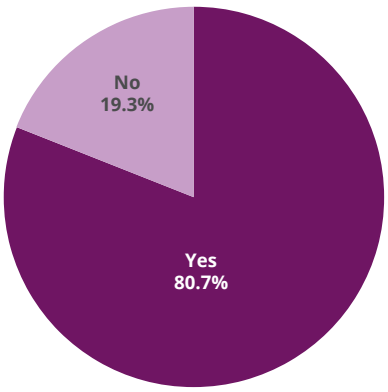

Figure 3.10: Sex with a female in the last six months

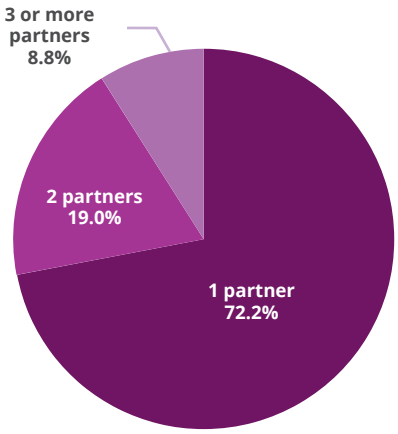

Figure 3.11: Number of main female partners in the last 6 months

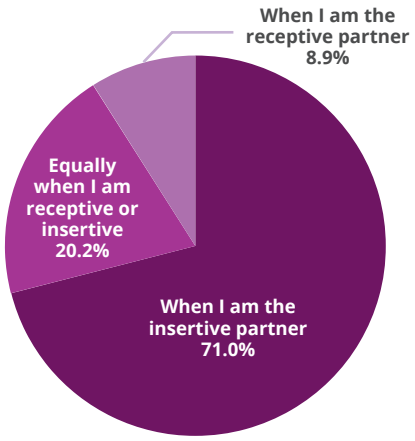

Figure 3.12: Most likely to use a condom in which sexual position

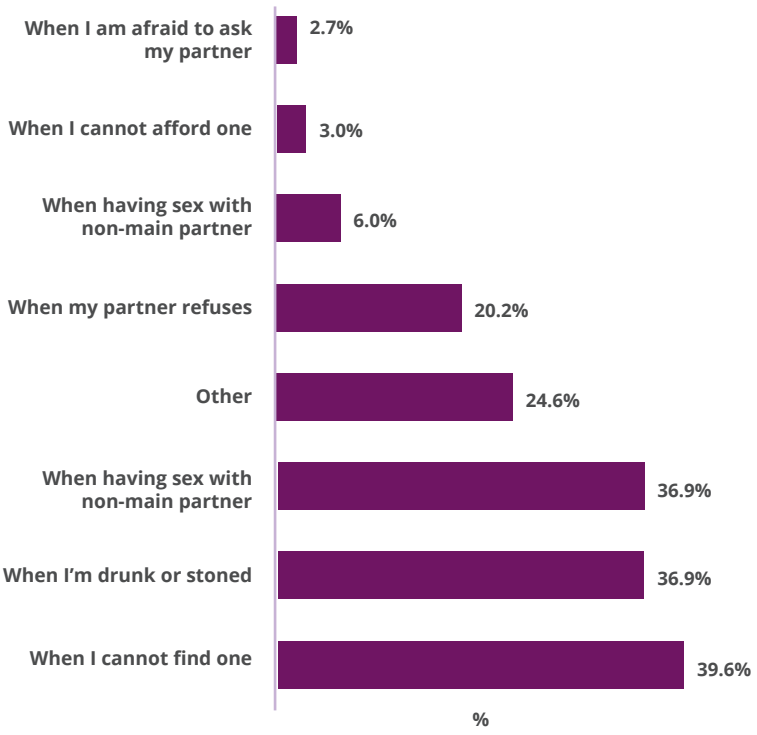

Figure 3.13: Reasons for not using a condom

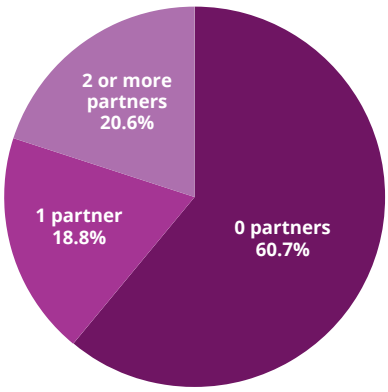

Figure 4.1: Number of main male or TG partners in the last six months

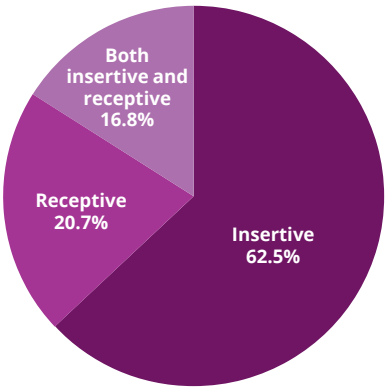

Figure 4.2: Usual sexual position when having anal sex with a main male or TG partner in the last six months

The most common reasons for not using a condom during anal sex were the lack of availability (39.6%) being under the influence of alcohol or other drugs (36.9%), or when having sex with a main partner (36.9%). **See Figure 3.13**.

"There is no satisfaction when you have sex with a condom. It's very important you know I must play safe to keep both not getting the STI or HIV. When I am under liquor, I don't think twice, I just go for it. That's one thing bad about me. Liquor makes me forget about it, do it quickly, something like that. When I am normal I usually use my head, ok safety first protection." Baku, 24 years

"Sometimes when I am dead drunk, they remove the condom and we do skin to skin and later I would notice that it has been removed. Other times, we run out of condoms. It's difficult when we are fully naked in the room to go out and look for condom, come have sex, have drinks, have sex again so we go skin to skin. Sometimes when I am drunk, I don't think about using condom. I have sex without condom, but when I am sober I usually negotiate with my partner or ask them about their (HIV) status. When we both agree then it's ok not to use condom, but if I see them and I get scared, we don't." Saki, age not known

"I use condom when it is available but most of the time when I am too drunk, I rush and I don't use it. Sometimes the condom is there but I usually ignore it because I want to feel the taste of sex. If the condom is there, it's rubber and I don't like rubber because I like to go flesh to flesh so that I will really feel the taste and the pleasure of sex. This way, I will enjoy it and be sexually satisfied." Ricky, 34 years

"There is no satisfaction when you have sex with women using condom. There is friction inside condom and sex will not be pleasurable but when you have sex with a woman without using condom, that's when you will find the real pleasure. The same with gay men so when you go skin to skin, the foreskin is pulled back and causing arousal. However, condom does not do that, it just goes in and then comes out and that's the end of it. I never use condoms." Mori, age not known

"I don't use condoms with my wife. I only use it with my two friends especially when we are giving and receiving cock. I put on condom when I want to take them." Theo, age not known

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

4.1. Number of partners in the last six months

In Port Moresby most MSM and TG did not have a main male or transgender partner (60.7%) in the last six months, with 18.8% having one, and 20.6% having two or more. See Figure 4.1.

"I've noticed these 3 sisters (transgender women) take good care of my children. They are truly my wives. They take good care of the children even when I am not around. When the children cry, they attend to them just as if they are my wives." Tyson, age not known

4.2. Sexual positioning

Among MSM and TG who had a main male or transgender partnerin the last six months, 62.5% were an insertive partner, 20.7% the receptive partner, and 16.8% both insertive and receptive. **See Figure 4.2**.

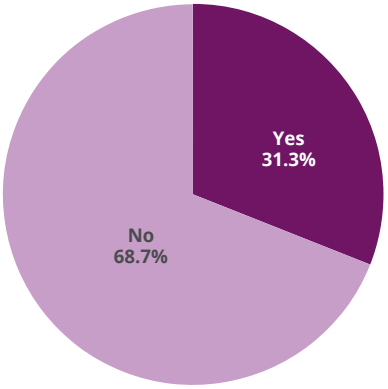

Figure 4.3: Condom use last time had anal sex with a main male orn TG partner

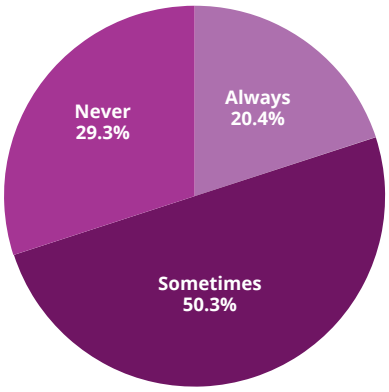

Figure 4.4: Frequency of condom use with a main male or TG partner in the last six months

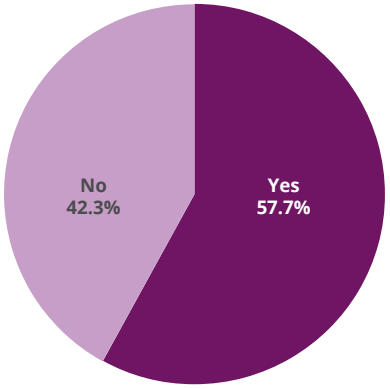

Figure 4.5: Could ask a main male or TG partner to use a condom

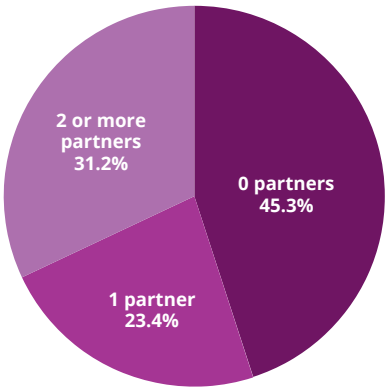

Figure 5.1: Number of casual male of TG partners in the last six months

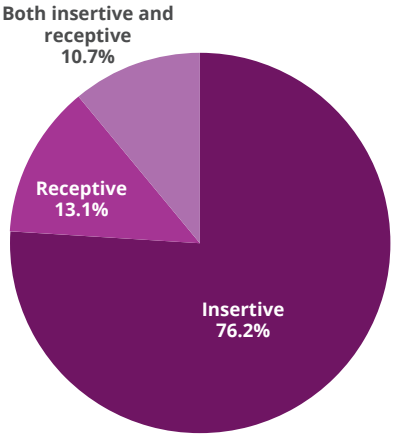

Figure 5.2: Usual sexual positioning with casual male or TG partners

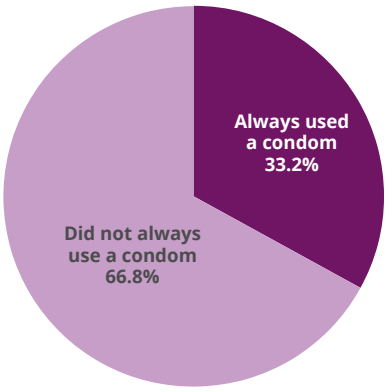

Figure 5.3: Condom use with casual partners in the last six months

4.3. Condom use

Less than one-third (31.3%) of Port Moresby MSM and TG used a condom the last time that they had anal sex with a main male or transgender partner. **See Figure 4.3**.

In the last six months, 20.4% of MSM and TG in Port Moresby always used a condom with a main male or transgender partner while 29.3% never used one. **See Figure 4.4**.

More than half of MSM and TG could ask a main male or transgender partner to use a condom (57.7%), with 42.3% not able to ask. **See Figure 4.5**.

"My best friend tells me skin to skin is nice when we have sex. When I tell him to use condom, he would say that condom makes it difficult for him to ejaculate quickly. Sometimes he gets mad and tells me he is not just anybody trying to have sex with me." Baria, 33 years

"I usually prefer not to use condom with the sisters [transgender women]. Sometimes they would force me to use safety but I usually tell them that I want to really feel it. I want to feel my dick going inside and the gripping. No condom, how am I supposed to feel you? I must go skin to skin and experience the nice sexual pleasure." Tyson, age not known

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

5.1. Number of partners

The estimated median number of casual partners for MSM and TG in Port Moresby in the last six months was two. **See Figure 5.1**.

5.2. Sexual positioning

With casual male and transgender partners, most MSM and TG were insertive (76.2%) with fewer being receptive (13.1%), or both insertive and receptive (10.7%). **See Figure 5.2**.

"I desire women, not gay men. ...I don't give too much thought about gay men but some of them like to have me take them in the ass. They force me to take them so they do things that turn me on and then I take them. When they touch and tease my dick, I get aroused and I fuck their ass." Yaso, 35 years

5.3. Condom use

Most MSM and TG did not use condoms with all of their casual partners in the last six months (66.8%), with only 33.2% having done so with all of them. **See Figure 5.3**.

"To avoid diseases, we use condom. We use condom with those women that go around or with gay men that go around everywhere and are popular. The kinds that we see that are quiet and do not go around much, like the virgin type or the new Papua gay, we don't use condom. The ones that normally stay at home, we have sex with them whether there is condom or not." Kiri, age not known


BLUES

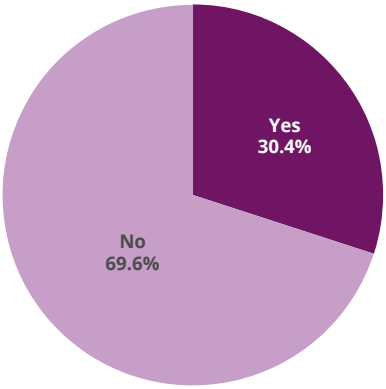

Figure 5.4: Condom use during last anal sex with a casual male or TG partner

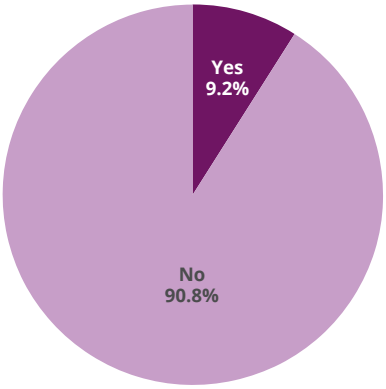

Figure 6.1: Paid another man or TG for sex in the last six months

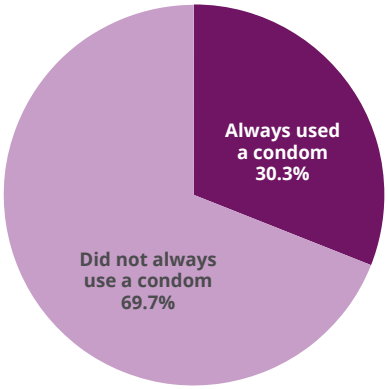

Figure 6.2: Condom use with men or TG from whom bought sex

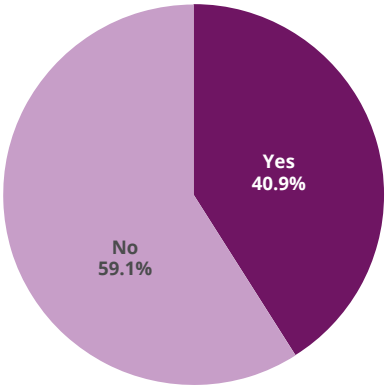

Figure 6.3: Condom use last time bought sex from a man or TG

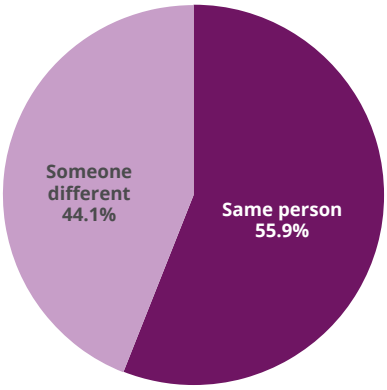

Figure 6.4: Identity of person from whom sex was bought

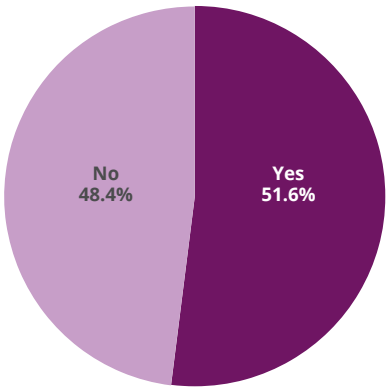

Figure 6.5: Ever sold or exchanged sex

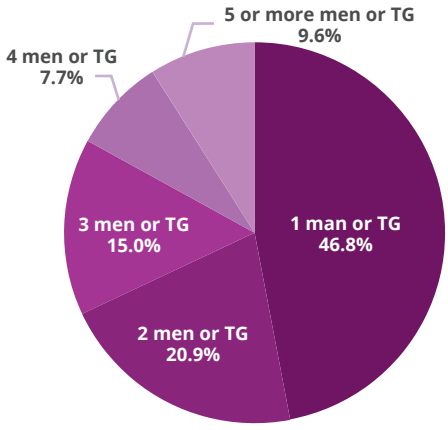

Figure 6.6: Number of clients

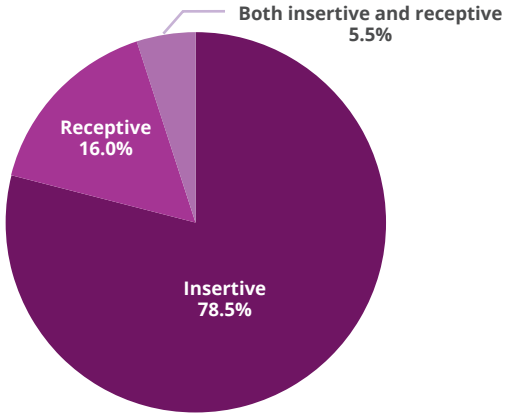

Figure 6.7: Usual sexual position with clients

Most MSM and TG (69.6%) in Port Moresby did not use a condom the last time they had anal sex with a casual male or transgender partner, with less than one-third using one (30.4%). **See Figure 5.4**.

6. BUYING, SELLING OR EXCHANGING SEX

6.1. Buying sex

In the last six months, 9.2% of MSM and TG in Port Moresby paid another male or transgender woman for sex. **See Figure 6.1**.

Only 30.3% of MSM and TG who had paid another man or transgender woman for sex used condoms with all of those partners. **See Figure 6.2**.

Of men and transgender women who paid for sex with another man or transgender woman, 59.1% did not use a condom on the last occasion. **See Figure 6.3**.

While 55.9% paid the same man or transgender woman for sex each time, 44.1% paid multiple men or transgender women for sex. **See Figure 6.4**.

6.2. Selling or exchanging sex

In comparison to the small proportion who paid for sex (9.2%) in the last six months (See Figure 6.1), more than half (51.6%) had ever received money, goods or services for sex. **See Figure 6.5**.

Of those who sold or exchanged sex to other men or TG, about half (46.8%) did so for only one person. **See Figure 6.6**.

6.3. Sexual positioning with clients

Very few MSM and TG in Port Moresby were both receptive and insertive (5.5%), or receptive only (16%) with their clients, with most being insertive only (78.5%). **See Figure 6.7**.

"I make it known to them that they must pay me when they want to use me. There are quite a few of them but there are eight of them who usually pay and bribe me. They know so they come and bribe me with beer, food and money. I don't feel guilty about it; I just go for it." Seva, 26 years

6.4. Condom use with clients

Most of the Port Moresby MSM and TG (66.1%) who sold or exchanged sex did not use condoms with all of their male or transgender clients. **See Figure 6.8**.

6.5. Contacting clients

Contacting clients in public areas such as streets and parks was the most common method identified by MSM and TG (77.0%). Other common methods included phones (30.9%), bars and clubs (15.6%) and private homes (15.4%). **See Figure 6.9**.

"When I was in Goroka, some of my mates that are in other provinces like Lae, Moresby, Madang, Hagen or Simbu, we know ourselves and so we contact and communicate. So if a client is on duty trip to Goroka, my friend would text to inform me. He will also give my phone number to that client and when that client arrives in Goroka, he would get in touch with me. I would go see him and he would at least give me K20, K50 or buy me beer and then we would have sex. In the past we used phone but now we use Facebook so we have our own network." Saki, age not known

7. SOCIAL SUPPORT, MENTAL HEALTH AND STIGMA AND DISCRIMINATION

7.1. Social support

More MSM and TG could rely on another man who has sex with men or transgender women to accompany them to see a doctor than they could to have a peer support them to deal with a difficult or violent situation with a partner (92.7% versus 53.7% respectively). In the last 12 months, 64.2% of MSM and TG supported a peer by negotiating with or standing up against the police. **See Figure 7.1**.

7.2. Depression and shame

Based on the two-item *Patient Health Questionnaire-2* screening tool for depression, 14.6% had depression. **See Figure 7.2**.

While 67.3% of MSM and TG in Port Moresby did not feel

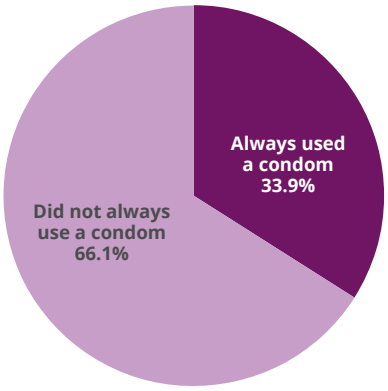

Figure 6.8: Condom use with male or TG clients

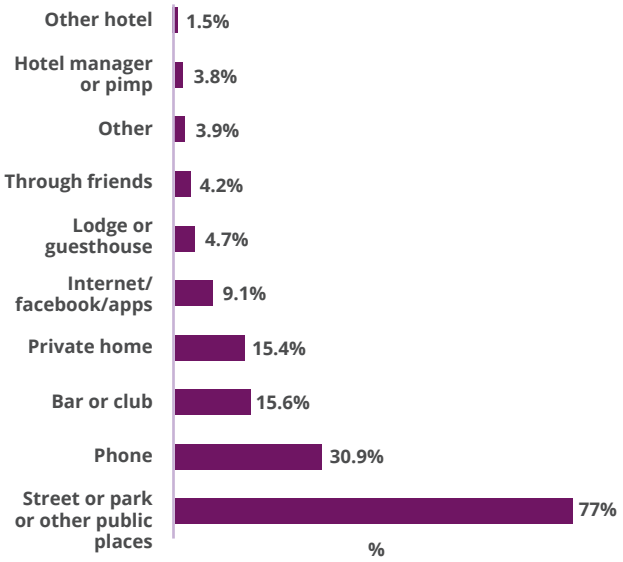

Figure 6.9: Contacting clients

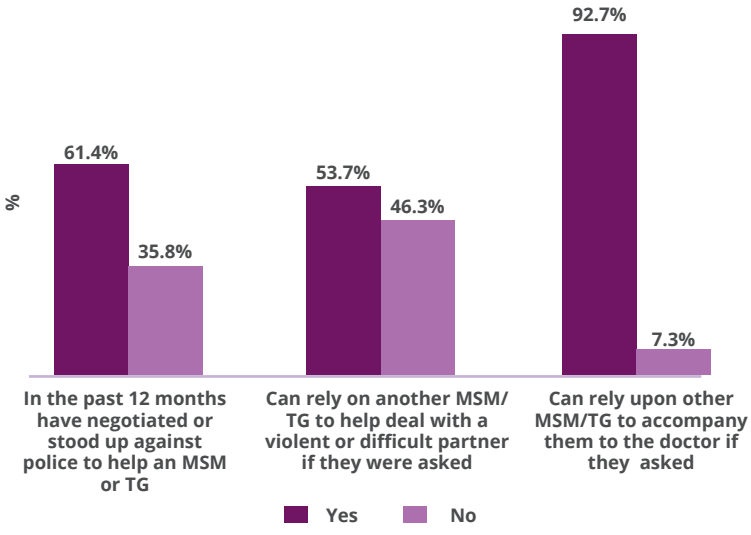

Figure 7.1: Social support

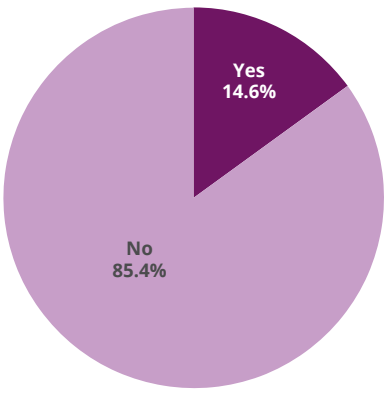

Figure 7.2: Depression

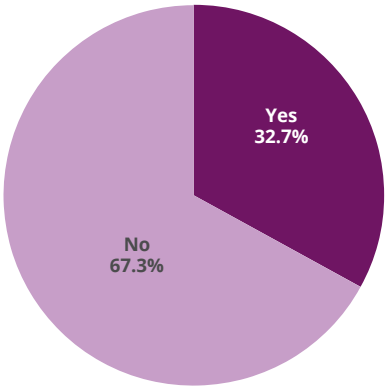

Figure 7.3: Feel ashamed of sexual practices or gender identity

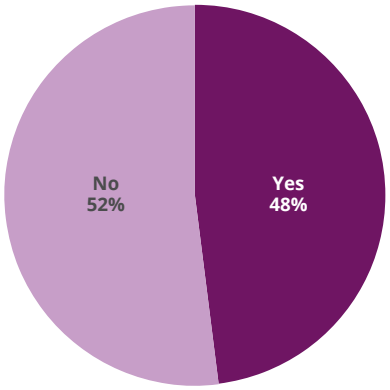

Figure 7.4: Felt the need to hide sexual practices or gender identity when accessing sexual health services

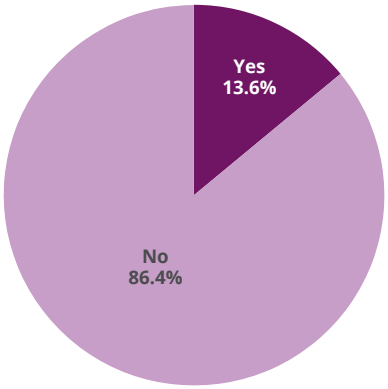

Figure 7.5: Blackmailed because of sexual practices or gender identity

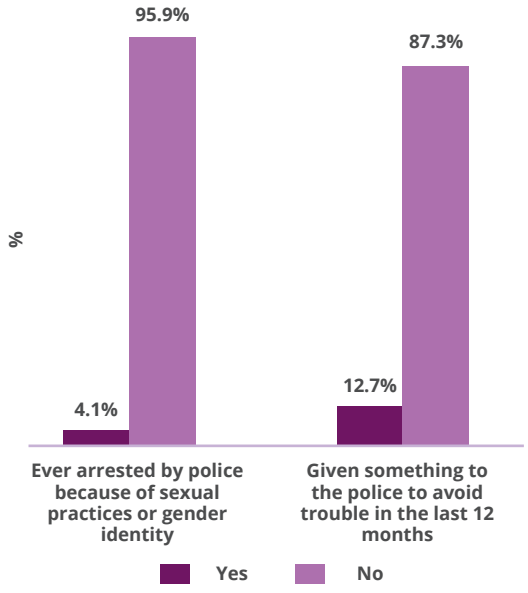

Figure 7.6: Experience with the police

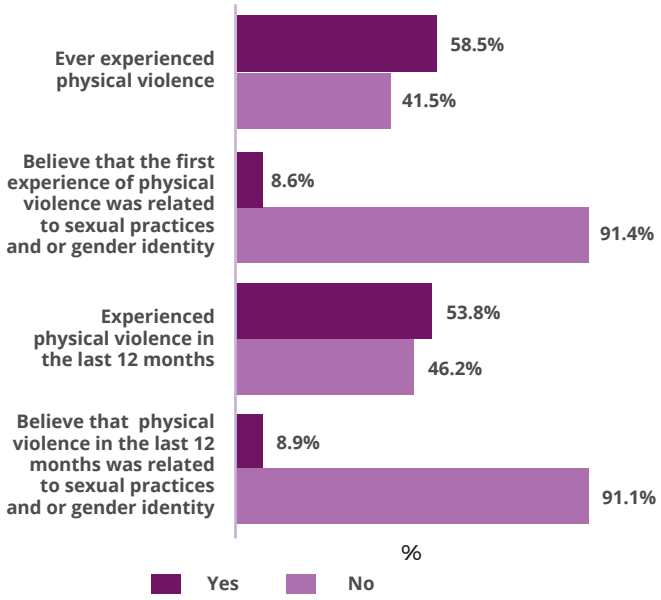

Figure 8.1: Experience of violence

ashamed of themselves based on their sexual practices or gender identity, 32.7% did. **See Figure 7.3**.

7.3. Stigma and discrimination

Nearly half (48.0%) of MSM and TG felt the need to hide their sexual practices or gender identity when accessing sexual health services. **See Figure 7.4**.

Very few MSM and TG in Port Moresby have been denied health care because of their sexual practices or gender identity (2.8%) (data not shown). Very few MSM or TG in Port Moresby had been terminated from a job because of their sexual practices or gender identity (1.8%) (data not shown). However, 13.6% had experienced some form of blackmail because of their sexual practices or gender identity. **See Figure 7.5**.

While most MSM and TG had not experienced discriminatory practices by the police, 4.1% had been arrested because of their sexual practices or gender identity, and 12.7% had given something to the police in order to avoid trouble in the last 12 months. **See Figure 7.6**.

8. VIOLENCE

8.1. Physical violence

Almost three-fifths of MSM and TG had ever experienced physical violence (58.5%) with 8.6% of those who had, believing that the violence was directly related to their sexual behaviours or gender identity. **See Figure 8.1**.

Of those who had ever experienced physical violence, 53.8% experienced physical violence in the past 12 months.

Of those who experienced it in the past 12 months, 8.9% believed it was related to their sexual practices or gender identity. **See Figure 8.1**.

Among those who experienced physical violence in the last 12 months, 62.6% did not seek support after the incident. Of those who did seek support, 17.6% did so from police or other security personnel.

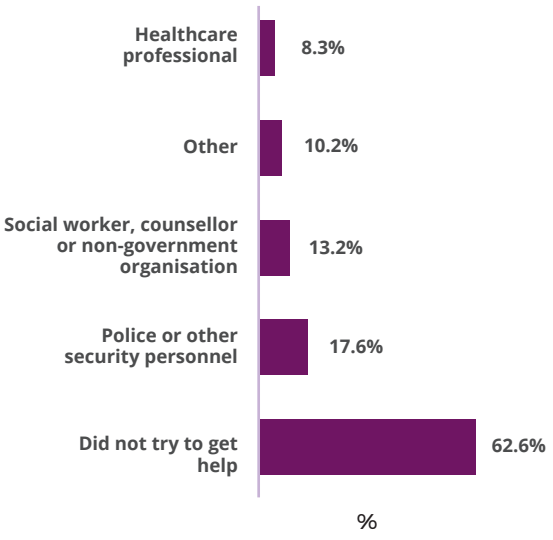

Figure 8.2: Access to support services after physical violence * Multiple responses possible

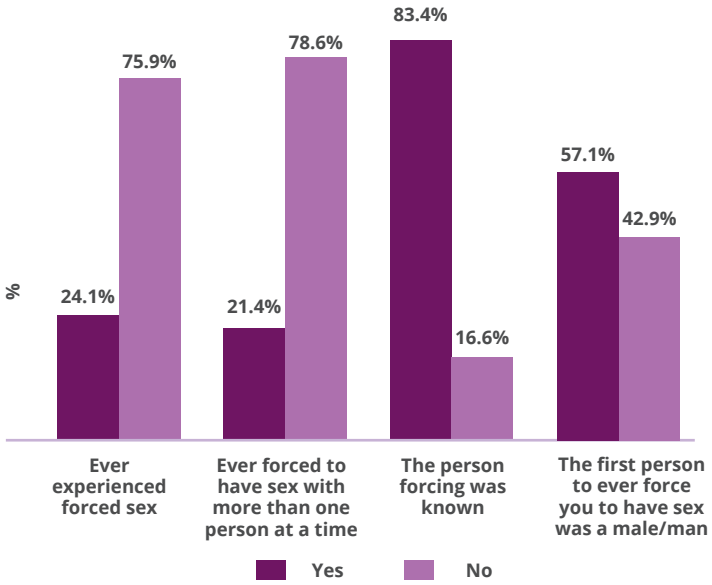

Figure 8.3: History of sexual violence

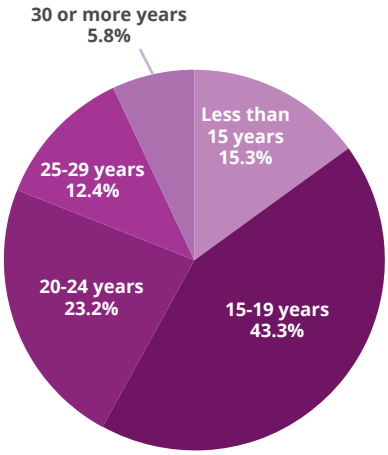

Figure 8.4: Age of first sexual violence

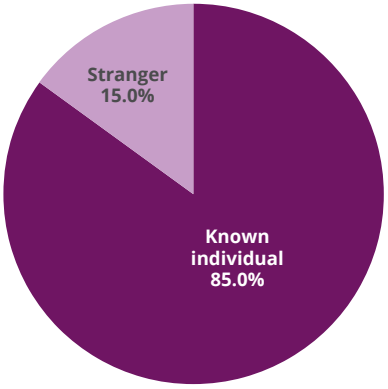

Figure 8.5: Identity of last perpetrator

Fewer sought the professional support of social workers, counsellors or non-government organisations (13.2%) or health care professionals (8.3%). **See Figure 8.2**.

8.2. Sexual violence

Nearly one-quarter (24.1%) of MSM and TG in Port Moresby had ever been forced to have sex.

Of these, 21.4% were forced to have sex by a group of perpetrators. Of those who had been forced to have sex, the perpetrator was known in most cases (83.4%).

Men (57.1%) were the most likely perpetrator of sexual violence the first time it occurred, but women (42.9%) were also perpetrators. **See Figure 8.3**.

Most experienced sexual violence for the first time before the age of 19 years (58.6%). **See Figure 8.4**.

8.3. Last experience of sexual violence

During the last experience of forced sex, the perpetrator was known in most incidents (85.0%). **See Figure 8.5**.

"In most cases, most of the abuse is caused by those who we know of. Two or three times they have used knives and asked me to have sex with them. They have their knives with them so whatever they ask; you have to give it to them. This happened in the area where I used to live. I went for a walk to my friends' and family's house and was returning home. The attackers saw me returning so they hid in the dark and held me with a knife and took me with them to the garden or where it is dark. Where it's possible for them to have me suck their cock. After this they fucked me. Most of them are men from the same area, like my neighbours in the same street. They are not strangers so most of the time it happens, it is from persons who are known to us." Saki, age not known

8.4. Sexual violence in the last 12 months

Of the MSM and TG in Port Moresby who had ever experienced sexual violence, 41.1% experienced it in the last 12 months.

Of these MSM and TG, more than half believed that they were sexually assaulted because of their gender identity/sexual practices. **See Figure 8.6**.

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

Nearly 20% (19.7%) of MSM and TG in Port Moresby who were forced to have sex in the last 12 months were forced to have sex by a sexual partner. **See Figure 8.7**.

8.6. Accessing support

Almost all MSM and TG (90.4%) did not seek support after an experience of sexual violence. **See Figure 8.8**.

Among those who did not seek support (90.4%), 35.7% were afraid or ashamed to do so and 51.5% thought they did not need it. **See Figure 8.9**.

9. DRUG USE

Only 5.1% of MSM and TG in Port Moresby have ever smoked, inhaled, or snorted marijuana, crystal meth, cocaine, crack, ecstasy, heroin, or opium. **See Figure 9.1**. Only 1.9% had ever injected drugs. **See Figure 9.2**.

10. PENILE MODIFICATION

Penile modification was common among MSM and TG in Port Moresby, with 59.5% having cut the skin of their penis. **See Figure 10.1**.

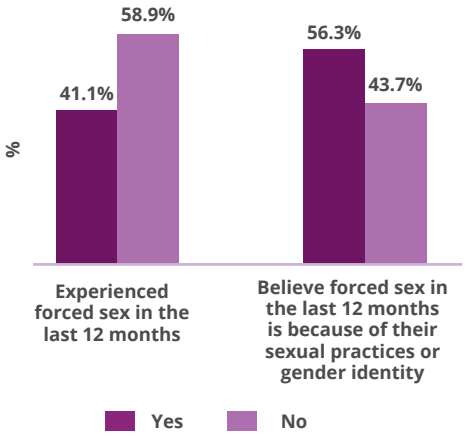

Figure 8.6: Sexual violence in the last 12 months

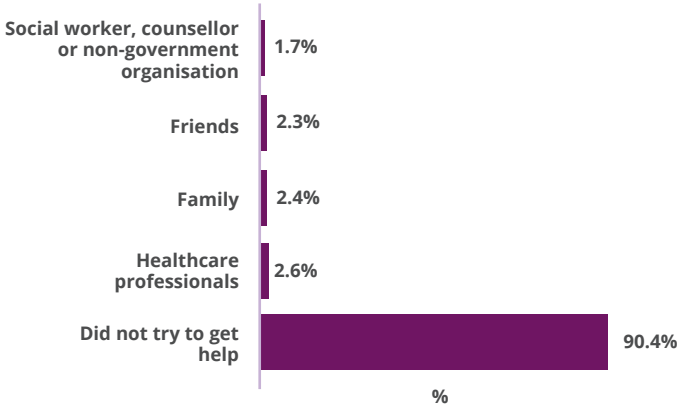

Figure 8.8: Services sought after any experience of sexual violence

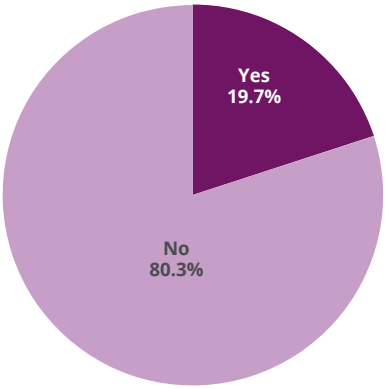

Figure 8.7: Sexual violence from partner in the last 12 months

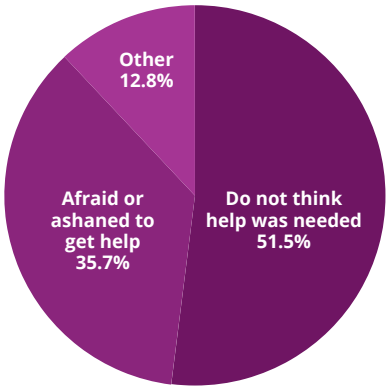

Figure 8.9: Reason for not seeking support after any experience of sexual violence

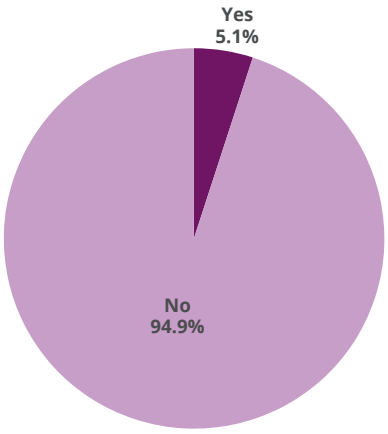

Figure 9.1: Ever used illegal drugs

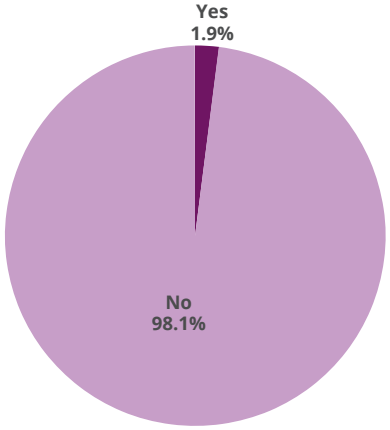

Figure 9.2: Ever injected illegal drugs

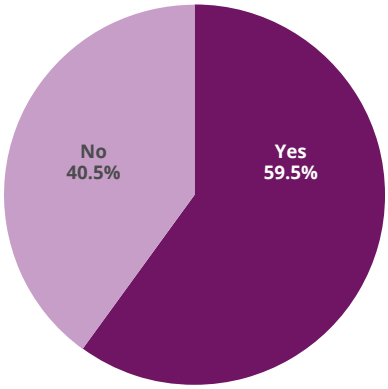

Figure 10.1: Have cut foreskin

Eight percent of men and transgender women had inserted something into the skin of their penis and 15.0% had injected substances into it. **See Figure 10.2**.

The most common reason MSM and TG had their foreskins cut was to improve cleanliness and genital hygiene (44.2%).

They also did it in response to customary requirements, including removing of "bad" maternal blood (17.7%), to prevent HIV or other STIs (16.4%), to increase sexual pleasure for themselves or partners (15.2%), and peer pressure (6.5%). **See Figure 10.3**.

Some men and transgender women had inserted something into the skin of their penis (8.0%) or ever injected something into their penis (15.0%).

11. ACCESS TO HIV OUTREACH AND PREVENTION SERVICES

11.1. Knowledge of HIV

HIV knowledge (**See Figure 11.1**) was greatest amongst MSM and TG for knowing that:

- A healthy looking person can have HIV (93.3% 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 (91.2% had correct knowledge).
- A person can reduce the risk of getting HIV by using a condom every time they had sex (86.4% had correct knowledge).

HIV knowledge (**See Figure 11.1**) was poorest for knowing that:

- If a condom is not used during anal sex, receptive anal sex puts a person at greatest risk for getting HIV (19.0% had correct knowledge).
- If a condom is not used, anal sex puts a person at greatest risk for getting HIV (26.0% had correct knowledge).
- There is effective treatment for HIV (51.6% had correct knowledge).
- HIV cannot be transmitted by a mosquito (52.1% had correct knowledge).

"HIV is transmitted through sexual intercourse and currently there is no treatment, there is no cure. There is a treatment, but there is no cure for the sickness. Treatment, I see it as it's just like life support ah? Yeah one main thing that we use to control the spread and transmission of HIV is when we are having sex we use condoms. We can use condoms to have sex or by sticking to one partner only. Be faithful to each other." Bonny, 24 years

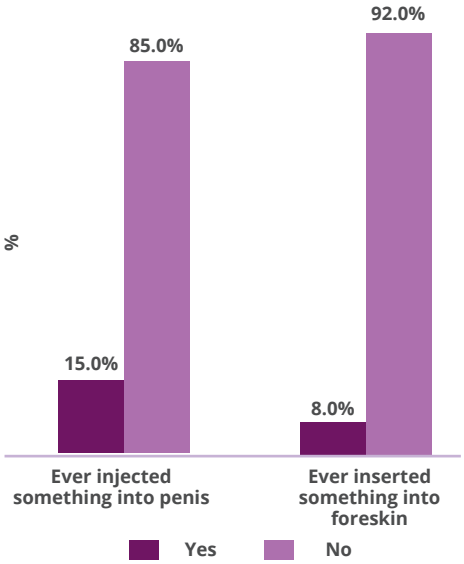

Figure 10.2: Penile inserts and penile injections

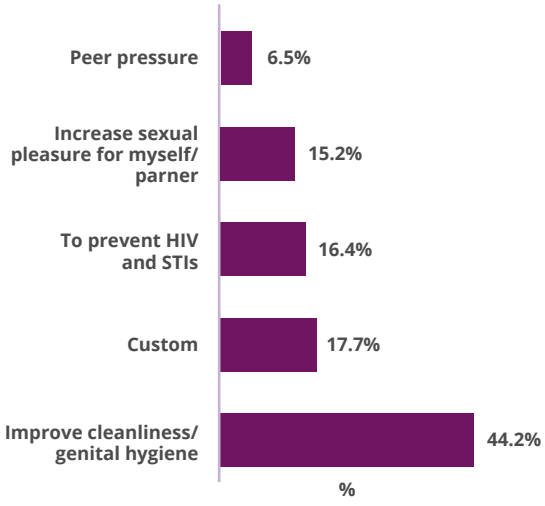

Figure 10.3: Reason for cutting foreskin

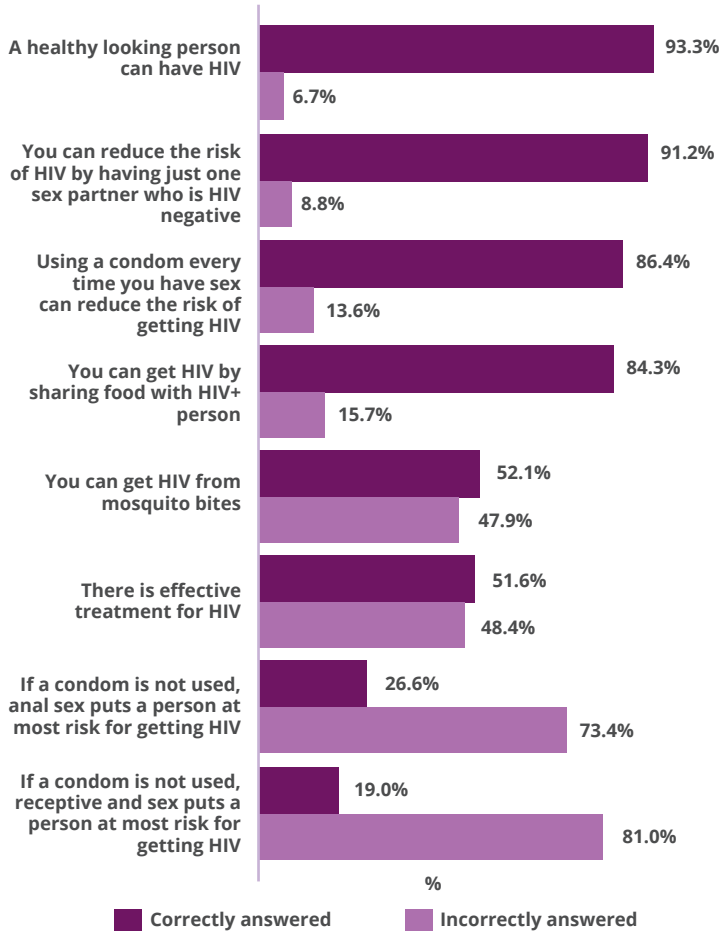

Figure 11.1: HIV knowledge

"I was not happy about using condom before joining the project, but when I joined the project, they showed us how to use condoms and told us about condoms, its benefits and about infections and HIV. I said to myself that there are [risks] of why I should be using condom so I started using condom. I'm 100% safe." Saki, age not known

"I think about it [HIV testing] quite often after I go out and have sex, but then I would have these thoughts that it's not vagina that I fucked but anus [so its ok]." Kenny, 30 years

11.2. Peer outreach

Approximately one-third third (34.6%) of MSM and TG had never been reached by an HIV peer outreach worker. In the last month only 15.1% had contact with an HIV peer outreach worker while 19.9% had contact in the last three months. **See Figure 11.2**.

Among those who were ever reached by an HIV peer outreach worker, condoms (83.0%) and lubricant (67.7%) were the most common items received, followed by brochures and pamphlets (56.1%) at the last contact with an outreach worker. **See Figure 11.3**.

Most peer outreach workers belonged to non-government organisations (50.4%). **See Figure 11.4**.

11.3. Free condoms

Nearly two-thirds (62.3%) of MSM and TG received information on condom use and safer sex in the last 12 months (**See Figure 11.5**) with almost the same proportion (64.3%) receiving free condoms in the same time. **See Figure 11.6**.

11.4. Free lubricant and lubricant use

Nearly half (47%) of MSM and TG used lubricants during anal sex in the last six months. **See Figure 11.7**.

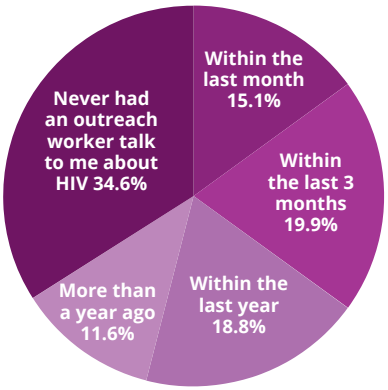

Figure 11.2: Last contact with peer outreach worker

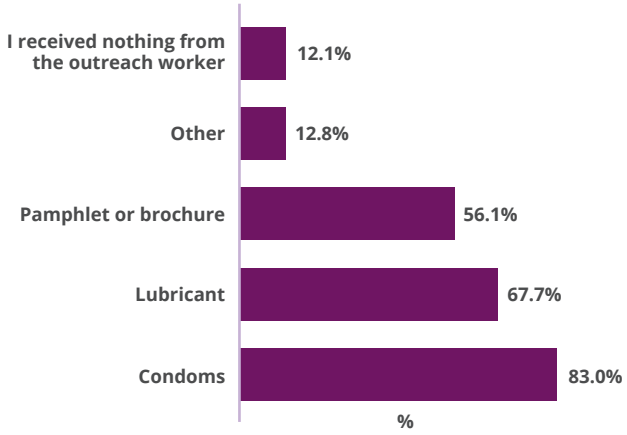

Figure 11.3: Products received at last peer outreach contact
***Multiple responses possible**

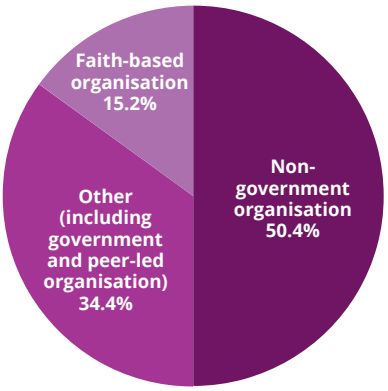

Figure 11.4: Organisation from where peer outreach worker comes from

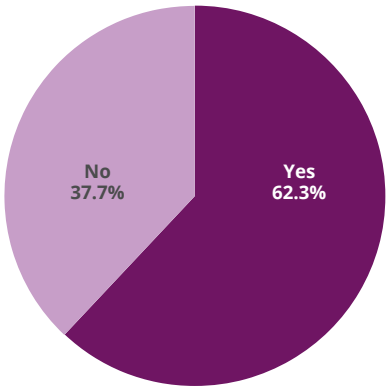

Figure 11.5: In the last 12 months received information on condom use and safer sex

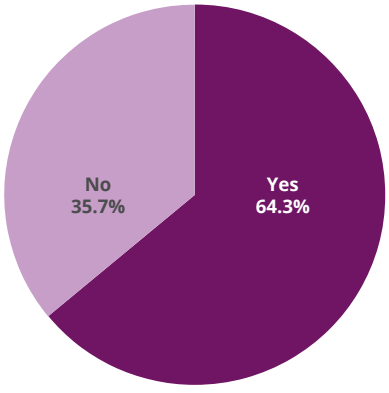

Figure 11.6: In the last 12 months been given condoms for free

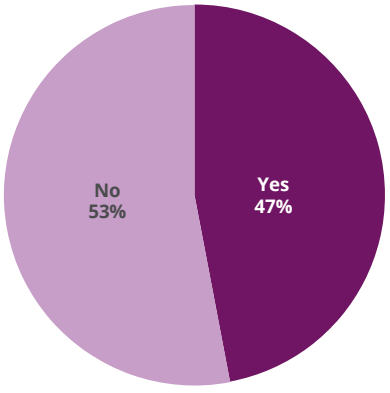

Figure 11.7: Used lubricant in the last six months for anal sex


timSafe 5L
Safety Box
BIOHAZARD

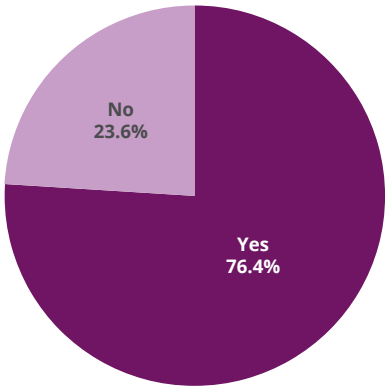

Figure 11.8: Given free packets of lubricant in the last 12 months

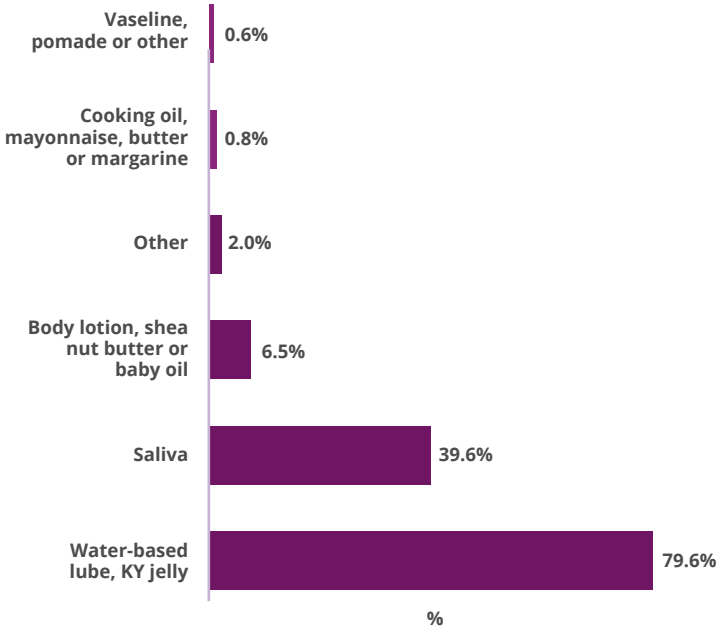

Figure 11.9: Types of lubricant used
*Multiple responses possible

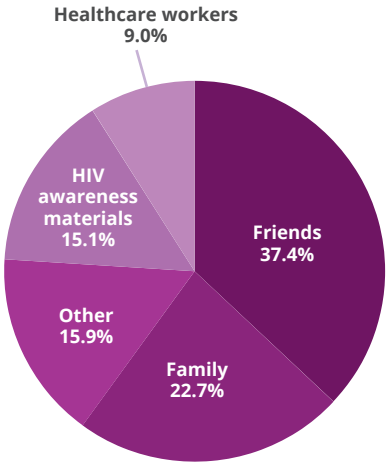

Figure 11.10: Sources of influence to protect self and others from HIV

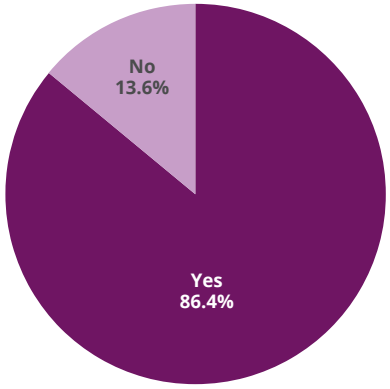

Figure 11.11: Relevance of HIV messaging to MSM and transgender

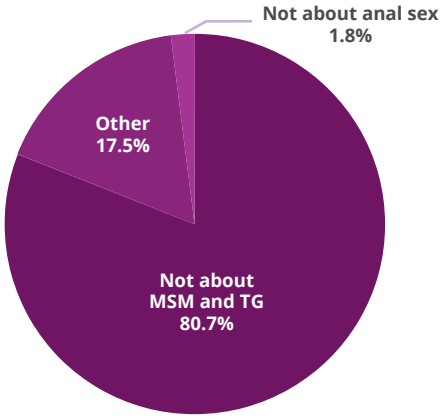

Figure 11.12: Reasons why HIV messaging does not apply to men who have sex with men and transgenders

Amongst this group, 76.4% received free packets of lubricant in the last 12 months. **See Figure 11.8**.

Of MSM and TG who had used lubricant in the last six months, 79.6% used water-based lubricants such as KY Jelly. Other lubricants used include saliva (39.6%), and lotions such as shea butter, baby oil or other body lotions (6.5%). **See Figure 11.9**.

"Sometimes (in prison) we used soapy water and give it them and then the men would destroy their ass." Theo, age not known

11.5. Sources of influence

Friends and family (60.0%) provided the greatest sources of influence to MSM and TG in Port Moresby to protect themselves and others from HIV (37.4% and 22.7% respectively). **See Figure 11.10**.

Most MSM and TG (86.4%) in Port Moresby believed that HIV messaging was relevant to and related to them. **See Figure 11.11**.

Among the 13.6% who felt HIV messaging did not relate to them, 80.7% felt the messages were not relevant to people who identified as transgender or who were engaged in male-male sexual behaviour (80.7%). **See Figure 11.12**.

11.6. Post-Exposure and Pre-Exposure Prophylaxis

More than twice as many MSM and TG in Port Moresby had heard of post-exposure prophylaxis (PEP) (16.2%) than had heard of pre-exposure prophylaxis (PrEP) (7.3%).

While no MSM and transgender women had used PEP in the last six months (data not shown), 9.9% had used it in their lifetime.

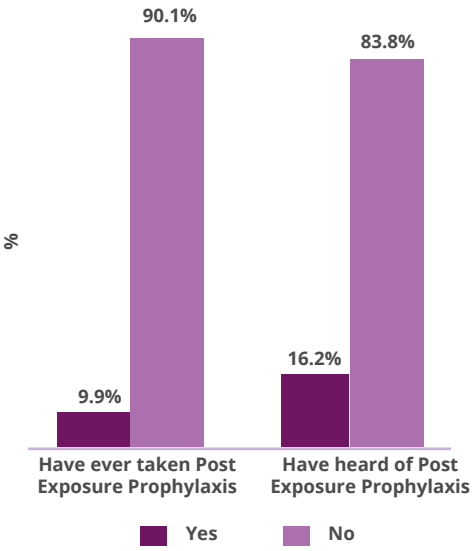

Figure 11.13: Post-Exposure Prophylaxis - knowledge and uptake

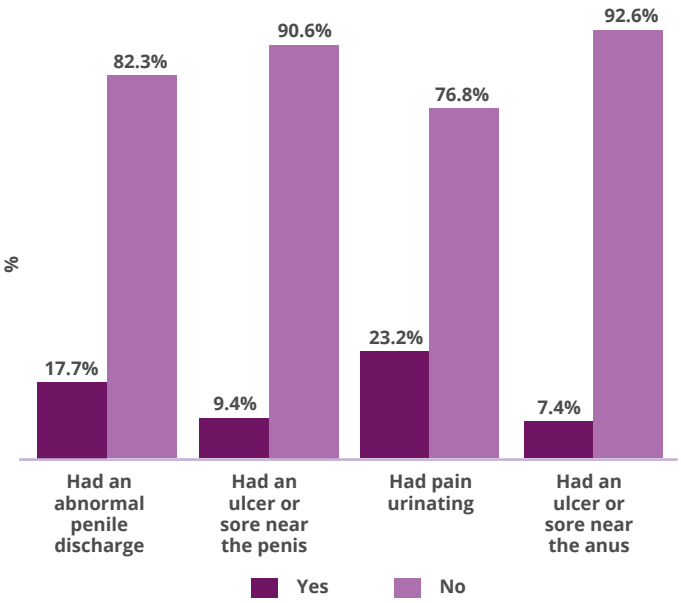

Figure 12.1: Symptoms of STIs in the past 12 months

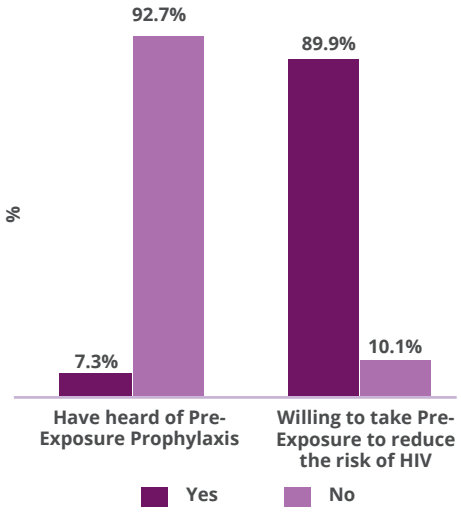

Figure 11.14: Pre-Exposure Prophylaxis - knowledge and acceptability

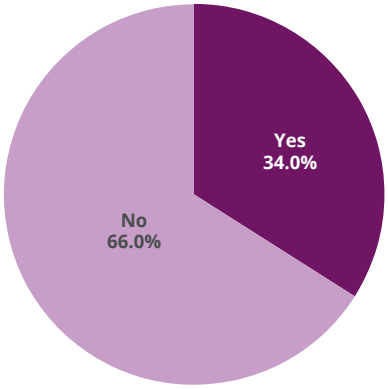

Figure 12.2: Proportion of MSM and TG with one or more STIS

Theoretical acceptability of PreP was high (89.9%). See Figures 11.13 and 11.14.

12. SEXUALLY TRANSMITTED INFECTIONS

12.1. Self-reported STI symptoms and health seeking behaviours

The most common STI symptoms experienced by MSM and TG in the last 12 months were pain while urinating (23.2%) and abnormal penile discharge (17.7%). A few had ulcers or sores near their penis (9.4%) and anus (7.4%). See Figure 12.1.

Of men and transgender women with these symptoms, most did not see a health care worker (63.0%) (data not shown).

12.2. Prevalence of STI

One-third (34.0%) of MSM and TG in Port Moresby had one or more sexually transmitted infections (STIs), excluding HIV. See Figure 12.2.

Genital chlamydia was the most common STI (12.3%) followed by hepatitis B (11.6%). Prevalence of anorectal chlamydia was 9.6%. Anorectal gonorrhoea was more prevalent (7.1%) than genital gonorrhoea (3.6%). While 10.0% had ever been infected with syphilis, only 4.0% had active syphilis. See Figure 12.3.

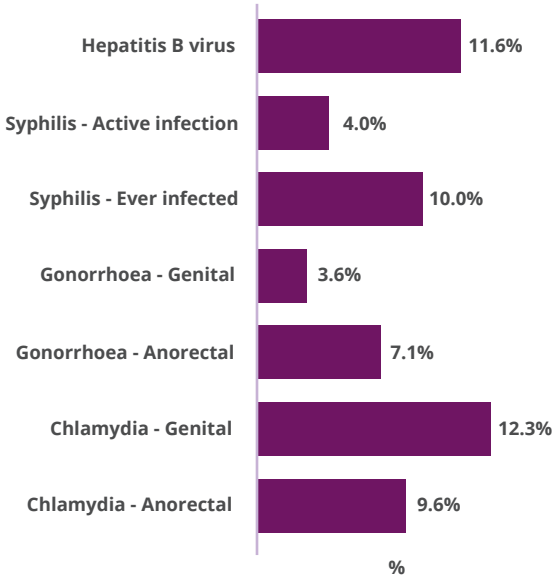

Figure 12.3: STI test results

13. HIV TESTING, CARE AND TREATMENT

13.1. HIV testing prior to *Kauntim mi tu*

The majority (58.2%) of MSM and TG in Port Moresby had never tested for HIV. **See Figure 13.1**. Of those who had tested for HIV (41.8%), 60.3% disclosed that they had sex with other men or identified as transgender during their last HIV test and 6.0% tested with a sexual partner. **See Figure 13.1**.

"I was a bit scared when I went up to get my results. My heart raced and I panicked but when I got my results, I was relieved. My blood results came clean, it was negative." Ricky, 34 years

Of those who had never tested for HIV, the reasons for not testing included; feeling fine (42.3%), not knowing where to get an HIV test (17.7%), and fear and stigma (16.1%). **See Figure 13.2**.

Of those who had tested for HIV, 42.3% had done so in the last six months, 21.6% between six and 12 months ago, and 36.1% last tested more than 12 months ago. **See Figure 13.3**.

Of MSM and TG who had tested, most (88.6%) received HIV testing in sexual health clinics, including stand-alone HIV testing facilities. Few tested in other clinics, hospital or with a private doctor (7.3%). Only 2.2% tested through outreach or a mobile clinic. **See Figure 13.4**.

Excluding those who knew that they were HIV positive, among those who tested for HIV, more than 12 months ago, the most common reason for not testing more recently was that they felt fine (58.8%), followed by not having time to get tested (26.2%). **See Figure 13.5**.

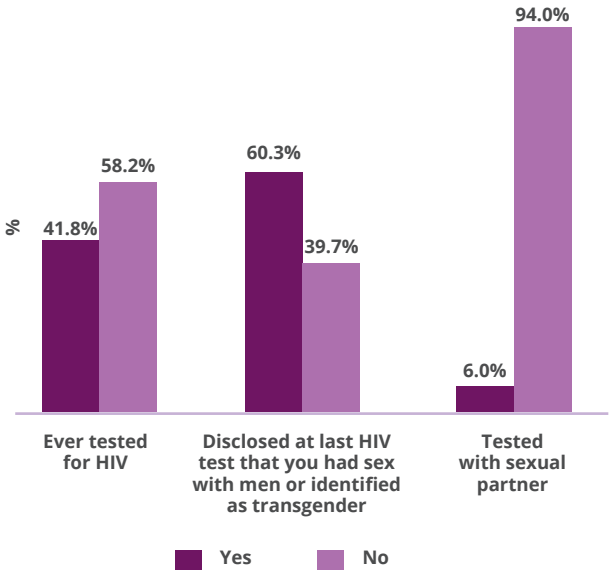

Figure 13.1: HIV testing history

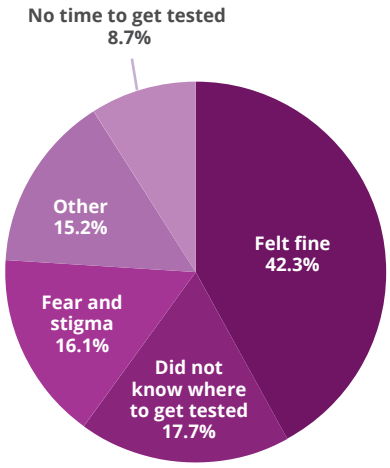

Figure 13.2: Reasons for never testing for HIV

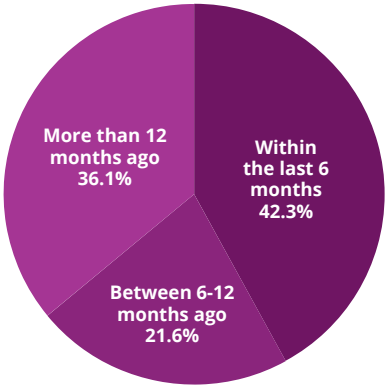

Figure 13.3: Timing of last HIV test

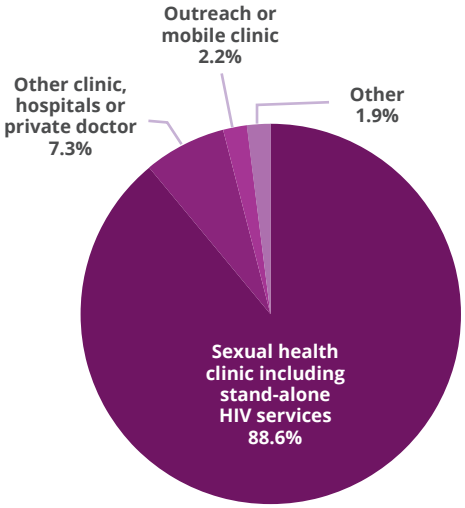

Figure 13.4: Location of last HIV test

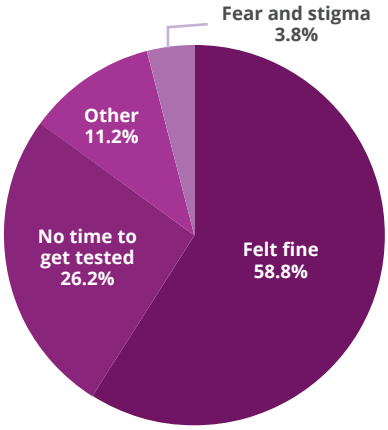

Figure 13.5: Reason for not testing in the last 12 months

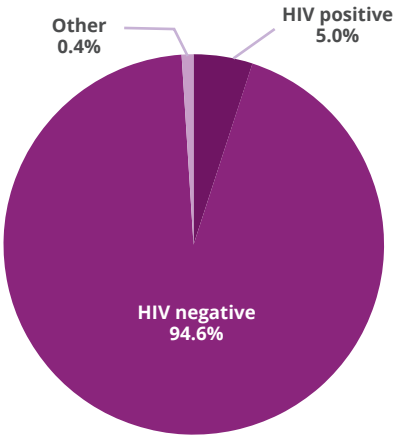

Figure 13.6: Result of last HIV test prior to *Kauntim mi tu*

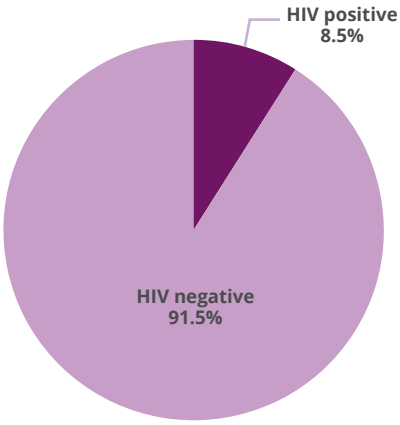

Figure 13.7: HIV prevalence

Of MSM and TG who ever tested for HIV, 4.0% reported never receiving their results (data not shown). Of those who had tested for HIV previously, 5.0% had returned an HIV-positive result the last time that they tested. **See Figure 13.6**.

Of the seven people in the study previously diagnosed with HIV, all were self-identified TG. Three disclosed their status to no one, one to a sex partner, three to other MSM or TG, one to a family member, and one to a priest.

> *"No, I have not told anyone, it's personal and I don't tell my family, it's personal between me and one of my best friends. One of my best friends also has this disease so both of us only know. … My boyfriends they don't know that I am HIV positive, I haven't told them… Because if I tell some people, that person that I am positive they will tell their friends, or they will gossip that, the man has this disease. That is why I don't tell anybody." Baria, 33 years*

13.2. HIV care and treatment

Of the seven TG who were aware that they had HIV prior to participation in the study, six had been linked to medical care (data not shown).

Of these six, all had already started treatment, three were still on treatment and two were virally suppressed (data not shown). Two of the three people no longer taking treatment were taking traditional medications instead (data not shown).

> *"I'm still continuing my HIV dose so I got this supply. I am happy that now my body is feeling alright. When I'm getting this supply, I feel like before I used to live, and now I am also feeling like that. Now I feel that I am normal." Baria, 33 years*

Five of the six TG who accessed HIV care received at least one CD4 result. Of the five people who received a CD4 result, three received one in the last six months and two more than one year ago (data not shown).

Of the six TG who accessed care, four were taking prophylactic medication in the form of Cotrimoxazole (data not shown).

Of the six TG who accessed HIV care, two were asked at their last HIV clinic appointment if they had any symptoms of TB. Two of the seven TG aware of their HIV positive status experienced at least one symptom of TB in the last 12 months (data not shown).

13.3. Prevalence of HIV

HIV prevalence among MSM and TG was 8.5%. See Figure 13.3. Three-quarters (75.6%) of MSM and transgender women were unaware that they had HIV (data not shown).

14. 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:

- 52.7% had unexplained weight loss.
- 40.1% had a cough in the last two weeks.
- 26.8% had a fever in the last two weeks.
- 24.6% had night sweats in the last two weeks.

Over two-thirds (69.0%) of MSM and TG experienced at least one of these symptoms of TB in the last two weeks and was tested for TB (data not shown).

Of MSM and TG screened for tuberculosis, 1.9% had tuberculosis. Of the four MSM and TG in the study who had tuberculosis, one had a drug resistant form (data not shown).

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

15. GLOBAL TARGETS: 90-90-90

The results presented here are unweighted due to the small number of HIV-positive individuals in our study.

In Port Moresby, PNG is not reaching the global targets where 90% of people with HIV are aware of their status, of those aware of their status, 90% of people who know they have HIV are on ART, and of those on treatment 90% are virally suppressed.

Of the 30 HIV-positive MSM and TG in our study, only seven individuals (23.3%) were aware of their infection. Of these individuals who were aware, only three (42.9%) were on treatment.

Finally, of these three individuals who were on treatment, only two (66.7%) were virally suppressed. Much more work remains in supporting MSM and TG in order for PNG to reach the UNAIDS 90-90-90 global targets.

16. SIZE ESTIMATION

Volunteers distributed 598 unique objects to MSM and TG throughout Port Moresby to estimate their population in Port Moresby utilizing the unique object multiplier method. Combining this distribution with the RDS IBBS where we estimated that 8.0% of the population received a unique object, we estimate that there are 7,487 MSM and TG in Port Moresby.

Statement by Port Moresby members of Friends Frangipani

Many of our friends do not feel accepted, respected or supported in our communities.

When we came to *Kauntim mi tu* we found a home. We were welcomed and respected. It was confidential.

We were interested in the study because we could access services to find out about our bodies, the infections we had.

It was good for our health to know who we are and to get tested and treated. We were told what was wrong within us on the same day.

We didn't have to wait to know if we had an infection or not. We had never been tested for these STIs before and we are happy to know our status.

Many of us thought there was nothing wrong with us, but after being tested we found out we had STIs and this shocked us. But we were treated. We liked doing our own examination. We want more of this.

Even after the IMR and the *Kauntim mi tu* team left, more of our friends kept on asking where they had gone because they wanted the service too. We want clinics like this.

We want to know about TB, STIs and our HIV viral load. We had never heard of viral load. Now we know about HIV viral load and we know about the goal of 90-90-90.

Some of our friends found out they had HIV and are now on treatment. Others were treated for syphilis and are now pregnant.

The results of the study have been shared with our community and we are very happy to hear them; we wanted to know the exact results of the study so we could share with others.

The results tell us where we need to continue, what we need to do more of and where we need to improve. We need more of our friends to test. This study cannot be the last.

Friends Frangipani felt it was a partner in this study. We at Friends Frangipani are proud of this study, we think of it as an achievement of our friends.

We are not rubbish women; we want people to understand us, to respect us.

We want to feel free to access services. We want the types of services we got in *Kauntim mi tu* to be here for us all the time. We don't want to be blamed for these infections, being called bad names.

We want people to be concerned for us. We also want people to partner with us.

This is our time to stand up and speak up for our rights to health and equity.

RECOMMENDATIONS

- Improve quality of clinical services and introduce point of care testing for STIs and HIV viral load among FSW.
- Improve knowledge of peer educators on STIs, HIV viral load and other key health issues.
- In the absence of a stand-alone FSW clinic, we need to ensure that healthcare workers are trained and supervised by members of our community to be friendly, respectful and understanding of our situation.
- Improve the quality and scope of peer outreach including adherence support and HIV testing.
- Ensure peer educators are trained to understand risks of anal sex for women and to improve use of condoms during anal sex.
- Continue to advocate for condom distribution to FSW.
- To reduce the stigma and fear associated with accessing clinics we need to have peer educators in the clinics.
- Improve knowledge of and access to PEP.

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